



City Council Regular Meeting **AGENDA**

Register for the virtual Ukiah City Council Regular Meeting at:

<https://attendee.gotowebinar.com/rt/7607882002839353870>

After registering, you will receive a confirmation email containing information about joining the webinar. Alternatively, you may view the meeting (without participating) by clicking on the name of the meeting at www.cityofukiah.com/meetings.

November 18, 2020 - 6:00 PM

1. ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. PROCLAMATIONS/INTRODUCTIONS/PRESENTATIONS

4. PETITIONS AND COMMUNICATIONS

5. APPROVAL OF MINUTES

5.a. Approval of the Minutes for the November 4, 2020, Special Meeting.

Recommended Action: Approve the Minutes of November 4, 2020, a Special Meeting, as submitted.

Attachments:

1. 2020-11-04 Draft Minutes - Special Meeting

5.b. Approval of the Minutes for the November 4, 2020, Regular Meeting.

Recommended Action: Approve the Minutes of November 4, 2020, a Regular Meeting, as submitted.

Attachments:

1. 2020-11-04 Draft Minutes

6. RIGHT TO APPEAL DECISION

Persons who are dissatisfied with a decision of the City Council may have the right to a review of that decision by a court. The City has adopted Section 1094.6 of the California Code of Civil Procedure, which generally limits to ninety days (90) the time within which the decision of the City Boards and Agencies may be judicially challenged.

7. CONSENT CALENDAR

The following items listed are considered routine and will be enacted by a single motion and roll call vote by the City Council. Items may be removed from the Consent Calendar upon request of a Councilmember or a citizen in which event the item will be considered at the completion of all other items on the agenda. The motion by the City Council on the Consent Calendar will approve and make findings in accordance with Administrative Staff and/or Planning Commission recommendations.

7.a. Report of Disbursements for the Month of October 2020.

Recommended Action: Approve the Report of Disbursements for the Month of October 2020.

Attachments:

1. October 2020 Summary of Disbursements
2. Account Codes for Reference
3. Object codes for Reference
4. October 2020 Disbursement Detail

7.b. Consideration of Adoption of the State of California Governor's Designation of Applicant's Agent Resolution Allowing the City Manager to Apply for Public Assistance and Recovery Funding.

Recommended Action: Adopt the State of California Governor's Designation of Applicant's Agent Resolution allowing the City Manager to apply for public assistance and recovery funding on the behalf of the City of Ukiah.

Attachments:

1. Designation of Applicant's Agent Resolution For Non-State Agencies- Cal OES 130 W Signature
2. Designation of Applicant's Agent Resolution For Non-State Agencies-Cal OES 130

7.c. Consideration of Adoption of a Resolution Terminating the Proclamation of a Local Emergency Due to Extreme Heat Emergency.

Recommended Action: Adopt a Resolution terminating the proclamation of a local emergency related to the extreme heat emergency.

Attachments:

1. Resolution Terminating Proclamation of Local Emergency

7.d. Approval of Notice of Completion for the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01, and Approval of Corresponding Budget Amendment.

Recommended Action: Approve the Notice of Completion for the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01, and Approval of Corresponding Budget Amendment

Attachments:

1. Notice of Completion-Spec 20-01

- 7.e. Approval of Notice of Completion for the Gobbi Street Underground District No. 3, Specification No. 19-03, and Approve the Final Payment of the 5% Retention to St. Francis Electric, LLC.

Recommended Action: Approve notice of completion for the Gobbi Street Underground District No. 3, Specification No. 19-03, and direct the City Clerk to file the Notice of Completion with the County Recorder.

Attachments:

1. Spec 19-03 - Gobbi Street Undergrounding Project
2. 2020-11-18 Notice of Completion-St. Francis Const

- 7.f. Approve Professional Services Contract Amendment No. 1 with L.S. Mitchell Architect, Inc. to Increase Contract Funding for Engineering and Construction Services for the 1350 Hastings Road Property in an Amount Not to Exceed \$45,000.

Recommended Action: Approve professional services contract Amendment No. 1 with L.S. Mitchell Architect, Inc. to increase contract funding for engineering and construction services for the 1350 Hastings Road property in an amount not to exceed \$45,000.

Attachments:

1. L.S. Mitchell, Inc. Contract #1617-091
2. Amendment 1 - C #1617-091

- 7.g. Consideration of City of Ukiah's Community Green Lighting Program to Enhance and Promote Energy Conservation, and Approval of LED Lighting Rebate.

Recommended Action: Approve the Community Decorative Green Lighting Program and Updated LED Lighting Rebate.

Attachments: None

8. AUDIENCE COMMENTS ON NON-AGENDA ITEMS

The City Council welcomes input from the audience. If there is a matter of business on the agenda that you are interested in, you may address the Council when this matter is considered. If you wish to speak on a matter that is not on this agenda, you may do so at this time. In order for everyone to be heard, please limit your comments to three (3) minutes per person and not more than ten (10) minutes per subject. The Brown Act regulations do not allow action to be taken on audience comments in which the subject is not listed on the agenda.

9. COUNCIL REPORTS

10. CITY MANAGER/CITY CLERK REPORTS

11. PUBLIC HEARINGS (6:15 PM)

12. UNFINISHED BUSINESS

- 12.a. Receive Status Report and Consider Any Action or Direction Related to the Novel Coronavirus (COVID-19) Emergency Including Operational Preparedness and Response; Continuity of City Operations and Services; Community and Business Impacts; and Any Other Related Matters.

Recommended Action: Receive status report and consider any action or direction related to the Novel Coronavirus (COVID-19) Emergency including operational preparedness and response; continuity of City operations and services; community and business impacts; and any other related matters.

Attachments: None

- 12.b. Consideration and Possible Approval of Option #2 in the October 20, 2020 Mead & Hunt Technical Memorandum (Attachment 1) to Protect for a Future 5,000-Foot Runway for CalFire and Other Operations; and Direction to Staff to Communicate Council's Recommendation to the Mendocino County Airport Land Use Commission.

Recommended Action: Approve Option #2 in the October 20, 2020 Mead & Hunt Technical Memorandum within Attachment 1 to protect for a future 5,000-foot runway for CalFire and other operations; and direct staff to communicate Council's direction to the Mendocino County Airport Land Use Commission.

Attachments:

1. UKI.C130 Memo.101920_complete
2. Airport Commission - Letter to Council 11-3-20

13. NEW BUSINESS

- 13.a. Consideration of Adoption of a Resolution Adopting the 2020 Multi-Jurisdictional Hazard Mitigation Plan for Mendocino County.

Recommended Action: Adopt the Resolution adopting the Mendocino County Multi-Jurisdictional Hazard Mitigation Plan required by Federal Emergency Management Agency (FEMA) to apply for funding under FEMA's Hazard Mitigation Assistance Program.

Attachments:

1. Volume 1 Mendocino MJHMP
2. Volume 2 Mendocino MJHMP
3. Resolution Adopting Hazard Mitigation Plan City of Ukiah

- 13.b. Receive Updates on City Council Committee and Ad Hoc Assignments, and, if Necessary, Consider Modifications to Assignments and/or the Creation/Elimination of Ad Hoc(s).

Recommended Action: Receive report(s). The Council will consider modifications to committee and ad hoc assignments along with the creation/elimination ad hoc(s).

Attachments:

1. 2020 City Council Special Assignments

14. CLOSED SESSION - CLOSED SESSION MAY BE HELD AT ANY TIME DURING THE MEETING

- 14.a. **Conference with Legal Counsel—Anticipated Litigation**

(Government Code Section 54956.9(d)(2))

Significant exposure to litigation pursuant to Government Code Section 54956.9(d)(2)(Number of potential cases: 3)

Recommended Action: Confer in Closed Session

Attachments: None

- 14.b. **Conference with Legal Counsel—Anticipated Litigation**

(Government Code Section 54956.9(d)(4))

Deciding whether to initiate litigation pursuant to paragraph (4) of subdivision (d) of Government Code Section 54956.9 (Potential Cases: 1)

Recommended Action: Confer in Closed Session

Attachments: None

- 14.c. **Conference with Legal Counsel – Existing Litigation**
(Government Code Section 54956.9(d)(1))
Name of case: Vichy Springs Resort v. City of Ukiah, Et Al; Case No. SCU-K-CVPT-2018-70200
Recommended Action: Confer in Closed Session
Attachments: None
- 14.d. **Conference with Legal Counsel – Existing Litigation**
(Cal. Gov't Code Section 54956.9(d)(1))
Name of case: City of Ukiah v. Questex, LTD, et al, Mendocino County Superior Court, Case No. SCU-K- CVPT-15-66036
Recommended Action: Confer in Closed Session
Attachments: None
- 14.e. **Conference with Labor Negotiator (54957.6)**
Agency Representative: Sage Sangiacomo, City Manager
Employee Organizations: All Bargaining Units
Recommended Action: Confer in Closed Session
Attachments: None
- 14.f. **Conference with Real Property Negotiators**
(Cal. Gov't Code Section 54956.8)
Property: APN Nos: 157-050-03, 157-060-02, 157-050-04, 157-050-03, 157-030-02, 157-050-01, 157-050-02, 157-050-10, 157-050-09, 157-070-01, 157-070-02, 003-190-01
Negotiator: Sage Sangiacomo, City Manager;
Negotiating Parties: Dave Hull and Ric Piffero
Under Negotiation: Price & Terms of Payment
Recommended Action: Confer in Closed Session
Attachments: None

15. **ADJOURNMENT**

Please be advised that the City needs to be notified 72 hours in advance of a meeting if any specific accommodations or interpreter services are needed in order for you to attend. The City complies with ADA requirements and will attempt to reasonably accommodate individuals with disabilities upon request. Materials related to an item on this Agenda submitted to the City Council after distribution of the agenda packet are available for public inspection at the front counter at the Ukiah Civic Center, 300 Seminary Avenue, Ukiah, CA 95482, during normal business hours, Monday through Friday, 8:00 am to 5:00 pm.

I hereby certify under penalty of perjury under the laws of the State of California that the foregoing agenda was posted on the bulletin board at the main entrance of the City of Ukiah City Hall, located at 300 Seminary Avenue, Ukiah, California, not less than 72 hours prior to the meeting set forth on this agenda.

Kristine Lawler, City Clerk
Dated: 11/13/2020

**CITY OF UKIAH
CITY COUNCIL MINUTES
Special Meeting**

Virtual Meeting: <https://attendee.gotowebinar.com/rt/4910662329263871245>

Ukiah, CA 95482

November 4, 2020

4:30 p.m.

1. ROLL CALL AND PLEDGE OF ALLEGIANCE

Ukiah City Council met at a Special Meeting on November 4, 2020, having been legally noticed on November 3, 2020. Mayor Crane called the meeting to order at 4:52 p.m. Roll was taken with the following **Councilmembers Present:** Maureen Mulheren, Jim O. Brown, Stephen G. Scalmanini (verified by City Manager Sangiacomo), Juan V. Orozco, and Douglas F. Crane. **Staff Present:** Sage Sangiacomo, City Manager; David Rapport, City Attorney; and Kristine Lawler, City Clerk.

MAYOR CRANE PRESIDING.

2. AUDIENCE COMMENTS ON NON-AGENDA ITEMS

No public comments were received.

THE CITY COUNCIL ADJOURNED FOR CLOSED SESSION AT 4:55 P.M.

3. CLOSED SESSION

a. Conference with Legal Counsel—Anticipated Litigation

(Government Code Section 54956.9(d)(2))

Significant exposure to litigation pursuant to Government Code Section 54956.9(d)(2)(Number of potential cases: 3)"

b. Conference with Legal Counsel—Anticipated Litigation

(Government Code Section 54956.9(d)(4))

Deciding whether to initiate litigation pursuant to paragraph (4) of subdivision (d) of Government Code Section 54956.9 (Potential Cases: 1)"

c. Conference with Legal Counsel – Existing Litigation

(Government Code Section 54956.9(d)(1))

Name of case: Vichy Springs Resort v. City of Ukiah, Et Al; Case No. SCUK-CVPT-2018-70200

d. Conference with Legal Counsel – Existing Litigation

(Cal. Gov't Code Section 54956.9(d)(1))

Name of case: City of Ukiah v. Questex, LTD, et al, Mendocino County Superior Court, Case No. SCUK- CVPT-15-66036

e. Conference with Labor Negotiator (54957.6)

Agency Representative: Sage Sangiacomo, City Manager

Employee Organizations: All Bargaining Units

f. Conference with Real Property Negotiators

(Cal. Gov't Code Section 54956.8)

Property: APN Nos: 157-050-03, 157-060-02, 157-050-04, 157-050-03, 157-030-02, 157-050-01, 157-050-02, 157-050-10, 157-050-09, 157-070-01, 157-070-02, 003-190-01

Negotiator: Sage Sangiacomo, City Manager; Negotiating Parties: Dave Hull and Ric Piffero

Under Negotiation: Price & Terms of Payment

Direction was given to staff.

4. ADJOURNMENT

There being no further business, the meeting adjourned at 5:55 p.m.

Kristine Lawler, City Clerk

**CITY OF UKIAH
CITY COUNCIL MINUTES
Regular Meeting**

<https://attendee.gotowebinar.com/rt/4910662329263871245>

November 4, 2020

6:00 p.m.

1. ROLL CALL

Ukiah City Council met at a Regular Meeting on November 4, 2020, having been legally noticed on October 30, 2020. The meeting was held virtually at the following link: <https://attendee.gotowebinar.com/rt/4910662329263871245>. Mayor Crane called the meeting to order at 6:03 p.m. Roll was taken with the following **Councilmembers Present:** Maureen Mulheren, Jim O. Brown, Stephen G. Scalmanini, Juan V. Orozco, and Douglas F. Crane. **Staff Present:** Sage Sangiacomo, City Manager; David Rapport, City Attorney; and Kristine Lawler, City Clerk.

MAYOR CRANE PRESIDING.

2. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Councilmember Brown.

3. PROCLAMATIONS/INTRODUCTIONS/PRESENTATIONS

a. Proclamation Recognizing November 14, 2020, as "World Diabetes Awareness Day" in the City of Ukiah.

Presenter: Vice Mayor Orozco.

Proclamation was received by Karin Ronk.

4. PETITIONS AND COMMUNICATIONS

5. APPROVAL OF MINUTES

a. Approval of the Minutes for the October 21, 2020, Regular Meeting.

Motion/Second: Mulheren/Brown to approve Minutes of October 21, 2020, a regular meeting, as submitted. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

6. RIGHT TO APPEAL DECISION

7. CONSENT CALENDAR

a. Report to Council for the Deep Ripping (Scarification) of Pond Number 1 at the Wastewater Treatment Plant to Mendocino Construction Services, Inc. (PO No. 46908) in the amount of \$11,775 – *Water Resources*.

b. Consider Approval of Community Development Technician I/II Position for the Community Development Department and Corresponding Budget Amendment – *Community Development*.

Motion/Second: Scalmanini/Brown to approve Consent Calendar Items 7a-7b, as submitted. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

8. **AUDIENCE COMMENTS ON NON-AGENDA ITEMS**

No public comment was received.

9. **COUNCIL REPORTS**

No reports were presented.

10. **CITY MANAGER/CITY CLERK REPORTS**

Presenter: Sage Sangiacomo, City Manager.

- **Recycled Water System Update** – Sean White, Water Resources Director
- **Construction Update** – Tim Eriksen, Public Works Director/City Engineer.
- **Marijuana Ad Hoc Meeting Update** – Craig Schlatter, Community Development Director.

11. **PUBLIC HEARINGS (6:15 PM)**

12. **UNFINISHED BUSINESS**

a. **Receive Status Report and Consider Any Action or Direction Related to the Novel Coronavirus (COVID-19) Emergency Including Operational Preparedness and Response; Continuity of City Operations and Services; Community and Business Impacts; and Any Other Related Matters.**

Presenter: Sage Sangiacomo, City Manager.

Report was received.

b. **Possible Adoption of Ordinance Amending Sign Ordinance.**

Presenter: David Rapport, City Attorney.

Motion/Second: Brown/Orozco to adopt amendment to Ukiah City Code Section 3224.C listing "Political Signs" as exempt from requiring a sign permit. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Orozco, and Crane. NOES: Scalmanini. ABSENT: None. ABSTAIN: None.

ORDINANCE NO. 1208

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF UKIAH AMENDING SECTION 3224 IN DIVISION 3, CHAPTER 7, ARTICLE 2 OF THE CITY CODE REGULATING THE POSTING OF POLITICAL CAMPAIGN SIGNS.

c. **Review of the Draft Objective Development and Design Standards and Flexible Parking Standards with Possible Direction to Staff to Prepare a Draft Zoning Ordinance Amendment Incorporating Both Sets of Standards into Ukiah City Code.**

Presenter: Mireya Turner, Planning Manager.

Motion/Second: Scalmanini/Mulheren to direct Staff to prepare a Draft Zoning Ordinance Amendment incorporating both sets of Standards into Ukiah City Code. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

d. Authorize the Inland Water and Power Commission to Execute the Second Amended Planning Agreement for the Potter Valley Project

Presenter: Sean White, Water Resources Director.

Motion/Second: Scalmanini/Orozco to authorize the Inland Water and Power Commission to execute the Second Amended Planning Agreement (*non-City agreement*) for the Potter Valley Project. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

13. NEW BUSINESS

a. Consideration of Adoption of a Resolution of Application for Annexation of City-Owned Properties to the Mendocino Local Agency Formation Commission; and Approval of a Community Development Director Determination that the Proposed Annexation Qualifies for a CEQA Exemption.

Presenter: Darcy Vaughn, Assistant City Attorney.

Motion/Second: Brown/Orozco to adopt Resolution (2020-61) of application for the City of Ukiah to annex City-owned properties; and approve the Community Development Director's determination that the proposed annexation qualifies for a CEQA Exemption. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

b. Authorize City Manager to Negotiate and Execute a Site Control Agreement Between the City of Ukiah and the Ukiah Unified School District Board, and Adoption of a Resolution Approving an Application to the Prop 68 Statewide Park Development and Community Revitalization Program Grant Funds for a Healthy Ukiah Sports Complex.

Presenter: Neil Davis, Community Services Program Administrator.

Motion/Second: Mulheren/Brown to authorize City Manager to negotiate and execute a site control agreement (*COU No. 2021-148*) between the City of Ukiah and the Ukiah Unified School District Board, and adoption of a Resolution (2020-62) approving an application to the Prop 68 Statewide Park Development and Community Revitalization Program Grant Funds for a Healthy Ukiah Sports Complex. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

c. Adopt Resolution Approving Award of Contract to Wipf Construction in the Amount of \$178,642 for the Emergency Repair of the Yosemite Drive Water Main and Approval of Corresponding Budget Amendment.

Presenter: Tim Eriksen, Public Works Director/City Engineer.

Motion/Second: Scalmanini/Orozco to adopt Resolution (2020-63) approving award of contract (*COU No. 2021-149*) to Wipf Construction in the amount of \$178,642 for the emergency repair of the Yosemite Drive Water Main, and approval of corresponding budget amendment. Motion **carried** by the following roll call votes: AYES: Mulheren, Brown, Scalmanini, Orozco, and Crane. NOES: None. ABSENT: None. ABSTAIN: None.

d. Receive Updates on City Council Committee and Ad Hoc Assignments and, if Necessary, Consider Modifications to Assignments and/or the Creation/Elimination of Ad hoc(s).

No reports were received.

14. CLOSED SESSION

a. Conference with Legal Counsel—Anticipated Litigation

(Government Code Section 54956.9(d)(2))

Significant exposure to litigation pursuant to Government Code Section 54956.9(d)(2)(Number of potential cases: 3)

b. Conference with Legal Counsel—Anticipated Litigation

Government Code Section 54956.9(d)(2)

Significant exposure to litigation pursuant to Government Code Section 54956.9(d)(2) (Number of potential cases: 1)

c. Conference with Legal Counsel – Existing Litigation

(Government Code Section 54956.9(d)(1))

Name of case: *Vichy Springs Resort v. City of Ukiah, Et Al; Case No. SCUK-CVPT-2018-70200*

d. Conference with Legal Counsel – Existing Litigation

(Cal. Gov't Code Section 54956.9(d)(1))

Name of case: *City of Ukiah v. Questex, LTD, et al, Mendocino County Superior Court, Case No. SCUK- CVPT-15-66036*

e. Conference with Labor Negotiator (54957.6)

Agency Representative: Sage Sangiacomo, City Manager

Employee Organizations: All Bargaining Units

f. Conference with Real Property Negotiators

(Cal. Gov't Code Section 54956.8)

Property: APN Nos: 157-050-03, 157-060-02, 157-050-04, 157-050-03, 157-030-02, 157-050-01, 157-050-02, 157-050-10, 157-050-09, 157-070-01, 157-070-02, 003-190-01

Negotiator: Sage Sangiacomo, City Manager;

Negotiating Parties: Dave Hull and Ric Piffero

Under Negotiation: Price & Terms of Payment

No Closed Session was held.

15. ADJOURNMENT

There being no further business, the meeting adjourned at 7:13 p.m.

Kristine Lawler, City Clerk



AGENDA SUMMARY REPORT

SUBJECT: Report of Disbursements for the Month of October 2020.

DEPARTMENT: Finance **PREPARED BY:** Candice Rasmason, Accounts Payable

PRESENTER: Consent Calendar

ATTACHMENTS:

1. October 2020 Summary of Disbursements
2. Account Codes for Reference
3. Object codes for Reference
4. October 2020 Disbursement Detail

Summary: The Council will review and consider approval of the Report of Disbursements for the month of October 2020.

Background: Payments made during the month of October 2020 are summarized on the Report of Disbursements. Further detail is supplied on the Schedule of Bills, representing the five (5) individual payment cycles within the month.

Accounts Payable Check Numbers (City & UVFA): 3040036-3040129; 3040130-3040208; 3040209-3040311; 3040312-3040391; 3040392-3040471

Accounts Payable Wire Transfers: 32

Payroll Check Numbers: 508212-508228; 508229-508248

Payroll Manual Check Numbers: N/A

Direct Deposit Numbers: 101139-101355; 101356-101584

Manual Direct Deposit Numbers: N/A

Void Check Numbers: N/A

Void Direct Deposit Numbers: 100630

Discussion: This report is submitted in accordance with Ukiah City Code Division 1, Chapter 7, Article 1.

Attachment #1: October 2020 Summary of Disbursements

Attachment #2: Account Codes for Reference

Attachment #3: Object Codes for Reference

Attachment #4: October 2020 Disbursement Detail

Recommended Action: Approve the Report of Disbursements for the Month of October 2020.

BUDGET AMENDMENT REQUIRED: N/A

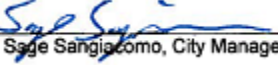
CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: N/A

Approved: 
Sage Sangiacomo, City Manager

Attachment 1

611	Retainage Withheld CDBG 16-CDBG-11147	<u>\$74,148.42</u>
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Account Code Summary

Attachment 2

10000000	General Fund	20526430	Electric Department - Meter Readers
10010000	City Council	20620231	Ukiah Dispatch
10011100	City Clerk	20620232	Ft Bragg Dispatch
10011300	Elections	20700000	Payroll Posting Fund
10012100	City Manager	20822500	Building Maintenance
10012200	Administrative Support	20824300	Corporation Yard
10012400	Miscellaneous General Government	20922900	IT Fund
10013400	Finance Department	22013300	FA Replace - Finance UB
10014000	City Attorney	22020200	FA Replace - Police Operations
10015100	Treasury Management	22021210	FA Replace - Fire Administration
10016100	Human Resources	22022900	FA Replace - Information Technology
10017100	Economic Development	22024100	FA Replace - Garage
10018000	Community Outreach	22024220	FA Replace - Streets
10020217	Animal Control	22024413	FA Replace - Water Distribution Cap
10022100	Parks	22024414	FA Replace - Water Distribution O&M
10022300	Aquatics	22024421	FA Replace - City Wastewater
10022800	Recreation	25024210	Engineering Reserve
10022810	Recreation Administration	25024300	Corporation Yard Reserve
10022821	Adult Basketball	25122900	CIP - IT
10022822	Adult Softball	25123100	CIP - Planning
10022824	Co-Ed Volleyball	25124210	CIP - Engineering
10022831	Youth Basketball	25124220	CIP - Streets
10022832	Youth Softball	25124410	CIP - Water
10022840	Day Camp	25124421	CIP - City Wastewater
10022850	Classes & Clinics	25126410	CIP - Electric
10022860	Special Activities	30022200	Park Development
10023100	Community Planning	30122210	Anton Stadium
10023320	Building Inspection	30222220	Observatory Park
10024210	Engineering	30522250	Riverside Park
10024214	Traffic Signals	30622260	Skate Park
10024620	Streets	30822280	Project Planning
10024224	Storm Drains	31022700	Museum Grant
10514000	Police - City Attorney	31122000	Alex Rorabaugh Recreation Center
10520210	Patrol	31217100	Downtown Business Improvement District
10520214	Police Reserves	50524210	Engineering - Signalization Fund
10520216	COPS Grant	50624210	Capital Engineering
10520218	Police - CSO	50824210	SB325 - Engineering
10520224	Police - Major Crimes Task Force	50824220	SB325 - Streets
10521210	Fire Administration	50924210	STP - Engineering
10521312	Fire Volunteer Station	50924220	STP - Streets
20112400	Worker's Compensation Fund	51024220	Trans - Traffic Slurry Seal
20212400	Liability Fund	510X9999	Trans -Traffic Project
20324100	Garage Fund	60217441	Grant - CDBG 602
20413500	Purchasing Fund	60317442	Grant - HOME 603
20513300	Billing and Collections	60417441	Grant - CDBG 604
20514000	Billing and Collections - City Attorney	60517442	Grant - HOME 605
20524412	Water Department - Meter Readers	60517461	First Time Homebuyer Program

Account Code Summary

Attachment 2

60517462	FTHB Activity Delivery	80026130	Electric Substation
60517467	FTHB - PIR	80026140	Reimbursable Work for Others
60600000	CDBG Grant 10-EDEF-7261 Fund	80026200	Electric Metering
60617441	Grant - CDBG 606	80026300	Electric Generation
60617451	General Administration	80026312	Mendocino Hydro
60617452	AD ED Direct Financial Assistance	80026330	Hydro Electric
60617453	ED Direct Financial Assistance	80026400	Electric Administration
60717443	Grant Prop 84	80026410	Electric General Administration
60724413	Prop 84 Water Distribution Cap	80026430	Interdepartmental Charges
60900000	13-CDBG-8940	80326330	Hydro Plant
60917458	13-CDBG-8940	80526610	Street Lighting
63020210	Asset Seizure Expenditure	80626500	Public Benefit
63120210	Drug & Alcohol Education	82027110	Water
63320210	H&S Asset Seizure Expenditure	82027111	Water - Production O&M
63420250	Fed Asset Seizure Expenditure	82027113	Water - Distribution Capital
63520210	SLESF	82027114	Water - Distribution O&M
63820210	Asset Forfeiture 11470	82027115	Water - Production Capital
64020213	Parking Enforcement	82227113	Water - Distribution Capital
69122700	Museum	84027220	Wastewater
70024500	Landfill 700	84027221	Wastewater City - O&M
70224500	Landfill Closure	84027222	Wastewater City - Capital
70424500	Landfill Post closure	84027225	Wastewater Treatment - O&M
72022400	Golf	84027226	Wastewater Treatment - Capital
73022600	Conference Center	84227220	Wastewater
75017110	Visit Ukiah	84327222	Wastewater City - Capital
77725200	Airport Operations	84427221	Wastewater City Capital - O&M
77817411	FAA Grant	84427222	Wastewater City - Capital
80026100	Electric Administration	90000000	Special Deposit Trust Fund
80026110	Electric Overhead	91190100	Russian River Watershed Assoc
80026120	Electric Underground	96900000	Successor Agency
80100000	Infrastructure		

Object Code Summary

Attachment 3

12102	INVENTORY OF SUPPLIES	52526	FRAUD INVEST. ASSESSMENT
12103	STORES PURCHASES	52527	A.D.P. PREMIUM & DEDUCTIBLE
12104	INVENTORY - PURCHASES	52528	LIABILITY INSURANCE
12105	STORES ISSUES	52529	EARTHQUAKE & FLOOD PREMIUMS
51211	PERS UNFUNDED LIABILITY	52530	POLLUTION-ENVIRON INS PREMIUM
51280	OVERTIME/CALLOUT MEALS	52531	UMEMPLOY. INS EXPENSE
51285	CALLOUT MILEAGE REIMBURSEMENTS	52532	SAFETY & TRAINING SUPPORT
52100	CONTRACTED SERVICES	52600	RENT
52107	CONTRACTED SERVICES-EIR	52841	SUCCESSOR AGENCY ADMIN
52108	CONTRACT SERVICES-GPU	54100	SUPPLIES
52110	AMBULANCE BILLING	54101	POSTAGE
52111	MAINT. CONTRCTS - DEFIBRULATOR	54102	SMALL TOOLS
52112	M. S. OVERSIGHT	54105	PHOTOGRAPHIC EXPENSE
52113	PLANNING STUDIES	54106	SPECIALTY SUPPLIES
52114	COMPLIANCE STUDIES	54120	PW - SPECIAL SUPPLIES
52120	LABOR CHARGES FROM OTHER DEPAR	54121	PW - ASPHALT CONCRETE
52130	EDUCATIONAL & MARKETING MATL'S	54122	PW - AGGREGATE BASE
52131	ASSISTANCE TO SENIORS	54123	PW - CRACK SEALANT
52132	EMERGENCY ASSISTANCE	54124	PW - CONCRETE/SUPPLIES
52133	MONTHLY DISCOUNT PROGRAM	54125	PW - TRAFFIC PAINT
52134	CONTRACT ADMINISTRATION	54126	PW-PREMARKS
52135	ENERGY CONSERVATION PROGRAM	54127	PW - SIGN POSTS/SHEETING
52136	PHOTOVOLTAIC RATES/INCENTIVE	54128	PW - COLD PATCH MATERIAL
52137	PUBLIC BENEFITS PROGRAM MGMT	54129	PW - TACK OIL
52138	NCPA PUBLIC BENEFITS PROGRAM	54130	PW - SAFETY
52139	RESEARCH, DEVELOPMENT & DEMO	54131	PW - BARRICADES & CONES
52140	LITIGATION EXPENSES	54160	HR - CITY LIABILITY & CONTRACT
52145	DETACHMENT-SEWER-UVSD	54161	HR - BACKGROUND & PHYSICALS
52150	LEGAL SERVICES/EXPENSES	54162	HR - ADVERTISING
52151	AFLAC & PERS INSUR ADMIN FEES	54163	HR - INTERVIEW SUPPLIES
52170	UKIAH WASTE SOLUTIONS	54164	HR - FORMS & OTHER DIV. EXP.
52171	RESIDENTIAL BILLING CHARGE	54165	HR - NEW EMPLOYEE FINGERPRINT
52172	COMMERCIAL OVERSIGHT FEE	54166	HR - DOT TESTING PROGRAM
52180	SECURITY SERVICES	54167	HR - EMPLOYEE DEVELOPMENT
52301	PROPERTY TAX ADMIN FEE	54168	HR - REMIF SAFETY TRNG & SUPPO
52302	AMBULANCE FEES	54201	PRISONER EXPENSE
52303	REHIT SUPPORT	54202	MAJOR CRIME INVETIGATIONS
52304	LAFCO FEES AND PROP TAX EXP	54320	SOFTWARE
52500	TRUSTEE FEES	54330	COMPUTER AND TECHNOLOGY
52510	ADVERTISING & PROMOTION	54500	EQUIP RENTS AND LEASES
52515	ADVERTISING & PUBLICATION	54700	FINES & PENALTIES
52521	LIABILITY INSURANCE PREMIUM	55100	TELEPHONE
52522	LIABILITY INSURANCE DEDUCT	55200	PG&E
52523	BOILER/MACHINERY PREMIUMS	55210	UTILITIES
52524	PROPERTY INSURANCE	56100	VEHICLE & EQUIPMENT MAINT. & R
52525	WORKER'S COMP. EXPENSE	56110	CITY GARAGE - PARTS

56121	R & M RADIO EQUIPMENT	56111	CITY GARAGE - LABOR
56122	R & M NON-AUTO EMS EQUIPMENT	56112	EQUIPMENT PARTS FOR RESALE
56123	R & M COMPUTERS	56120	EQUIPMENT MAINTENANCE & REPAIR
56124	MAINT CONTRACT DEFIBULATORS	80235	SYSTEM MAINTENANCE
56130	EXTERNAL SERVICES	80236	EMERGENCY/CONTINGENCY
56210	FUEL & FLUIDS	90100	LOAN PROCEEDS
56300	BUILDING MAINT. & REPAIR	90101	LOAN PAYMENT RECEIVED
56410	EQUIPMENT RENTAL - PRIVATE	90301	LOAN REPAYMENT
56504	FACILITY MAINTENANCE & REPAIR	90410	BOND PROCEEDS
56600	AIRFIELD MAINTENANCE & REPAIR		
56700	LANDFILL CLOSURE EXPENSE		
57100	CONFERENCE & TRAINING		
57101	CONF & TRAINING-AQUATICS		
57102	CONF & TRAINING-PARKS STAFF		
57200	MEETINGS		
57300	MEMBERSHIPS & SUBSCRIPTIONS		
58101	NCPA PLANT GENERATION		
58102	NCPA POWER PURCHASES		
58103	NCPA TRANSMISSION		
58104	NCPA MANAGEMENT SERVICES		
58105	NCPA THIRD PARTY SALES		
58106	NCPA PASS THROUGH COSTS		
58107	NCPA COMMITMENTS ACTIVITY		
58201	WATER PURCHASES		
58202	WATER TREATMENT PLANT CHEMICAL		
58401	AVIATION FUEL		
58410	GARAGE LUBRICANTS & PARTS		
58510	REIMBRASABLE JOBS		
59100	PROPERTY TAXES PAID		
59101	FEES		
59102	FRANCHISE FEES		
59350	PURCHASE DISCOUNTS TAKEN		
59400	OTHER EXPENSES		
70101	LOAN PAYMENTS MADE		
70102	BOND INTEREST PAYMENTS		
70110	BOND ISSUANCE COSTS		
70201	LOAN PRINCIPAL PAYMENTS		
70202	BOND PRINCIPAL PAYMENTS		
80100	MACHINERY & EQUIPMENT		
80200	BUILDINGS ACQUISITION		
80210	LAND ACQUISITION		
80220	BUILDING IMPROVEMENTS		
80230	INFRASTRUCTURE		
80231	RECYCLING STUDY 50% GRANT MATC		
80232	LINE REPLACEMENTS		
80233	MAIN REPLACEMENTS		
80234	INFLOW/INFILTRATION		

List of Checks Presented for Approval on 10/2/2020

The following list of bills payable was reviewed and approved for payment.

CR 10.26.20

Signature

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ADVANCED SECURITY SYSTEMS	534058	LATE FEE FOR MONTHLY ALARM SERVICES FOR 130	\$0.50	10021210-52180	SECURITY SERVICES	\$0.25
				91521400-52180	SECURITY SERVICES	\$0.25
	524454	MONTHLY ALARM SERVICES FOR 130	\$24.75	10021210-52180	SECURITY SERVICES	\$12.38
				91521400-52180	SECURITY SERVICES	\$12.37
	528433	MONTHLY ALARM SERVICES FOR 130	\$25.75	10021210-52180	SECURITY SERVICES	\$12.87
				91521400-52180	SECURITY SERVICES	\$12.88
	531939	MONTHLY ALARM SERVICES FOR 130	\$25.75	10021210-52180	SECURITY SERVICES	\$12.88
				91521400-52180	SECURITY SERVICES	\$12.87
	Vendor Total:					\$76.75
ALL STAR FIRE EQUIPMENT, INC	226504	KEY TYPE II SINGLE JACKET WILD	\$2,567.43	25321210-54102	SMALL TOOLS	\$1,283.72
				91621400-54102	SMALL TOOLS	\$1,283.71
				Vendor Total:		
ALL-GUARD ALARM SYSTEMS INC	A293781	MONTHLY MONITORING AT WWTP	\$91.40	84027225-52180	SECURITY SERVICES	\$91.40
				Vendor Total:		
AMANDA M BROWN	DV071420 1	INSTRUCTOR	\$336.00	10022850-52100	CONTRACTUAL SERVICES	\$336.00
	DV071420	INSTRUCTOR	\$462.00	10022850-52100	CONTRACTUAL SERVICES	\$462.00
	DV081720	INSTRUCTOR	\$700.00	10022850-52100	CONTRACTUAL SERVICES	\$700.00
	DV081820	INSTRUCTOR	\$700.00	10022850-52100	CONTRACTUAL SERVICES	\$700.00
	Vendor Total:					\$2,198.00
AMAZON CAPITAL SERVICES	13CL-7TW6-3YPJ	LED LIGHT BULBS	\$27.20	84027225-56300	BUILDING MAINT. & REPAIR	\$27.20
	1WV6-T1XW-LCWR	LED LIGHT BULBS	\$310.20	84027225-56300	BUILDING MAINT. & REPAIR	\$310.20
	1HDT-DFTG-KGV7	RADWELL BULBS	\$81.55	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$81.55
	1GMM-CVCJ-QN3G	INFORMATION SYSTEMS STUDY GUIDE	\$63.76	20913900-57100	LEARNING AND DEVELOPMENT	\$63.76

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
AMAZON CAPITAL SERVICES	1G94-CF19-G11F	POLICE BOOKS	\$187.08	10020210-54100	SUPPLIES	\$187.08
					Vendor Total:	\$669.79
ARROW FENCING	80972	ALL LABOR AND EQUIPMENT TO REM	\$5,372.61	82027111-56300	BUILDING MAINT. & REPAIR	\$5,372.61
					Vendor Total:	\$5,372.61
AT&T	2463 AUG 20	FAX SERVICES - S STATION	\$45.30	10021210-55100	TELEPHONE	\$22.65
				91521400-55100	TELEPHONE	\$22.65
	2463 SEP 20	FAX SERVICES - S STATION	\$58.69	10021210-55100	TELEPHONE	\$29.34
				91521400-55100	TELEPHONE	\$29.35
					Vendor Total:	\$103.99
CAROLLO ENGINEERS INC	0190150	DESIGN PHASES I&II RECYCLED WA	\$8,234.30	83027330-80230	INFRASTRUCTURE	\$8,234.30
					Vendor Total:	\$8,234.30
CHARGEPOINT INC	IN82719	CHARGEPOINT ASSURE LICENSE	\$5,847.00	80026400-52100	CONTRACTUAL SERVICES	\$5,847.00
					Vendor Total:	\$5,847.00
CHRISTOPHER JOHN DIAZ	9/18/20	INSTALLATION OF NEW 200AMP 3-P	\$4,762.92	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$4,762.92
					Vendor Total:	\$4,762.92
CINDY SAUERS	DV092520	REIMBURSEMENT-LUNCHEON MEETING	\$119.48	80026400-54100	SUPPLIES	\$119.48
					Vendor Total:	\$119.48
COFFEE CRITIC INC, THE	R24519	MISC. COFFEE SUPPLIES AS NEEDED	\$90.00	20012200-54100	SUPPLIES	\$90.00
					Vendor Total:	\$90.00
COMCAST	0472 AUG 20	INTERNET SERVICES	\$162.31	20913900-55100	TELEPHONE	\$162.31
					Vendor Total:	\$162.31
DANA W BURWELL	DV092920	APPRAISALS	\$1,500.00	20012200-52100	CONTRACTUAL SERVICES	\$1,500.00
					Vendor Total:	\$1,500.00
DC ELECTRIC GROUP INC	414600	ORCHARD AND PERKINS TRAFFIC SI	\$2,247.73	10024224-52100	CONTRACTUAL SERVICES	\$2,247.73
					Vendor Total:	\$2,247.73
DC FROST ASSOCIATES INC	42062	PART #10000286-008, WEAR STRIP	\$8,015.49	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$8,015.49
					Vendor Total:	\$8,015.49
DEEP VALLEY SECURITY	365847	16CH HD-TVI DVR	\$1,186.36	10022700-52180	SECURITY SERVICES	\$1,186.36
	367081	ALARM SERVICES PER ATTACHED CO	\$110.89	20824300-52180	SECURITY SERVICES	\$110.89
					Vendor Total:	\$1,297.25

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
DIAMOND D CONSTRUCTION	90820-1	THOMAS PLAZA IMPROVEMENT PROJE	\$165,292.32	80126100-80230	INFRASTRUCTURE	\$60,000.00
				80126100-80230	INFRASTRUCTURE	\$105,292.32
				Vendor Total:		\$165,292.32
EFFICIENCY SERVICES GROUP LLC	2871	ADMIN OF EUD PUBLIC BENEFITS P	\$3,500.00	80626450-52137	PUBLIC BENEFITS PROGRAM MGMT	\$3,500.00
				Vendor Total:		\$3,500.00
EPIC AVIATION LLC	7350830	JET A FUEL	\$12,056.19	77725200-58401	AVIATION FUEL	\$12,056.19
	7348414	JET A FUEL	\$12,790.26	77725200-58401	AVIATION FUEL	\$12,790.26
	7350451	AVGAS 110LL	\$24,981.66	77725200-58401	AVIATION FUEL	\$24,981.66
	Vendor Total:		\$49,828.11			
EUREKA OXYGEN CO	470170	EQUIPMENT MAINTENANCE	\$480.59	10020210-56130	EXTERNAL SERVICES	\$480.59
				Vendor Total:		\$480.59
FARWEST CORROSION CONTROL COMPANY	0353093-IN	MAGNESIUM ANODES, PIPE CORE	\$1,061.34	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$1,061.34
				Vendor Total:		\$1,061.34
FASTENAL	CAUKA40401	MISC. SUPPLIES AS NEEDED	\$85.96	77725200-56300	BUILDING MAINT. & REPAIR	\$85.96
				Vendor Total:		\$85.96
FEDERAL EXPRESS	7-126-66659	SHIPPING SERVICES	\$180.19	10020210-54101	POSTAGE	\$20.59
				10020210-54101	POSTAGE	\$20.95
				10020210-54101	POSTAGE	\$31.40
				10020210-54101	POSTAGE	\$44.80
				70024500-54101	POSTAGE	\$29.71
				84027225-54101	POSTAGE	\$32.74
				Vendor Total:		\$180.19
FIRST ALARM	568235	ALARM MONITORING	\$166.86	10020210-52180	SECURITY SERVICES	\$120.51
				20822500-52180	SECURITY SERVICES	\$46.35
				Vendor Total:		\$166.86
FRED PRYOR SEMINARS	5581535	MEMBERSHIP - C RASMASON	\$199.00	20013210-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$199.00
				Vendor Total:		\$199.00
GENERAL PACIFIC INC	1378876	(TI-W397) TIE, WRAPLOCK #WTF-0	\$3,037.07	80000000-12104	INVENTORY - PURCHASES	\$3,037.07

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
GENERAL PACIFIC INC	1381918	(2U-CA-20) PEDESTAL, DEAD FRON	\$13,909.87	80000000-12104	INVENTORY - PURCHASES	\$13,909.87
	1380505	ITRON #ITR G980710, C1SDR3, FM	\$718.58	80026200-54100	SUPPLIES	\$718.58
					Vendor Total:	\$17,665.52
GENERAL SERVICES AGENCY	OCT 20	SPANISH MTN SUBLEASE MO RENT-	\$50.00	20620231-52100	CONTRACTUAL SERVICES	\$50.00
					Vendor Total:	\$50.00
GEORGE DUTTON	20-043	NARRATIVE APPRAISAL REPORT FOR GOBBI	\$2,500.00	80026400-52100	CONTRACTUAL SERVICES	\$2,500.00
					Vendor Total:	\$2,500.00
GEORGE WHITNEY	IUKIAH-003	1-YEAR SUBSCRIPTION TO COMPELTE EM	\$7,500.00	20012800-54320	SOFTWARE	\$7,500.00
					Vendor Total:	\$7,500.00
GOLDEN STATE EMERGENCY VEHICLE SERVICE INC	CI024400	COIL FOR DIRECTIONAL VALVE HUSKY 3	\$80.44	10021210-56130	EXTERNAL SERVICES	\$80.44
	CI024304	DIRECTIONAL VALVE HUSKY 3	\$99.31	10021210-56130	EXTERNAL SERVICES	\$99.31
	CI024421	BELLOWS, EXHAUST, SS CLAMPS, GASKETS	\$667.13	10021210-56130	EXTERNAL SERVICES	\$667.13
	CI024507	LVDT ROD TRANSDUCER W/ENDS	\$974.23	10021210-56130	EXTERNAL SERVICES	\$974.23
	CI023799	SWITCH, ROCK WHT SPDT, NO CTR PS	\$46.83	91521400-56130	EXTERNAL SERVICES	\$46.83
					Vendor Total:	\$1,867.94
GRANITE CONSTRUCTION COMPANY	1864241	MISC ROCK & ROAD PATCH MATERIA	\$377.58	84027221-54100	SUPPLIES	\$377.58
					Vendor Total:	\$377.58
HERC RENTALS INC	31659951-001	1 WEEK RENTAL OF EXCAVATOR	\$3,426.18	82027111-56410	EQUIPMENT RENTAL - PRIVATE	\$2,008.44
				84027225-56410	EQUIPMENT RENTAL - PRIVATE	\$1,417.74
					Vendor Total:	\$3,426.18
HOME DEPOT CREDIT SERVICES	0013092	DRYWALL	\$19.03	20822500-56300	BUILDING MAINT. & REPAIR	\$19.03
	4033130	SPRAY BOTTLE, TOMCAT GLUE	\$25.64	20822500-56300	BUILDING MAINT. & REPAIR	\$25.64
	6073237	CHLORINE GRANULES	\$244.90	84027225-58202	CHEMICALS	\$244.90
	8032014	SUPPLIES FOR ROTAMETER CLEANING KIT AT WWTP	\$145.22	84027225-54102	SMALL TOOLS	\$145.22
	6523995	DISINFECTING WIPES	\$26.00	20822500-54100	SUPPLIES	\$26.00
	1511220	GORILLA DUCT TAPE, RUST SEMI-GLOSS WHT	\$30.09	82027111-54100	SUPPLIES	\$30.09

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
HOME DEPOT CREDIT SERVICES	6033704	28THRUSET	\$38.07	82027114-54100	SUPPLIES	\$38.07
	7511482	TELESCOPIC POLE, BRUSHES, CASTER NON-MARK	\$148.58	84027225-54100	SUPPLIES	\$148.58
					Vendor Total:	\$677.53
INERTIA ENGINEERING INC	34654	(SW-MF-1) SWITCH, INERTIA ENG	\$17,994.52	80000000-12104	INVENTORY - PURCHASES	\$17,994.52
					Vendor Total:	\$17,994.52
INTEGRITY SHRED LLC	110503	DOCUMENT SHREDDING	\$28.50	10020210-54100	SUPPLIES	\$28.50
					Vendor Total:	\$28.50
INTERWEST CONSULTING GROUP INC	62872	ON-CALL BUILDING & PLAN CHECK	\$1,069.99	10023320-52100	CONTRACTUAL SERVICES	\$1,069.99
					Vendor Total:	\$1,069.99
IWORQ SYSTEMS INC	193393	IWORQ SYSTEMS INTERNET SOFTWARE	\$19,000.00	10024224-54320	SOFTWARE	\$2,000.00
				10024620-54320	SOFTWARE	\$4,000.00
				20324100-54320	SOFTWARE	\$2,000.00
				82027114-54320	SOFTWARE	\$6,250.00
				84027221-54320	SOFTWARE	\$3,250.00
				84027225-54320	SOFTWARE	\$1,500.00
					Vendor Total:	\$19,000.00
JACK MILLER	20035	LABOR TO REPAIR / UPDATE SCADA	\$4,960.18	82027111-52100	CONTRACTUAL SERVICES	\$4,960.18
					Vendor Total:	\$4,960.18
JACK WANN	DV090120	INSTRUCTOR	\$409.50	10022850-52100	CONTRACTUAL SERVICES	\$409.50
					Vendor Total:	\$409.50
JASON SODERQUIST	H0092786	PURPLE PAINT	\$146.14	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$146.14
					Vendor Total:	\$146.14
JUDY CHAN	OCT 20	OCT 20 RENT - MASON ST	\$1,175.75	10022100-52600	RENT	(\$176.25)
				10022100-52600	RENT	(\$96.00)
				10022100-52600	RENT	\$1,448.00
					Vendor Total:	\$1,175.75
KATHERINE ESCOBEDO	DV090420	INSTRUCTOR	\$500.50	10022850-52100	CONTRACTUAL SERVICES	\$500.50
	DV090420 1	INSTRUCTOR	\$500.50	10022850-52100	CONTRACTUAL SERVICES	\$500.50
	DV082220	INSTRUCTOR	\$577.50	10022850-52100	CONTRACTUAL SERVICES	\$577.50

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
KATHERINE ESCOBEDO	DV082220 1	INSTRUCTOR	\$577.50	10022850-52100	CONTRACTUAL SERVICES	\$577.50
					Vendor Total:	\$2,156.00
LARRY WALKER ASSOCIATES INC	00564.07-6	APPLICATION PREPARATION (NPDES	\$3,996.56	84027225-52100	CONTRACTUAL SERVICES	\$3,996.56
					Vendor Total:	\$3,996.56
LEHR AUTO ELECTRIC	SI49675	CRADLEPOINT #MA1-0900120B-NNA:	\$2,208.35	10020210-56130	EXTERNAL SERVICES	\$934.50
				10020210-56130	EXTERNAL SERVICES	\$1,273.85
					Vendor Total:	\$2,208.35
LIFE ASSIST INC	1035778	LIDOCAINE, ELECTRODES, GLUCOSE, SODIUM CHLORIDE	\$106.30	10021210-54107	EMS SUPPLIES	\$53.15
				91521400-54107	EMS SUPPLIES	\$53.15
					Vendor Total:	\$106.30
LORELEI SCOTT	8119	WOMENS SUFFRAGE BANNER	\$188.14	20012300-52510	ADVERTISING & PROMOTION	\$188.14
					Vendor Total:	\$188.14
MENDOCINO COUNTY TAX COLLECTOR	180-120-16 19/20	PROPERTY TAXES	\$171.56	82027110-59100	PROPERTY TAXES PAID	\$171.56
					Vendor Total:	\$171.56
MINTIER HARNISH LP	UKIAHSB2-06.1	GPU, EIR & ADVANCED PLANNING S	\$630.00	31523100-52100	CONTRACTUAL SERVICES	\$630.00
					Vendor Total:	\$630.00
MOIRS	163206	MISC. POOL SUPPLIES AS NEEDED	\$54.43	20822500-56300	BUILDING MAINT. & REPAIR	\$54.43
	162685	MISC. POOL SUPPLIES AS NEEDED	\$331.39	82027111-58202	CHEMICALS	\$331.39
	163274	MISC. POOL SUPPLIES AS NEEDED	\$345.83	82027111-58202	CHEMICALS	\$345.83
	163115	MISC. POOL SUPPLIES AS NEEDED	\$441.86	82027111-58202	CHEMICALS	\$441.86
	162899	MISC. POOL SUPPLIES AS NEEDED	\$607.56	82027111-58202	CHEMICALS	\$607.56
	162749	MISC. POOL SUPPLIES AS NEEDED	\$108.85	84027225-58202	CHEMICALS	\$108.85
	162949	MISC. POOL SUPPLIES AS NEEDED	\$304.81	84027225-58202	CHEMICALS	\$304.81
	162673	MISC. POOL SUPPLIES AS NEEDED	\$415.46	10022300-54106	SPECIALTY SUPPLIES	\$415.46
					Vendor Total:	\$2,610.19
NETWORK FOR GOOD INC	INV00184747	ALL IN ONE FUNDRAISING PLATFOR	\$1,800.00	10022700-54320	SOFTWARE	\$1,800.00
					Vendor Total:	\$1,800.00
NFP NATIONAL ACCOUNT SERVICES INC	20-10 NFP	OCT 20 NFP INSURANCE	\$2,848.37	20700000-20523	P/R DEDUCT-LTD	\$2,517.62

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
NFP NATIONAL ACCOUNT SERVICES INC	20-10 NFP	OCT 20 NFP INSURANCE	\$2,848.37	20700000-20512	REMIF LIFE	\$36.75
				20700000-20512	REMIF LIFE	\$294.00
				Vendor Total:		\$2,848.37
OLIN CORPORATION	23304989	SODIUM HYDROXIDE 30%	\$4,553.02	82027111-58202	CHEMICALS	\$4,553.02
	2869621	LIQUID SODIUM HYPOCHLORITE	\$3,912.70	84027225-58202	CHEMICALS	\$3,912.70
	2875840	LIQUID SODIUM HYPOCHLORITE	\$4,199.71	84027225-58202	CHEMICALS	\$4,199.71
	Vendor Total:			\$12,665.43		
ONE TIME PAY VENDOR	103798-5	UTILITY REFUND-FRANCES KUTCHER	\$52.73	90100000-10421	UTILITY RECEIVABLES CLEARING	\$52.73
	121036-8	UTILITY REFUND-LIZET & DANIEL ANSALDO	\$65.37	90100000-10421	UTILITY RECEIVABLES CLEARING	\$65.37
	107682-7	UTILITY REFUND-CHON TRAVIS & SARA DOCKINS	\$123.64	90100000-10421	UTILITY RECEIVABLES CLEARING	\$123.64
	Vendor Total:			\$241.74		
ONLINE INFORMATION SRVS INC	1013549	UTILITY EXCHANGE REPORTING FY	\$184.07	20513300-52100	CONTRACTUAL SERVICES	\$184.07
	Vendor Total:			\$184.07		
OSMOSE UTILITIES SERVICES INC	INV1212476	#15-010-000-004: O-CALC MAINT	\$1,485.00	80026400-54320	SOFTWARE	\$1,485.00
	Vendor Total:			\$1,485.00		
PACE SUPPLY CORPORATION	026335967	B16 CONCRETE BOX WITH KNOCK OU	\$5,651.53	82227113-80230	INFRASTRUCTURE	\$5,651.53
	026328693	GRIPPER CHERNE, ELL BRASS	\$240.60	82000000-12104	INVENTORY - PURCHASES	\$240.60
	026340166	RATCHET SHEARS	\$126.35	82027114-54102	SMALL TOOLS	\$126.35
	026364326	TEE GASKETED	\$128.24	84027221-54100	SUPPLIES	\$128.24
	Vendor Total:			\$6,146.72		
PACIFIC REDWOOD MEDICAL GROUP INC	2994	BACKGROUND & PHYSICALS	\$134.40	84027221-54161	BACKGROUND & PHYSICALS	\$134.40
	3026	BACKGROUND & PHYSICALS	\$235.20	84027225-54161	BACKGROUND & PHYSICALS	\$235.20
	Vendor Total:			\$369.60		
PETERSON TRUCKS INC	230327R	FILTER OIL & FUEL	\$46.95	84027221-56130	EXTERNAL SERVICES	\$46.95
	230565RX1	DISPOSABLE CENTRIFUGE	\$34.05	91521400-56130	EXTERNAL SERVICES	\$34.05
	230567RX1	DISPOSABLE CENTRIFUGE	\$34.05	20324100-58510	REIMBURSABLE JOBS	\$34.05
	Vendor Total:			\$115.05		

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
PG&E CO	3822-9 AUG 20	PACIFIC GAS & ELECTRIC	\$6,618.35	84027225-55200	PG&E	\$1,787.00
				10022100-55210	UTILITIES	\$9.20
				10022300-55210	UTILITIES	\$8.11
				10022700-55210	UTILITIES	\$15.63
				20822500-55210	UTILITIES	\$93.48
				70024500-55210	UTILITIES	\$526.21
				73022600-55210	UTILITIES	\$8.66
				73022600-55210	UTILITIES	\$15.63
				77725200-55210	UTILITIES	\$16.03
				82027111-55210	UTILITIES	\$4,024.99
				84027221-55210	UTILITIES	\$113.41
				Vendor Total:		
PITNEY BOWES INC	1016378808	POSTAGE MACHINE LEASE & SUPPLIES	\$146.98	73022600-52100	CONTRACTUAL SERVICES	\$146.98
				Vendor Total:		\$146.98
PSOMAS	165933	LAND SURVEYOR & MAPPING SERVICES	\$9,825.00	20012200-52100	CONTRACTUAL SERVICES	\$3,174.00
				82027110-52100	CONTRACTUAL SERVICES	\$6,651.00
				Vendor Total:		\$9,825.00
R&B COMPANY - RWC	S1944841.001	(SA-234) ANGLE STOP FIP X METE	\$2,080.27	82000000-12104	INVENTORY - PURCHASES	\$2,080.27
				Vendor Total:		\$2,080.27
RAINBOW AGRICULTURAL SERVICES	36457/1	CHAIN LOOP	\$147.25	82027111-56300	BUILDING MAINT. & REPAIR	\$147.25
				Vendor Total:		\$147.25
REDWOOD COAST FUELS	3138818	CARDLOCK FUEL PURCHASES	\$555.66	20824300-56210	FUEL & FLUIDS	\$555.66
				Vendor Total:		\$555.66
REDWOOD EMPIRE MUNICIPAL INSURANCE FUND	INV-003221	19/20 ANNUAL CDT/DOT PASS	\$876.00	20016100-54166	DOT TESTING PROGRAM	\$876.00
	20-10 EAP	REMIF EAP INSURANCE	\$545.28	20700000-20520	P/R DEDUCT.- MEDICAL INS	\$545.28
	Vendor Total:					\$1,421.28
REDWOOD FORD	332690	LOCK ASSEMBLY	\$65.42	10020210-56130	EXTERNAL SERVICES	\$65.42
	332617	SPARK PLUG	\$82.37	10020210-56130	EXTERNAL SERVICES	\$82.37

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
REDWOOD FORD	332533	IGNITION ASSEMBLY	\$88.54	10020210-56130	EXTERNAL SERVICES	\$88.54
	332518	GLASS ASSEMBLY	\$97.46	10020210-56130	EXTERNAL SERVICES	\$97.46
	332371	SPARK PLUG	\$258.32	10020210-56130	EXTERNAL SERVICES	\$258.32
	332485	MOTORCRAFT	\$76.63	10021210-56130	EXTERNAL SERVICES	\$76.63
	332439	KIT ELEMENT	\$117.37	10021210-56130	EXTERNAL SERVICES	\$117.37
	332446	ELEMENT ASSEMBLY	\$19.12	10022100-56130	EXTERNAL SERVICES	\$19.12
	332457	KEY BUTTON	\$158.84	10024210-56130	EXTERNAL SERVICES	\$158.84
	332574	BRAKE PAD	\$83.23	10024620-56130	EXTERNAL SERVICES	\$83.23
	332571	BRAKE PAD	\$94.38	10024620-56130	EXTERNAL SERVICES	\$94.38
	332575	ROTOR ASSEMBLY	\$377.10	10024620-56130	EXTERNAL SERVICES	\$377.10
	332455	SUNSHADE	\$23.83	20822500-56130	EXTERNAL SERVICES	\$23.83
	332531	ELEMENT KIT & ASSEMBLY	\$391.08	80026110-56130	EXTERNAL SERVICES	\$391.08
	332765	BRAKE KIT	\$85.79	82027114-56130	EXTERNAL SERVICES	\$85.79
	332679	FRONT BAR	\$118.00	91521400-56130	EXTERNAL SERVICES	\$118.00
	Vendor Total:					\$2,137.48
RESPECTECH	41152	PHONE SYSTEMS SERVICE & LEAVE	\$112.50	10021210-55100	TELEPHONE	\$56.25
				91521400-55100	TELEPHONE	\$56.25
	Vendor Total:					\$112.50
REXEL USA INC	OT50691	FUSE	\$40.14	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$40.14
Vendor Total:					\$40.14	
RICHARD ANDERSON	2020-0911-1	AGREEMENT FOR PROF.SVC'S FOR W	\$3,500.00	20913900-52100	CONTRACTUAL SERVICES	\$3,500.00
Vendor Total:					\$3,500.00	
RICHARD THORNTON	0000011700	MITEL 3300 CX II ICP SYSTEM W/	\$7,583.77	80126100-80220	BUILDING IMPROVEMENTS	\$7,583.77
	0000490	ALL EQUIPMENT AND LABOR TO INS	\$4,656.70	10022700-54330	COMPUTER AND TECHNOLOGY	\$4,656.70
	Vendor Total:					\$12,240.47
ROGINA WATER COMPANY	14355 JUL 20	WATER SERVICES - 1301 TALMAGE	\$23.84	10021210-55210	UTILITIES	\$11.92
				91521400-55210	UTILITIES	\$11.92
	Vendor Total:					\$23.84
SACKS, RICKETTS & CASE, LLP	120748	LEGAL SERVICES	\$850.00	20016100-52150	LEGAL SERVICES/ EXPENSES	\$850.00
Vendor Total:					\$850.00	

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
SCOTT C WALLACE	DV092320	PURCHASE OF EASEMENT AT 610 S STATE ST	\$2,500.00	80126100-80230	INFRASTRUCTURE	\$2,500.00
					Vendor Total:	\$2,500.00
SHI INTERNATIONAL CORP	B12234447	CISCO #C9300-48P-E: CATALYST 9	\$12,761.68	20913900-80100	MACHINERY & EQUIPMENT	\$12,761.68
					Vendor Total:	\$12,761.68
STATE WATER RESOURCES CONTROL BOARD	SC-121959	OLD LESLIE ST GAS PLANT FEES	\$196.68	20012200-52100	CONTRACTUAL SERVICES	\$196.68
	DV092820	T-4 WATER RENEWAL - A HODGE	\$105.00	84027225-57100	LEARNING AND DEVELOPMENT	\$105.00
					Vendor Total:	\$301.68
STB ELECTRICAL TEST EQUIPMENT INC	63973	TESTING SERVICES	\$854.75	80026110-52100	CONTRACTUAL SERVICES	\$75.84
				80026110-52100	CONTRACTUAL SERVICES	\$854.75
				90000000-20231	COUNTY MENTAL HEALTH .5%	(\$4.26)
				90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$1.07)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$4.27)
				90000000-23028	MEASURE Y DISTRICT TAX	(\$4.27)
				90000000-23013	STATE USE TAX LIABILITY	(\$61.97)
					Vendor Total:	\$854.75
SYAR INDUSTRIES INC	794363	ASPHALT AS NEEDED	\$1,607.41	90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$1.86)
				10024620-54128	PW - COLD PATCH MATERIAL	\$0.62
				10024620-54128	PW - COLD PATCH MATERIAL	\$393.76
				82027114-54100	SUPPLIES	\$0.62
				82027114-54100	SUPPLIES	\$809.10
				84027221-54100	SUPPLIES	\$0.62
				84027221-54100	SUPPLIES	\$404.55
					Vendor Total:	\$1,607.41
TRANSENE COMPANY INC	184482	ACETATE BUFFER	\$898.99	84027225-54103	LAB SUPPLIES	\$898.99
					Vendor Total:	\$898.99

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
TUFTS POLYGRAPH & INVESTIGATION	2020-584	POLYGRAPH & INVESTIGATION SERVICES	\$800.00	10020210-54161	BACKGROUND & PHYSICALS	\$800.00
Vendor Total:						\$800.00
UNDERGROUND SERVICE ALERT OF	131439DIG20	CALIFORNIA STATE FEE FOR REGULATORY COSTS	\$1,004.80	82027114-59101	FEES	\$1,004.80
Vendor Total:						\$1,004.80
VWR INTERNATIONAL INC	8802046216	LABORATORY SUPPLIES WWTP	\$92.27	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.36)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.36)
				84027225-54103	LAB SUPPLIES	\$0.72
				84027225-54103	LAB SUPPLIES	\$92.27
	8802133041	LABORATORY SUPPLIES WWTP	\$117.24	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.34)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.34)
				84027225-54103	LAB SUPPLIES	\$0.68
				84027225-54103	LAB SUPPLIES	\$117.24
	8802245986	LABORATORY SUPPLIES WWTP	\$119.18	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.42)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.42)
				84027225-54103	LAB SUPPLIES	\$0.84
				84027225-54103	LAB SUPPLIES	\$119.18
	8802167195	LABORATORY SUPPLIES WWTP	\$121.85	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.49)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.49)
				84027225-54103	LAB SUPPLIES	\$0.98
				84027225-54103	LAB SUPPLIES	\$121.85
	8802146710	LABORATORY SUPPLIES WWTP	\$160.17	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.68)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.68)
				84027225-54103	LAB SUPPLIES	\$1.36
				84027225-54103	LAB SUPPLIES	\$160.17
	8802159964	LABORATORY SUPPLIES WWTP	\$161.45	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.65)

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail			
VWR INTERNATIONAL INC	8802159964	LABORATORY SUPPLIES WWTP	\$161.45	90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.65)	
				84027225-54103	LAB SUPPLIES	\$1.30	
				84027225-54103	LAB SUPPLIES	\$161.45	
	8802140944	LABORATORY SUPPLIES WWTP	\$177.00	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.63)	
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.63)	
				84027225-54103	LAB SUPPLIES	\$1.26	
	84027225-54103	LAB SUPPLIES	\$177.00				
		8801963244	LABORATORY SUPPLIES WWTP	\$373.27	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$1.67)
					90000000-23237	DISTRICT USE TAX-MEASURE S	(\$1.67)
	84027225-56125				LAB EQUIP-REPAIR & MAINT.	\$3.34	
	84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$373.27				
		8802175223	LABORATORY SUPPLIES WWTP	\$602.77	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$2.72)
					90000000-23237	DISTRICT USE TAX-MEASURE S	(\$2.72)
	84027225-56125				LAB EQUIP-REPAIR & MAINT.	\$5.44	
	84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$602.77				
		8802133040	LABORATORY SUPPLIES WWTP	\$766.92	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$3.30)
					90000000-23237	DISTRICT USE TAX-MEASURE S	(\$3.30)
	84027225-54103				LAB SUPPLIES	\$6.60	
	84027225-54103	LAB SUPPLIES	\$766.92				
	Vendor Total: -----						
\$2,692.12							
WALMART COMMUNITY	014138	CLEANING SUPPLIES	\$65.18	10024620-54120	PW - SPECIAL SUPPLIES	\$65.18	
					Vendor Total: -----		
				\$65.18			
WESCO DISTRIBUTION INC	103851	(U-TE-27) INSUL CONN, 500 KCM,	\$1,113.14	80000000-12104	INVENTORY - PURCHASES	\$1,113.14	
					Vendor Total: -----		
				\$1,113.14			
WESTERN HILLS HOMEOWNERS ASSOC	1312	QUARTELY MEMBER DUES	\$225.00	20822500-52100	CONTRACTUAL SERVICES	\$225.00	

List of Checks Presented for Approval on 10/2/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
WESTERN HILLS HOMEOWNERS ASSOC	1299	QUARTERLY MEMBER DUES	\$225.00	20822500-52100	CONTRACTUAL SERVICES	\$225.00
					Vendor Total:	\$450.00
WHITLOCK & WEINBERGER TRANSPORTATION INC	25263	TRAFFIC SIGNAL DESIGN AT GOBBI	\$3,627.50	50924210-80230	INFRASTRUCTURE	\$3,627.50
					Vendor Total:	\$3,627.50
WIPF CONSTRUCTION LLC	1920253 RET	RETAINAGE	\$3,558.50	80100000-20150	AP CONTRACT RETAINAGE	\$3,558.50
	1920248 RET	RETAINAGE	\$4,761.94	80100000-20150	AP CONTRACT RETAINAGE	\$4,761.94
					Vendor Total:	\$8,320.44
XEROX CORP	011394065	XEROX CB070H COPIER LEASE	\$303.36	20012200-54500	EQUIP RENTS AND LEASES	\$303.36
					Vendor Total:	\$303.36
ZERO WASTE USA	365256	DOG ROLL BAGS	\$865.40	10022100-54100	SUPPLIES	\$865.40
					Vendor Total:	\$865.40
					INVOICE TOTAL:	\$458,788.90

List of Checks Presented for Approval on 10/9/2020

The following list of bills payable was reviewed and approved for payment.

Sprague

DRG

CR 10/21/20

Signature

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ADVANCED SECURITY SYSTEMS	535664	MONTHLY ALARM SERVICES FOR 130	\$25.75	10021210-52180	SECURITY SERVICES	\$12.87
				91521400-52180	SECURITY SERVICES	\$12.88
				Vendor Total:		\$25.75
AL SMATSKY	95	DESIGN, ENGINEERING & CONSULTA	\$12,744.83	80126100-80230	INFRASTRUCTURE	\$12,744.83
				Vendor Total:		\$12,744.83
ALYSSA BOGE	200037286	REIMBURSEMENT-REGISTRATION	\$55.00	10022700-57100	LEARNING AND DEVELOPMENT	\$55.00
				Vendor Total:		\$55.00
AMAZON CAPITAL SERVICES	1TD9-6HKC-NWGL	WEBCAM	\$69.98	84027225-54330	COMPUTER AND TECHNOLOGY	\$69.98
	1P6K-YL39-CQWT	ELECTRONIC SIREN	\$399.30	10021210-56130	EXTERNAL SERVICES	\$399.30
	1MLY-QJN9-HTFN	TRAILER HITCH, BALL TOW	\$309.20	80026110-56130	EXTERNAL SERVICES	\$309.20
	1TPY-HF36-D9XV	TRANSMITTER	\$191.61	90000000-23235	MOVIES IN THE PLAZA	\$191.61
	1QWC-G97F-1F39	DESK ORGANIZER, VIVO LIFT KEYBOARD RISER	\$129.07	10020210-54100	SUPPLIES	\$129.07
	1P3T-NDTL-G9PG	RESPIRATOR MASKS	\$275.50	10022300-54100	SUPPLIES	\$275.50
	1QV3-H4TK-F7T3	RETURN CABLE CONVERTER	(\$20.20)	63820210-54100	SUPPLIES	(\$20.20)
	1VVG-R169-QTMN	CABLE CONVERTER	\$33.30	63820210-54100	SUPPLIES	\$33.30
	1LYL-CNMW-MVGY	TACTICAL HEADLAMPS	\$714.48	80026110-54100	SUPPLIES	\$714.48
	1FCP-HNJY-FM7R	DEWALT BLADES	\$512.57	84027221-54100	SUPPLIES	\$512.57
	1NF6-C4PL-Q1YP	EYE WASH HOLDER	\$27.04	84027225-54100	SUPPLIES	\$27.04
	1FK1-PQG9-91RN	EAR MUFFS	\$190.47	84027225-54100	SUPPLIES	\$190.47
			Vendor Total:		\$2,832.32	
ANDREA DAVIS	DV100620	REIMBURSEMENT-SUPPLIES	\$49.80	10022700-54100	SUPPLIES	\$49.80
				Vendor Total:		\$49.80
ANDREA L PIEROTTI	DV100120	SEWER LATERAL REIMBURSEMENT	\$2,000.00	84427222-52100	CONTRACTUAL SERVICES	\$2,000.00
				Vendor Total:		\$2,000.00

List of Checks Presented for Approval on 10/9/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
AT&T	000015263853	T1 TO INTERNET FOR DOJ/CLETS	\$292.25	10020210-55100	TELEPHONE	\$146.13
				20620231-55100	TELEPHONE	\$146.12
	2799 OCT 20	INTERNET	\$89.00	10022100-55100	TELEPHONE	\$89.00
	3138 SEP 20	DSL FOR 911 REMOTE SUPPORT	\$101.65	20620231-55100	TELEPHONE	\$101.65
	Vendor Total:					\$482.90
BEHAVIORAL ANALYSIS TRAINING INC	IV03915	REGISTRATION-A ELLEDGE	\$481.00	10020210-57100	LEARNING AND DEVELOPMENT	\$481.00
				Vendor Total:		\$481.00
BRIDGES RESTORATION LLC	2718	ON-CALL EMERGENCY CLEAN-UP SER	\$1,854.40	10021210-56130	EXTERNAL SERVICES	\$927.20
				91521400-56130	EXTERNAL SERVICES	\$927.20
				Vendor Total:		\$1,854.40
CALPACIFIC EQUIPMENT CO	IN-00095784	LEVEL CONTROL RELAY	\$238.16	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$238.16
				Vendor Total:		\$238.16
CDW GOVERNMENT INC	ZLS1931	ADOBE ACROBAT #65297917BC01A12	\$2,725.20	20913900-54320	SOFTWARE	\$2,725.20
				Vendor Total:		\$2,725.20
CHROMAGRAPHS	69716	BUSINESS CARDS - S WAGENET	\$52.99	82027111-54100	SUPPLIES	\$52.99
				Vendor Total:		\$52.99
CITIBANK N.A.	SF-D 23655	CLOROX WIPES, GERM-X	\$582.10	20012200-54100	SUPPLIES	\$582.10
				Vendor Total:		\$582.10
COMCAST	5488 OCT 20	INTERNET SERVICES	\$89.86	10021210-55100	TELEPHONE	\$44.93
				91521400-55100	TELEPHONE	\$44.93
				Vendor Total:		\$89.86
DAVID KIRCH	DV100120	REIMBURSEMENT-TRAINING LUNCHEON	\$67.18	20324100-57100	LEARNING AND DEVELOPMENT	\$67.18
				Vendor Total:		\$67.18
DAVID RAPPORT	7214	LEGAL SERVICES FOR FY 20/21	\$28,601.40	20014000-52150	LEGAL SERVICES/ EXPENSES	\$225.41
				20014000-52150	LEGAL SERVICES/ EXPENSES	\$1,682.90
				20014000-52150	LEGAL SERVICES/ EXPENSES	\$23,347.28
				77714000-52150	LEGAL SERVICES/ EXPENSES	\$694.82
				Vendor Total:		\$25,950.41

List of Checks Presented for Approval on 10/9/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
DAVID RAPPORT	7214	LEGAL SERVICES FOR FY 20/21	\$28,601.40	80014000-52150	LEGAL SERVICES/ EXPENSES	\$532.15
				84014000-52150	LEGAL SERVICES/ EXPENSES	\$382.96
				90214000-52150	LEGAL SERVICES/ EXPENSES	\$1,735.88
				Vendor Total:		\$28,601.40
DEEP VALLEY SECURITY	367518 6	SECURITY SYSTEM MONITORING AT	\$39.95	10022100-52180	SECURITY SERVICES	\$39.95
	367518	ALARM SERVICES PER ATTACHED CO	\$278.65	10022100-52180	SECURITY SERVICES	\$26.95
				10022100-52180	SECURITY SERVICES	\$29.95
				10022700-52180	SECURITY SERVICES	\$42.95
				20822500-52180	SECURITY SERVICES	\$42.95
				20824300-52180	SECURITY SERVICES	\$49.00
				73022600-52180	SECURITY SERVICES	\$19.95
				73022600-52180	SECURITY SERVICES	\$21.95
				82027111-52180	SECURITY SERVICES	\$20.00
				82027111-52180	SECURITY SERVICES	\$24.95
	367518 5	SECURITY UPGRADE & MONITORING/	\$42.95	10022700-52180	SECURITY SERVICES	\$42.95
	367518 1	MONITORING - SOFTBALL COMPLEX	\$32.95	10022822-52180	SECURITY SERVICES	\$32.95
	367518 2	SECURITY MONITORING SVCS - STR	\$34.95	20824300-52180	SECURITY SERVICES	\$34.95
	367518 3	SECURITY MONITORING SVCS - GAR	\$46.95	20824300-52180	SECURITY SERVICES	\$46.95
	367518 4	PROVIDE AND INSTALL ELECTRONIC	\$52.95	80026400-52180	SECURITY SERVICES	\$52.95
			Vendor Total:		\$529.35	
DEPARTMENT OF JUSTICE	470434	CHEM/TEST REPORT CRIMINAL INVE	\$560.00	10020210-52100	CONTRACTUAL SERVICES	\$560.00
				Vendor Total:		\$560.00
EUREKA OXYGEN CO	DM00817378	RENTAL OF CYLINDERS	\$20.30	10021210-56120	EQUIPMENT MAINTENANCE & REPAIR	\$10.15
				91521400-56120	EQUIPMENT MAINTENANCE & REPAIR	\$10.15
	UC 39079	SERVICE CHARGE CREDIT	(\$3.64)	10020210-56130	EXTERNAL SERVICES	(\$3.64)
	STMT 9/30/20	SERVICE CHARGE/LATE FEE	\$19.55	10020210-56130	EXTERNAL SERVICES	\$19.55
				Vendor Total:		\$36.21

List of Checks Presented for Approval on 10/9/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
EVERGREEN JOB & SAFETY TRAINING INC	1197	JOB AND SAFETY TRAINING - JULY	\$2,109.12	80026110-52100	CONTRACTUAL SERVICES	\$2,109.12
					Vendor Total:	\$2,109.12
FASTENAL	CAUKA40456	MISC. SUPPLIES AS NEEDED	\$15.39	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$15.39
					Vendor Total:	\$15.39
FEDERAL EXPRESS	3-300-80334	SHIPPING CHARGES	\$23.23	10020210-54101	POSTAGE	\$23.23
					Vendor Total:	\$23.23
FLEETPRIDE	60121923	FILTER, COLLANT	\$36.97	20324100-58510	REIMBURSABLE JOBS	\$36.97
					Vendor Total:	\$36.97
FRIEDMANS HOME IMPROVEMENT	INV11577869	MISC. ITEMS AS NEEDED	\$57.24	20822500-56300	BUILDING MAINT. & REPAIR	\$57.24
	INV11727381	MISC. ITEMS AS NEEDED	\$61.21	20822500-56300	BUILDING MAINT. & REPAIR	\$61.21
	INV11692657	MISC. ITEMS AS NEEDED	\$124.31	20822500-56300	BUILDING MAINT. & REPAIR	\$124.31
	INV11560118	MISC. ITEMS AS NEEDED	\$149.13	20822500-56300	BUILDING MAINT. & REPAIR	\$149.13
	INV11685342	MISC. ITEMS AS NEEDED	\$160.31	20822500-56300	BUILDING MAINT. & REPAIR	\$160.31
	INV11612584	MISC. ITEMS AS NEEDED	\$178.74	20822500-56300	BUILDING MAINT. & REPAIR	\$178.74
	INV11642910	MISC. ITEMS AS NEEDED	\$234.34	20822500-56300	BUILDING MAINT. & REPAIR	\$234.34
	INV11704934	MISC. ITEMS AS NEEDED	\$55.11	31122000-56300	BUILDING MAINT. & REPAIR	\$55.11
	INV11660081	MISC. ITEMS AS NEEDED	\$19.45	82027111-56300	BUILDING MAINT. & REPAIR	\$19.45
	INV11649354	MISC. ITEMS AS NEEDED	\$26.55	82027111-56300	BUILDING MAINT. & REPAIR	\$26.55
	INV11679349	MISC. ITEMS AS NEEDED	\$33.04	82027111-56300	BUILDING MAINT. & REPAIR	\$33.04
	INV11691818	MISC. ITEMS AS NEEDED	\$119.65	82027111-56300	BUILDING MAINT. & REPAIR	\$119.65
	INV11733675	MISC. ITEMS AS NEEDED	\$77.45	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$77.45
	INV11565228	MISC. ITEMS AS NEEDED	\$17.70	84027221-56120	EQUIPMENT MAINTENANCE & REPAIR	\$17.70
	INV11566392	MISC. ITEMS AS NEEDED	\$29.20	84027221-56120	EQUIPMENT MAINTENANCE & REPAIR	\$29.20
	INV11572455	MISC. ITEMS AS NEEDED	\$47.65	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$47.65
	INV11601141	MISC. ITEMS AS NEEDED	\$77.58	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$77.58
	INV11661233	MISC. ITEMS AS NEEDED	\$57.69	82227113-80230	INFRASTRUCTURE	\$57.69

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FRIEDMANS HOME IMPROVEMENT	INV11733278	MISC. ITEMS AS NEEDED	\$42.36	84027225-54103	LAB SUPPLIES	\$42.36
	INV11649082	MISC. ITEMS AS NEEDED	\$240.02	10022100-59400	OTHER EXPENSES	\$240.02
	INV11704427	MISC. ITEMS AS NEEDED	\$8.69	10024620-54124	PW - CONCRETE/ SUPPLIES	\$8.69
	INV11691722	MISC. ITEMS AS NEEDED	\$101.05	10024620-54124	PW - CONCRETE/ SUPPLIES	\$101.05
	INV11698366	MISC. ITEMS AS NEEDED	\$30.07	10024620-54120	PW - SPECIAL SUPPLIES	\$30.07
	INV11698897	MISC. ITEMS AS NEEDED	\$45.64	10024620-54120	PW - SPECIAL SUPPLIES	\$45.64
	INV11559810	MISC. ITEMS AS NEEDED	\$54.27	10024620-54120	PW - SPECIAL SUPPLIES	\$54.27
	INV11698543	MISC. ITEMS AS NEEDED	\$69.18	10024620-54120	PW - SPECIAL SUPPLIES	\$69.18
	INV11691721	MISC. ITEMS AS NEEDED	\$100.61	10024620-54120	PW - SPECIAL SUPPLIES	\$100.61
	INV11734541	MISC. ITEMS AS NEEDED	\$108.78	10024620-54120	PW - SPECIAL SUPPLIES	\$108.78
	INV11734484	MISC. ITEMS AS NEEDED	\$651.08	82027114-54102	SMALL TOOLS	\$651.08
	INV11648882	MISC. ITEMS AS NEEDED	\$53.01	84027221-54102	SMALL TOOLS	\$53.01
	INV11642937	MISC. ITEMS AS NEEDED	\$37.96	10023320-54100	SUPPLIES	\$37.96
	INV11704943	MISC. ITEMS AS NEEDED	\$170.07	10024224-54100	SUPPLIES	\$170.07
	INV11565171	MISC. ITEMS AS NEEDED	\$63.36	10024620-54100	SUPPLIES	\$63.36
	INV11618954	MISC. ITEMS AS NEEDED	\$393.43	20822500-54100	SUPPLIES	\$393.43
	INV11679138	MISC. ITEMS AS NEEDED	\$48.25	20824300-54100	SUPPLIES	\$48.25
	INV11601314	MISC. ITEMS AS NEEDED	\$50.10	20824300-54100	SUPPLIES	\$50.10
	INV11722357	MISC. ITEMS AS NEEDED	\$15.08	73022600-54100	SUPPLIES	\$15.08
	INV11679125	MISC. ITEMS AS NEEDED	\$14.14	77725200-54100	SUPPLIES	\$14.14
	INV11679047	MISC. ITEMS AS NEEDED	\$60.25	77725200-54100	SUPPLIES	\$60.25
	INV11698630	MISC. ITEMS AS NEEDED	\$21.08	80026110-54100	SUPPLIES	\$21.08
	INV11566277	MISC. ITEMS AS NEEDED	\$32.67	80026110-54100	SUPPLIES	\$32.67
	INV11566232	MISC. ITEMS AS NEEDED	\$70.94	80026110-54100	SUPPLIES	\$70.94
	INV11727913	MISC. ITEMS AS NEEDED	\$254.39	80026110-54100	SUPPLIES	\$254.39
	INV11637020	MISC. ITEMS AS NEEDED	\$42.25	80526150-54100	SUPPLIES	\$42.25
	INV11637214	MISC. ITEMS AS NEEDED	\$47.87	82027111-54100	SUPPLIES	\$47.87
	INV11624635	MISC. ITEMS AS NEEDED	\$4.72	82027114-54100	SUPPLIES	\$4.72

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
FRIEDMANS HOME IMPROVEMENT	INV11679119	MISC. ITEMS AS NEEDED	\$7.96	82027114-54100	SUPPLIES	\$7.96
	INV11624499	MISC. ITEMS AS NEEDED	\$22.28	82027114-54100	SUPPLIES	\$22.28
	INV11618793	MISC. ITEMS AS NEEDED	\$26.78	82027114-54100	SUPPLIES	\$26.78
	INV11732994	MISC. ITEMS AS NEEDED	\$33.80	82027114-54100	SUPPLIES	\$33.80
	INV11571529	MISC. ITEMS AS NEEDED	\$53.76	82027114-54100	SUPPLIES	\$53.76
	INV11685355	MISC. ITEMS AS NEEDED	\$44.83	84027221-54100	SUPPLIES	\$44.83
	INV11698205	MISC. ITEMS AS NEEDED	\$52.64	84027221-54100	SUPPLIES	\$52.64
	INV11601741	MISC. ITEMS AS NEEDED	\$96.90	84027221-54100	SUPPLIES	\$96.90
	INV11691893	MISC. ITEMS AS NEEDED	\$171.95	84027221-54100	SUPPLIES	\$171.95
	INV11601073	MISC. ITEMS AS NEEDED	\$211.53	84027221-54100	SUPPLIES	\$211.53
	INV11572288	MISC. ITEMS AS NEEDED	\$24.43	84027225-54100	SUPPLIES	\$24.43
	INV11722446	MISC. ITEMS AS NEEDED	\$24.47	84027225-54100	SUPPLIES	\$24.47
	INV11607412	MISC. ITEMS AS NEEDED	\$600.86	84027225-54100	SUPPLIES	\$600.86
Vendor Total:						\$5,729.86
GCS ENVIRONMENTAL EQUIP SRVS	22019	#507131 ELECT/HYD PUMP W/ FITT	\$1,197.63	10024620-56130	EXTERNAL SERVICES	\$1,197.63
	Vendor Total:					\$1,197.63
GENERAL PACIFIC INC	1380455	DJI MATRICE 300 RTK: AIRCRAFT,	\$24,560.02	80026110-54100	SUPPLIES	\$24,560.02
	Vendor Total:					\$24,560.02
GHILOTTI CONSTRUCTION COMPANY INC	5909*01	DOWNTOWN STREETSCAPE & ROAD DI	\$137,871.50	10024200-80230	INFRASTRUCTURE	\$48,601.99
				12024200-80230	INFRASTRUCTURE	\$50,726.05
				50024220-80230	INFRASTRUCTURE	\$28,223.37
				50924200-80230	INFRASTRUCTURE	\$1,184.43
				80126100-80230	INFRASTRUCTURE	\$1,169.60
				82227113-80230	INFRASTRUCTURE	\$4,206.64
				84427221-80230	INFRASTRUCTURE	\$3,759.42
	Vendor Total:					\$137,871.50
GRAINGER INC	9663359397	CHEMICAL CARTRIDGES	\$298.27	84027225-54100	SUPPLIES	\$298.27
	Vendor Total:					\$298.27
GRANITE CONSTRUCTION COMPANY	1888044	MISC ROCK & ROAD PATCH MATERIA	\$72.25	84027221-54100	SUPPLIES	\$72.25

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
GRANITE CONSTRUCTION COMPANY	1884313	MISC ROCK & ROAD PATCH MATERIA	\$101.42	84027221-54100	SUPPLIES	\$101.42
					Vendor Total:	\$173.67
HERC RENTALS INC	31703009-001	RENTAL OR PURCHASE OF MISC EQU	\$233.67	10024620-56410	EQUIPMENT RENTAL - PRIVATE	\$233.67
					Vendor Total:	\$233.67
HILDEBRAND CONSULTING LLC	237	ON-GOING SEWER UTILITY BILLING	\$1,680.00	20513300-52100	CONTRACTUAL SERVICES	\$1,680.00
					Vendor Total:	\$1,680.00
INTERSTATE BATTERIES	380043385	BATTERIES	\$151.20	10020210-56130	EXTERNAL SERVICES	\$151.20
	380043386	BATTERIES	\$258.85	10021210-56130	EXTERNAL SERVICES	\$258.85
	380043569	BATTERIES	\$258.85	84027221-56130	EXTERNAL SERVICES	\$258.85
					Vendor Total:	\$668.90
JAKE BURGESS - PETTY CASH	DV100820	PUMPKINFEST ANNUAL WEIGH-OFF	\$1,700.00	90000000-23219	PUMPKINFEST	\$1,700.00
					Vendor Total:	\$1,700.00
JOHN AGUILAR	DV100120	REIMBURSEMENT- TRAINING SUPPLIES	\$27.46	20324100-57100	LEARNING AND DEVELOPMENT	\$27.46
					Vendor Total:	\$27.46
KAREN HOLMES	20035970	REIMBRUSEMENT- REGISTRATION	\$75.00	10022700-57100	LEARNING AND DEVELOPMENT	\$75.00
					Vendor Total:	\$75.00
KAREN ROCKEL	TA 10/19-20/20	TRAVEL ADVANCE	\$199.70	20620232-57100	LEARNING AND DEVELOPMENT	\$199.70
					Vendor Total:	\$199.70
LIFE ASSIST INC	1035972	SODIUM CHLORIDE IV SOLUTION	\$29.20	10021210-54107	EMS SUPPLIES	\$14.60
				91521400-54107	EMS SUPPLIES	\$14.60
	1037894	NALOXONE, 2MG, 2ML LUER-JET SYRINGES	\$206.45	10021210-54107	EMS SUPPLIES	\$103.22
				91521400-54107	EMS SUPPLIES	\$103.23
	1037195	MICRODOT XTRA TEST STRIPS, GLOVES	\$280.04	10021210-54107	EMS SUPPLIES	\$140.02
				91521400-54107	EMS SUPPLIES	\$140.02
					Vendor Total:	\$515.69
LN CURTIS & SONS	INV422690	FIREFIGHTERS SHUT OFF CLAMPS	\$878.44	25321210-54102	SMALL TOOLS	\$439.22
				91621400-54102	SMALL TOOLS	\$439.22
					Vendor Total:	\$878.44

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
MEAD & HUNT INC	307212	DESIGN SVCS PAPI & REIL REPLAC	\$6,741.40	77825200-80230	INFRASTRUCTURE	\$6,741.40
					Vendor Total:	\$6,741.40
MENDO MILL & LUMBER CO	169455/1	MISC. SUPPLIES AS NEEDED	\$48.25	10024620-54120	PW - SPECIAL SUPPLIES	\$48.25
	168866/1	TAP PLUGS	\$14.13	80026220-54100	SUPPLIES	\$14.13
	168857/1	CM MICRO TRQ WRENCH	\$87.09	80026220-54100	SUPPLIES	\$87.09
					Vendor Total:	\$149.47
MILLVIEW COUNTY WATER DISTRICT	UVFA AUG 20	WATER SERVICES	\$52.95	10021210-55210	UTILITIES	\$26.48
				91521400-55210	UTILITIES	\$26.47
	UVFA SEP 20	WATER SERVICES	\$61.50	10021210-55210	UTILITIES	\$30.75
				91521400-55210	UTILITIES	\$30.75
					Vendor Total:	\$114.45
MUNI SERVICES LLC	INV06-009949	SALES TAX AUDIT REPORTING SERV	\$1,162.48	20013400-52100	CONTRACTUAL SERVICES	\$1,162.48
	INV06-009950	SALES TAX AUDIT REPORTING SERV	\$2,665.64	20013400-52100	CONTRACTUAL SERVICES	\$2,665.64
					Vendor Total:	\$3,828.12
MUSCO CORPORATION	338970	CONTROL LINK SERVICE FY 2020	\$450.00	10022100-52100	CONTRACTUAL SERVICES	\$450.00
					Vendor Total:	\$450.00
NOBLE WAIDELICH	DV100520	REIMBURSEMENT-SUPPLIES	\$173.33	10020214-54100	SUPPLIES	\$173.33
					Vendor Total:	\$173.33
ONE TIME PAY VENDOR	119462-0	UTILITY REFUND-EVAN ENGLAR	\$30.37	90100000-10421	UTILITY RECEIVABLES CLEARING	\$30.37
	112930-3	UTILITY REFUND-RICKEY FARMER & JESSICA MURRY	\$38.15	90100000-10421	UTILITY RECEIVABLES CLEARING	\$38.15
	117815-1	UTILITY REFUND-KURT KUGEL & JOE MADDOX	\$52.44	90100000-10421	UTILITY RECEIVABLES CLEARING	\$52.44
					Vendor Total:	\$120.96
PAC MACHINE CO INC	80793	AIRMAN #SDG25S-8E1 25KVA GENER	\$63,852.25	84427221-80100	MACHINERY & EQUIPMENT	\$31,926.12
				84427221-80100	MACHINERY & EQUIPMENT	\$31,926.13
					Vendor Total:	\$63,852.25
PACE SUPPLY CORPORATION	026294078	PVC PIPE	\$309.40	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$309.40
	026356266	CONCRETE LID	\$279.13	82000000-12104	INVENTORY - PURCHASES	\$279.13
	026293765	BLADES	\$92.51	80026110-54100	SUPPLIES	\$92.51

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PACE SUPPLY CORPORATION	026366529	BRS COUPLING	\$87.96	82027114-54100	SUPPLIES	\$87.96
					Vendor Total:	\$769.00
PATRICIA A WELCH	DV092220	SEWER LATERAL REIMBURSEMENT	\$2,000.00	84427222-52100	CONTRACTUAL SERVICES	\$2,000.00
					Vendor Total:	\$2,000.00
PETERSON TRUCKS INC	231080R	FLEETRITE TOWEL	\$34.17	90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$0.04)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.16)
				20324100-54100	SUPPLIES	\$0.20
				20324100-54100	SUPPLIES	\$34.17
	230908R	FILTER	\$42.50	10021210-56130	EXTERNAL SERVICES	\$21.25
				10021210-56130	EXTERNAL SERVICES	\$21.25
					Vendor Total:	\$76.67
POLYDYNE INC	1481164	LIQUID POLYMER ALKYLAMINE	\$9,465.59	84027225-58202	CHEMICALS	\$9,465.59
	1481503	LIQUID POLYMER EMULSION	\$12,544.66	84027225-58202	CHEMICALS	\$12,544.66
					Vendor Total:	\$22,010.25
PUBLIC SERVICE DEPARTMENT	PERMIT 5417	REAPPLY TO BUILDING PERMIT 5417	\$8,842.18	90100000-10421	UTILITY RECEIVABLES CLEARING	\$8,842.18
					Vendor Total:	\$8,842.18
RED CARPET MINI STORAGE	3150	UNIT A64 ANNUAL RENTAL PERIOD:	\$1,140.00	63020210-54100	SUPPLIES	\$1,140.00
					Vendor Total:	\$1,140.00
REDWOOD COAST FUELS	2180610	CARDLOCK FUEL PURCHASES	\$462.97	10021210-56130	EXTERNAL SERVICES	\$462.97
	2174283	CARDLOCK FUEL PURCHASES	\$8,381.56	10020210-56210	FUEL & FLUIDS	\$2,439.32
				10020224-56210	FUEL & FLUIDS	\$40.63
				10022100-56210	FUEL & FLUIDS	\$573.75
				10023320-56210	FUEL & FLUIDS	\$68.55
				10024620-56210	FUEL & FLUIDS	\$1,279.92
				20324100-56210	FUEL & FLUIDS	\$226.65
				20513382-56210	FUEL & FLUIDS	\$30.39
				20822500-56210	FUEL & FLUIDS	\$23.28
				80026400-56210	FUEL & FLUIDS	\$1,250.31
				82027111-56210	FUEL & FLUIDS	\$342.95

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REDWOOD COAST FUELS	2174283	CARDLOCK FUEL PURCHASES	\$8,381.56	82027114-56210	FUEL & FLUIDS	\$50.66
				82027114-56210	FUEL & FLUIDS	\$387.98
				82027114-56210	FUEL & FLUIDS	\$556.67
				84027221-56210	FUEL & FLUIDS	\$387.99
				84027221-56210	FUEL & FLUIDS	\$556.66
				84027225-56210	FUEL & FLUIDS	\$165.85
	3129053	CARDLOCK FUEL PURCHASES	\$707.95	10024620-56210	FUEL & FLUIDS	\$353.98
				84027221-56210	FUEL & FLUIDS	\$353.97
	3138009	CARDLOCK FUEL PURCHASES	\$209.52	20824300-56210	FUEL & FLUIDS	\$209.52
	3128819	CARDLOCK FUEL PURCHASES	\$218.62	20824300-56210	FUEL & FLUIDS	\$218.62
	2155267 1	CARDLOCK FUEL PURCHASES	(\$18.88)	84027225-56210	FUEL & FLUIDS	(\$18.88)
	2160842	CARDLOCK FUEL PURCHASES	\$107.24	20324100-58410	GARAGE LUBRICANTS & PARTS	\$107.24
	Vendor Total:					\$10,068.98
	REXEL USA INC	OT84112	BULBS RETURN	(\$45.31)	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR
OT11369		BUILDING MAINTENANCE SUPPLIES	\$238.65	20822500-54100	SUPPLIES	\$238.65
Vendor Total:					\$193.34	
RICHARD THORNTON	0000011769	TELEPHONE PRODUCTS & SERVICES	\$62.50	10020210-54100	SUPPLIES	\$62.50
	000011801	TELEPHONE PRODUCTS & SERVICES	\$413.73	80026400-54100	SUPPLIES	\$413.73
	Vendor Total:					\$476.23
RINO PACIFIC	CL32260	FUEL CARD CHARGES AS NEEDED	\$1,635.62	10021210-56210	FUEL & FLUIDS	\$817.81
				91521400-56210	FUEL & FLUIDS	\$817.81
	CL31673	FUEL CARD CHARGES AS NEEDED	\$2,324.36	10021210-56210	FUEL & FLUIDS	\$1,162.18
				91521400-56210	FUEL & FLUIDS	\$1,162.18
	Vendor Total:					\$3,959.98
SAGE SANGIACOMO	DV100620	REIMBURSEMENT-MEMBERSHIP RENEWAL	\$128.00	20012100-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$128.00
Vendor Total:					\$128.00	
SOLID WASTES SYSTEMS INC	SEP 20	RESIDENTIAL GARBAGE FEES	\$40,940.37	90200000-52170	UKIAH WASTE SOLUTIONS	\$40,940.37
				Vendor Total: \$40,940.37		

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
SONIC NET LLC	1001528813	INTERNET SERVICES - UVFA	\$33.43	10021210-55100	TELEPHONE	\$16.72
				91521400-55100	TELEPHONE	\$16.71
				Vendor Total:		\$33.43
STAPLES CREDIT PLAN	64501	PAPER MATE PENS, WRIST REST	\$39.67	10022700-54100	SUPPLIES	\$39.67
	69965	PAYPAL CREDIT CARD READER	\$65.31	10022700-54100	SUPPLIES	\$65.31
	66810	WIRELESS KEYBOARD & MOUSE	\$54.43	20013220-54100	SUPPLIES	\$54.43
	64546	PEN ROLLER, WIRELESS KEYBOARD & MOUSE	\$169.79	77725200-54100	SUPPLIES	\$169.79
	66705	MEMO PADS, GEL PENS	\$68.55	80026400-54100	SUPPLIES	\$68.55
	66694	PHOTO FRAMES, GEL PENS, MEMO PADS	\$76.96	82027110-54100	SUPPLIES	\$76.96
	65455	DVID-D VIDEO CABLE	\$47.89	82027111-54100	SUPPLIES	\$47.89
	13362	BINDERS, FILES, DIVIDERS	\$103.00	84027221-54100	SUPPLIES	\$103.00
	66738	DIVIDERS, BINDERS, FILE DRAWER POCKETS	\$74.52	84027225-54100	SUPPLIES	\$74.52
	70282	APC BACKUPS, BINDERS	\$231.88	84027225-54100	SUPPLIES	\$231.88
Vendor Total:						\$932.00
SYDNEY DEARBORN	R0228617	REIMBURSEMENT FOR MEDICAL INSURANCE	\$188.03	91500000-52152	POST-EMPLOYMENT BENEFITS	\$188.03
					Vendor Total:	\$188.03
TELSTAR INSTRUMENTS INC	104879	WWTP TELEMETRY MODIFICATIONS I	\$9,120.00	84027225-80230	INFRASTRUCTURE	\$9,120.00
					Vendor Total:	\$9,120.00
THERMCO PRODUCTS INC	189173	THERMOMETER CALIBRATION	\$267.38	84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$267.38
					Vendor Total:	\$267.38
TOTAL COMPENSATION SYSTEMS, INC	8517	GASB 68 REPORTING SERVICE FOR	\$1,000.00	20013400-52100	CONTRACTUAL SERVICES	\$1,000.00
					Vendor Total:	\$1,000.00
TURF STAR INC	7139345-00	STUD-WHEEL	\$43.48	10022100-56130	EXTERNAL SERVICES	\$43.48
					Vendor Total:	\$43.48
UKIAH VALLEY SANITATION DIST	91037 AUG 20	SEWER - 1500 REDEMEYER RD	\$73.27	10021210-55210	UTILITIES	\$36.64
				91521400-55210	UTILITIES	\$36.63
	81411 AUG 20	SEWER - 1500 S STATE ST	\$87.21	10021210-55210	UTILITIES	\$43.61
				91521400-55210	UTILITIES	\$43.60

List of Checks Presented for Approval on 10/9/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
UKIAH VALLEY SANITATION DIST	81411 JUL 20	SEWER - 1500 S STATE ST	\$87.21	10021210-55210	UTILITIES	\$43.61
				91521400-55210	UTILITIES	\$43.60
	90558 AUG 20	SEWER - 141 LOVERS LN	\$112.87	10021210-55210	UTILITIES	\$56.43
				91521400-55210	UTILITIES	\$56.44
	90558 JUL 20	SEWER - 141 LOVERS LN	\$112.87	10021210-55210	UTILITIES	\$56.43
				91521400-55210	UTILITIES	\$56.44
	58070 AUG 20	SEWER - 432 OBSERVATORY AVE	\$53.47	10022100-55210	UTILITIES	\$53.47
	104613 AUG 20	SEWER - LOW GAP SKATE PARK	\$53.47	10022100-55210	UTILITIES	\$53.47
	89690 AUG 20	1640 S STATE ST	\$87.21	31122000-55210	UTILITIES	\$87.21
	113354 AUG 20	SEWER - 1350 HASTINGS RD	\$53.47	80026400-55210	UTILITIES	\$53.47
Vendor Total:						\$721.05
UNITED SITE SERVICES	114-10966374	PORTABLE TOILET RENTAL	\$178.15	10022100-52100	CONTRACTUAL SERVICES	\$178.15
	114-10966375	PORTABLE TOILET RENTAL	\$178.15	10022100-52100	CONTRACTUAL SERVICES	\$178.15
	114-10966377	PORTABLE TOILET RENTAL	\$143.99	80026220-52100	CONTRACTUAL SERVICES	\$143.99
Vendor Total:						\$500.29
US BANK CORPORATE PAYMENT SERVICES	SEP 20	CAL CARD PURCHASES	\$1,354.47	10021210-56300	BUILDING MAINT. & REPAIR	\$79.74
				91521400-56300	BUILDING MAINT. & REPAIR	\$79.74
				10021210-52100	CONTRACTUAL SERVICES	\$27.05
				91521400-52100	CONTRACTUAL SERVICES	\$27.05
				10021210-56120	EQUIPMENT MAINTENANCE & REPAIR	\$46.97
				91521400-56120	EQUIPMENT MAINTENANCE & REPAIR	\$47.01
				10021210-56210	FUEL & FLUIDS	\$13.02
				91521400-56210	FUEL & FLUIDS	\$13.02
				91721400-57100	LEARNING AND DEVELOPMENT	\$25.00
				91721400-57100	LEARNING AND DEVELOPMENT	\$25.00
				25321210-54102	SMALL TOOLS	\$49.43
				91621400-54102	SMALL TOOLS	\$49.43
				91521400-54100	SUPPLIES	\$120.27

List of Checks Presented for Approval on 10/9/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
US BANK CORPORATE PAYMENT SERVICES	SEP 20	CAL CARD PURCHASES	\$1,354.47	91521400-54100	SUPPLIES	\$315.74
				91721400-54100	SUPPLIES	\$120.27
				91721400-54100	SUPPLIES	\$315.73
				Vendor Total:		\$1,354.47
VERIZON WIRELESS	9863195028	DATA & EMERGENCY PHONES	\$2,622.05	80126100-80100	MACHINERY & EQUIPMENT	\$152.04
				10020210-55100	TELEPHONE	\$76.02
				10022100-55100	TELEPHONE	\$38.01
				10022300-55100	TELEPHONE	\$38.01
				10022810-55100	TELEPHONE	\$38.01
				10022840-55100	TELEPHONE	\$38.01
				10023100-55100	TELEPHONE	\$38.01
				10024210-55100	TELEPHONE	\$69.69
				10024620-55100	TELEPHONE	\$54.03
				20012100-55100	TELEPHONE	\$38.01
				20913900-55100	TELEPHONE	\$432.85
				70024500-55100	TELEPHONE	\$28.51
				77725200-55100	TELEPHONE	\$185.15
				80026210-55100	TELEPHONE	\$38.01
				80026400-55100	TELEPHONE	\$352.11
				82027110-55100	TELEPHONE	\$117.20
				82027111-55100	TELEPHONE	\$76.02
				82027114-55100	TELEPHONE	\$300.14
				84027221-55100	TELEPHONE	\$463.14
				84027225-55100	TELEPHONE	\$49.08
				Vendor Total:		\$2,622.05
WELTY, WEAVER & CURRIE	2214	LEGAL SERVICES - WATER RESOURC	\$962.50	82027110-52150	LEGAL SERVICES/ EXPENSES	\$962.50
	2215	LEGAL SERVICES - WATER RESOURC	\$6,887.50	82027110-52150	LEGAL SERVICES/ EXPENSES	\$6,887.50
				Vendor Total:		\$7,850.00

List of Checks Presented for Approval on 10/9/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
WESCO DISTRIBUTION INC	994329	(S-181) SPLICE, AL 4/0 STR - 3	\$345.95	80000000-12104	INVENTORY - PURCHASES	\$345.95
	097218	(U-TE-27) INSUL CONN, 500 KCM,	\$876.92	80000000-12104	INVENTORY - PURCHASES	\$876.92
	Vendor Total:					\$1,222.87
WEST COAST ARBORISTS INC	1-6240	ALL NECESSARY, LABOR EQUIPMENT	\$3,600.00	10024620-52100	CONTRACTUAL SERVICES	\$3,600.00
	Vendor Total:					\$3,600.00
WEST YOST ASSOCIATED	2042351	RUSSIAN RIVER CONFLUENCE PROGR	\$4,572.00	90000000-23029	RRWA CONFLUENCE	\$4,572.00
	Vendor Total:					\$4,572.00
WINE COUNTRY BALANCE	7527	TOP LOADING BALANCE	\$227.62	84027225-54103	LAB SUPPLIES	\$227.62
	Vendor Total:					\$227.62
ZUMAR INDUSTRIES INC	89847	WING BRACKETS	\$302.07	10024620-54127	PW - SIGN POSTS/SHEETING	\$302.07
	Vendor Total:					\$302.07
	INVOICE TOTAL:					\$432,594.69

List of Checks Presented for Approval on 10/16/2020

The following list of bills payable was reviewed and approved for payment.

Sgt. S. S. S.

D. R. J.

CR 11.3.20

Signature

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ACME RIGGING & SUPPLY CO	313283	MISC. RENTAL & SUPPLIES AS NEE	\$90.50	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$90.50
					Vendor Total:	\$90.50
ADVANCED SECURITY SYSTEMS	536638 1	ALARM MONITORING AT GHM	\$88.50	10022700-52180	SECURITY SERVICES	\$88.50
	536638	FIRE, LIFE SAFETY INSPECTION &	\$528.48	10022700-52180	SECURITY SERVICES	\$528.48
					Vendor Total:	\$616.98
AFMAN SUPPLY	417707	MASTERLOCK	\$152.86	84027221-56120	EQUIPMENT MAINTENANCE & REPAIR	\$152.86
					Vendor Total:	\$152.86
AIR TECHNOLOGY WEST	4696	GASKET KIT, RING & GASKET OVERHAUL KIT	\$647.45	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$647.45
					Vendor Total:	\$647.45
ALHAMBRA NATIONAL WATER	5109554 100620	DRINKING WATER SERVICES	\$128.52	10022700-52100	CONTRACTUAL SERVICES	\$8.99
				84027225-54100	SUPPLIES	\$119.53
					Vendor Total:	\$128.52
ALPHA ANALYTICAL LABORATORIES INC	0092232-UKIAH	MISC. LABORATORY WORK AS NEEDE	\$390.00	82027111-52100	CONTRACTUAL SERVICES	\$390.00
	0091266-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$177.00	84027225-52100	CONTRACTUAL SERVICES	\$177.00
	0091622-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$177.00	84027225-52100	CONTRACTUAL SERVICES	\$177.00
	0093101-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$177.00	84027225-52100	CONTRACTUAL SERVICES	\$177.00
	0093466-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$177.00	84027225-52100	CONTRACTUAL SERVICES	\$177.00
	0094379-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$177.00	84027225-52100	CONTRACTUAL SERVICES	\$177.00
	0091900-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$190.00	84027225-52100	CONTRACTUAL SERVICES	\$190.00
	0093395-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$218.00	84027225-52100	CONTRACTUAL SERVICES	\$218.00
	0093192-UKIAHSTP	MISC. LABORATORY WORK AS NEEDE	\$237.00	84027225-52100	CONTRACTUAL SERVICES	\$237.00
	0093031-UKIAHSTP	PROVIDE GROUND WATER TEST RESU	\$2,500.00	84027225-52100	CONTRACTUAL SERVICES	\$2,500.00

List of Checks Presented for Approval on 10/16/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
AUSTIN AIR SYSTEMS LTD	359912 & 59588	BALANCE DUE FOR 30 EACH HEALTH	\$7,293.75	20822500-54100	SUPPLIES	\$7,293.75
					Vendor Total:	\$7,293.75
B & B INDUSTRIAL SUPPLY INC	219997	MISC. MATERIALS AS NEEDED	\$103.36	20822500-56300	BUILDING MAINT. & REPAIR	\$103.36
	220120	MISC. MATERIALS AS NEEDED	\$27.22	82027111-56300	BUILDING MAINT. & REPAIR	\$27.22
	219782	MISC. MATERIALS AS NEEDED	\$25.28	84027221-56120	EQUIPMENT MAINTENANCE & REPAIR	\$25.28
	220469	MISC. MATERIALS AS NEEDED	\$44.68	82027111-56130	EXTERNAL SERVICES	\$44.68
					Vendor Total:	\$200.54
BELKORP AG	669203	PRESSURE S, RADIO KIT	\$174.97	84027225-56130	EXTERNAL SERVICES	\$174.97
					Vendor Total:	\$174.97
BOMBER INC	23971	SAFETY GLASSES	\$226.04	80026110-54100	SUPPLIES	\$226.04
					Vendor Total:	\$226.04
BOUND TREE MEDICAL LLC	83780715	ISOLATION GOWNS	\$381.67	10021210-54107	EMS SUPPLIES	\$190.83
				91521400-54107	EMS SUPPLIES	\$190.84
					Vendor Total:	\$381.67
CALIFORNIA WATER ENVIRONMENT ASSOCIATION	DV101320	MEMBERSHIP-T ANDERSON	\$192.00	84027225-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$192.00
					Vendor Total:	\$192.00
CDW GOVERNMENT INC	2289920	VEEAM AVAILABILITY SUITE UNIVE	\$9,336.06	20913900-54320	SOFTWARE	\$9,336.06
					Vendor Total:	\$9,336.06
COFFEE CRITIC INC, THE	R24436	MISC. COFFEE SUPPLIES AS NEEDED	\$45.00	20012200-54100	SUPPLIES	\$45.00
					Vendor Total:	\$45.00
COMCAST	1067 OCT 20	INTERNET SERVICES	\$124.81	10021210-55100	TELEPHONE	\$62.40
				91521400-55100	TELEPHONE	\$62.41
	1067 SEP 20	INTERNET SERVICES	\$124.81	10021210-55100	TELEPHONE	\$62.41
				91521400-55100	TELEPHONE	\$62.40
	1296 OCT 20	INTERNET SERVICES	\$168.40	20913900-55100	TELEPHONE	\$168.40
	4635 OCT 20	INTERNET SERVICES	\$246.49	20913900-55100	TELEPHONE	\$246.49
	9780 OCT 20	INTERNET SERVICES	\$130.88	73022600-55100	TELEPHONE	\$130.88
					Vendor Total:	\$795.39

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Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
CONCUR TECHNOLOGIES INC	10110012895	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
	10120011279	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
	10120011881	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
	10120012956	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
	10130012688	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
	10150012686	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
	10160011673	CONCUR EXPENSE PAY SOFTWARE L	\$457.20	20413500-54320	SOFTWARE	\$457.20
Vendor Total:						\$3,200.40
COOPER COMPLIANCE CORPORATION	2185	COMPLIANCE & REPORTING SERVICE	\$500.00	80026400-52100	CONTRACTUAL SERVICES	\$500.00
	Vendor Total:					\$500.00
DANIEL F MEAD	50521	DUPLICATE KEYS, REPAIRS & MISC	\$12.25	20822500-56300	BUILDING MAINT. & REPAIR	\$12.25
	50528	DUPLICATE KEYS, REPAIRS & MISC	\$93.63	20822500-56300	BUILDING MAINT. & REPAIR	\$93.63
	50563	LABOR ON BOFA BUILDING	\$497.50	20822500-56300	BUILDING MAINT. & REPAIR	\$497.50
	50565	PARTS FOR BOFA BUILDING	\$627.77	20822500-56300	BUILDING MAINT. & REPAIR	\$627.77
	50559	DUPLICATE KEYS, REPAIRS & MISC	\$29.40	84027221-54100	SUPPLIES	\$29.40
Vendor Total:						\$1,260.55
DC ELECTRIC GROUP INC	415938	TRAFFIC SIGNAL REPAIRS AT AIRP	\$3,313.25	10024214-52100	CONTRACTUAL SERVICES	\$3,313.25
	Vendor Total:					\$3,313.25
E SOURCE COMPANIES LLC	2554	PM FOR UTILITY BILLING CIS REP	\$9,352.50	20513300-52100	CONTRACTUAL SERVICES	\$9,352.50
	Vendor Total:					\$9,352.50
EPIC AVIATION LLC	7353873	JET A FUEL	\$7,034.84	77725200-58401	AVIATION FUEL	\$7,034.84
	7354842	JET A FUEL	\$10,537.20	77725200-58401	AVIATION FUEL	\$10,537.20
	7355126	JET A FUEL	\$11,224.63	77725200-58401	AVIATION FUEL	\$11,224.63
	7353639	JET A FUEL	\$12,212.36	77725200-58401	AVIATION FUEL	\$12,212.36
Vendor Total:						\$41,009.03
EUREKA OXYGEN CO	470186	EQUIPMENT MAINTENANCE	\$684.75	10022100-54100	SUPPLIES	\$684.75
	Vendor Total:					\$684.75
FASTENAL	CAUKA40600	MISC. SUPPLIES AS NEEDED	\$7.62	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$7.62
	CAUKA40492	MISC. SUPPLIES AS NEEDED	\$18.85	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$18.85

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Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
FASTENAL	CAUKA40500	MISC. SUPPLIES AS NEEDED	\$26.85	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$26.85
	CAUKA40606	MISC. SUPPLIES AS NEEDED	\$32.03	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$32.03
	CAUKA40547	MISC. SUPPLIES AS NEEDED	\$205.62	84027225-54100	SUPPLIES	\$205.62
Vendor Total:						\$290.97
FISHER WIRELESS SVCS INC	232178	COMMUNICATION EQUIP & MISC REP	\$310.00	10020210-56130	EXTERNAL SERVICES	\$310.00
	Vendor Total:					\$310.00
FRED PRYOR SEMINARS	5581541	MEMBERSHIP-K CUMMINS	\$199.00	20013220-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$199.00
	Vendor Total:					\$199.00
GCR TIRES & SERVICES	851-50502	TIRES, TUBES, REPARIS & LABOR	\$186.90	10020210-56130	EXTERNAL SERVICES	\$186.90
	851-50547	TIRES, TUBES, REPARIS & LABOR	\$367.88	10020210-56130	EXTERNAL SERVICES	\$367.88
	851-50501	TIRES, TUBES, REPARIS & LABOR	\$933.37	80026110-56130	EXTERNAL SERVICES	\$933.37
	851-50646	TIRES, TUBES, REPARIS & LABOR	\$477.49	82027114-56130	EXTERNAL SERVICES	\$477.49
	851-50692	BS 225/70R19.5/14 M729F REG DR	\$1,729.99	84027221-56130	EXTERNAL SERVICES	\$1,729.99
	851-50567	TIRES, TUBES, REPARIS & LABOR	\$287.88	84027225-56130	EXTERNAL SERVICES	\$287.88
	851-50549	420/90R30 R-1W FARM TIRE	\$1,796.67	84027225-56130	EXTERNAL SERVICES	\$1,796.67
	851-50574	TIRES, TUBES, REPARIS & LABOR	\$436.63	91521400-56130	EXTERNAL SERVICES	\$436.63
	Vendor Total:					\$6,216.81
GENERAL PACIFIC INC	1384100	ITRON #ITR G980710, C1SDR3, FM	\$3,592.88	80026200-54100	SUPPLIES	\$3,592.88
	Vendor Total:					\$3,592.88
GRANITE CONSTRUCTION COMPANY	1895134	MISC ROCK & ROAD PATCH MATERIA	\$115.14	82027114-54100	SUPPLIES	\$115.14
	Vendor Total:					\$115.14
IBEW, LOCAL 1245	20-10 IBEW	OCT 20 ELECTRIC UNIT UNION DUES	\$1,797.85	20700000-20524	NON-EMPLOYEE HEALTH INS.PREM	\$1,797.85
	Vendor Total:					\$1,797.85
JOHN'S LOCK & SAFE	10334	MISC LOCK & KEYSERVICES AS NEE	\$25.00	10020210-56130	EXTERNAL SERVICES	\$25.00
	Vendor Total:					\$25.00
KELLY-MOORE PAINT COMPANY INC	910-00000330964	GRACO 248212 PCKING KIT 795	\$83.67	10024620-56130	EXTERNAL SERVICES	\$83.67
	Vendor Total:					\$83.67

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
KIMBALL MIDWEST	8216859	5/16X15-1/4 BLK CABLE	\$448.54	20324100-56112	EQUIPMENT PARTS FOR RESALE	\$448.54
					Vendor Total:	\$448.54
LANGUAGE LINE SERVICE INC	10093058	TRANSLATION AND INTERPRETING S	\$3.84	20012300-52100	CONTRACTUAL SERVICES	\$3.84
					Vendor Total:	\$3.84
LES SCHWAB TIRE CENTER	64000499358	MISCELLANEOUS TIRE SERVICES AS	\$37.00	82027114-56130	EXTERNAL SERVICES	\$37.00
					Vendor Total:	\$37.00
LIFE ASSIST INC	1038936	MISC. EMS SUPPLIES AS NEEDED	\$10.52	10021210-54107	EMS SUPPLIES	\$5.26
				91521400-54107	EMS SUPPLIES	\$5.26
	1038721	MISC. EMS SUPPLIES AS NEEDED	\$409.00	10021210-54107	EMS SUPPLIES	\$204.50
				91521400-54107	EMS SUPPLIES	\$204.50
					Vendor Total:	\$419.52
LN CURTIS & SONS	PT145460	HRRB ARC HOSE TRANSPORTATION RETURN	(\$19.92)	10021210-56120	EQUIPMENT MAINTENANCE & REPAIR	(\$9.96)
				91521400-56120	EQUIPMENT MAINTENANCE & REPAIR	(\$9.96)
	INV407609	HP3-2501-BK WOLFPACK	\$964.40	25321210-54106	SPECIALTY SUPPLIES	\$482.20
				91621400-54106	SPECIALTY SUPPLIES	\$482.20
					Vendor Total:	\$944.48
LYMAN GROUP INC	5251756	MISC. PURCHASES AS NEEDED	\$381.71	84027225-58202	CHEMICALS	\$381.71
	5251956	MISC. PURCHASES AS NEEDED	\$20.64	20822500-56210	FUEL & FLUIDS	\$20.64
	5251639	MISC. PURCHASES AS NEEDED	\$13.98	84027225-56210	FUEL & FLUIDS	\$13.98
	5251168	MISC. PURCHASES AS NEEDED	\$44.80	10024224-54100	SUPPLIES	\$44.80
					Vendor Total:	\$461.13
MATHESON TRI-GAS INC	22355360	OXYGEN & MISC. AS NEEDED	\$51.19	80026210-54100	SUPPLIES	\$51.19
	22375902	OXYGEN & MISC. AS NEEDED	\$57.50	80026210-54100	SUPPLIES	\$57.50
					Vendor Total:	\$108.69
MAUREEN MULHEREN	TR 10/1/20	TRAVEL REIMBURSEMENT	\$50.00	20010000-57100	LEARNING AND DEVELOPMENT	\$50.00
					Vendor Total:	\$50.00
MENDOCINO COUNTY HISTORICAL SOCIETY	DV100620	MUSEUM RENTAL REFUND- COVID-19	\$250.00	10022700-46530	MUSEUM MEETING RENTALS	\$250.00
					Vendor Total:	\$250.00

List of Checks Presented for Approval on 10/16/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
MINE SAFETY APPLIANCES COMPANY LLC	961322845	10060295 SENSOR, ULTIMA X RETURNED	(\$713.13)	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	(\$713.13)
	961307855	A-ULTX-SENSOR, ULTIMA X	\$691.36	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$691.36
	961284513	A-ULTX-SENS: 14-0-0 GAS TYPE S	\$1,348.87	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$1,348.87
	Vendor Total:					\$1,327.10
MOTION INDUSTRIES INC	CA23-522110	BEARING, FITTINGS & MISC. ITEM	\$238.72	80026110-56130	EXTERNAL SERVICES	\$238.72
	CA23-522094	BEARING, FITTINGS & MISC. ITEM	\$711.31	80026110-56130	EXTERNAL SERVICES	\$711.31
	Vendor Total:					\$950.03
MULTIQUIP INC	93486733	MULTIQUIP #DCA25SSSIU4F 25KVA	\$62,402.25	82027111-80100	MACHINERY & EQUIPMENT	\$2,326.92
				82027111-80100	MACHINERY & EQUIPMENT	\$58,733.36
				84427221-80100	MACHINERY & EQUIPMENT	\$1,341.97
	93479736	MULTIQUIP #DCA25SSSIU4F 25KVA	\$68,857.77	82027111-80100	MACHINERY & EQUIPMENT	\$3,113.95
				82027111-80100	MACHINERY & EQUIPMENT	\$45,110.73
				84427221-80100	MACHINERY & EQUIPMENT	\$20,633.09
				Vendor Total:		
NCPA	006102-1020027	OCT 20 NCPA	\$606,233.00	80026440-58104	NCPA MANAGEMENT SERVICES	\$38,626.00
				80026440-58101	NCPA PLANT GENERATION	(\$98,471.00)
				80026440-58102	NCPA POWER PURCHASES	\$526,620.00
				80026440-58105	NCPA THIRD PARTY SALES	(\$52,122.00)
				80026440-58103	NCPA TRANSMISSION	\$191,580.00
Vendor Total:					\$606,233.00	
NOR-CAL RECYCLED ROCK & AGGREGATES INC	19944	MISC ROCK & ROAD PATCH MATERIA	\$109.80	10024620-54122	PW - AGGREGATE BASE	\$109.80
	20263	MISC ROCK & ROAD PATCH MATERIA	\$733.55	10024620-54124	PW - CONCRETE/ SUPPLIES	\$733.55
	Vendor Total:					\$843.35
OLIN CORPORATION	2879152	LIQUID SODIUM HYPOCHLORITE	\$4,146.12	84027225-58202	CHEMICALS	\$4,146.12

List of Checks Presented for Approval on 10/16/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ONE TIME PAY VENDOR	122292-6	UTILITY REIMBURSEMENT-HAROLD GUTKNECHT	\$37.75	90100000-10420	UTILITY RECEIVABLES	\$37.75
					Vendor Total:	\$37.75
ONESOURCE DISTRIBUTORS LLC	S6513788.002	GLASER LOCK WASHERS	\$34.08	80000000-12104	INVENTORY - PURCHASES	\$34.08
	S6547193.001	AUTO SPLICE	\$153.95	80000000-12104	INVENTORY - PURCHASES	\$153.95
	S6529198.001	GUY GRIPS, SLEEVES	\$269.85	80000000-12104	INVENTORY - PURCHASES	\$269.85
	S6513788.001	GLASER HEX HEAD BOLTS, FLAT WASHERS	\$650.64	80000000-12104	INVENTORY - PURCHASES	\$650.64
	S6534229.001	JOSLYN #J1079 SQUARE WASHERS 3	\$1,218.20	80000000-12104	INVENTORY - PURCHASES	\$795.55
				80026110-54100	SUPPLIES	\$422.65
	S6519943.001	GROUND CLAMPS	\$351.75	80026110-54100	SUPPLIES	\$351.75
					Vendor Total:	\$2,678.47
OPERATING ENGINEER PUBLIC& MISC EMPLOYEES	86138 SEP 20	SEP 20 HEALTH INSURANCE	\$1,497.00	20700000-20524	NON-EMPLOYEE HEALTH INS.PREM	\$1,497.00
					Vendor Total:	\$1,497.00
OPERATING ENGINEERS UNION	2010-1	OCT 20 PW UNION DUES	\$975.00	20700000-20509	P/R DEDUCT.- UNION DUES	\$975.00
	2010	OCT 20 MISC UNION DUES	\$1,680.00	20700000-20509	P/R DEDUCT.- UNION DUES	\$1,680.00
					Vendor Total:	\$2,655.00
OPPERMAN & SON INC	01P36525	MISC. PARTS AS NEEDED	\$63.36	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$63.36
	01P36297	MISC. PARTS AS NEEDED	\$41.00	20324100-56112	EQUIPMENT PARTS FOR RESALE	\$41.00
	01P35073	MISC. PARTS AS NEEDED	\$333.11	10021210-56130	EXTERNAL SERVICES	\$166.55
				10021210-56130	EXTERNAL SERVICES	\$166.56
	01P36078	MISC. PARTS AS NEEDED	\$34.34	10024620-56130	EXTERNAL SERVICES	\$34.34
	01P36231	MISC. PARTS AS NEEDED	\$39.78	10024620-56130	EXTERNAL SERVICES	\$39.78
	01P36549	MISC. PARTS AS NEEDED	\$268.85	10024620-56130	EXTERNAL SERVICES	\$268.85
	01P36524	MISC. PARTS AS NEEDED	\$82.63	77725200-56130	EXTERNAL SERVICES	\$82.63
	01P36855	MISC. PARTS AS NEEDED	\$397.37	80026110-56130	EXTERNAL SERVICES	\$397.37
	01P37162	MISC. PARTS AS NEEDED	\$520.00	82027111-56130	EXTERNAL SERVICES	\$520.00
	01P37163	MISC. PARTS AS NEEDED	\$289.87	84027221-56130	EXTERNAL SERVICES	\$289.87

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
OPPERMAN & SON INC	01P37164	MISC. PARTS AS NEEDED	\$321.62	84027221-56130	EXTERNAL SERVICES	\$160.81
				84027221-56130	EXTERNAL SERVICES	\$160.81
	01P36268	MISC. PARTS AS NEEDED	\$121.81	91521400-56130	EXTERNAL SERVICES	\$121.81
	01P36701	MISC. PARTS AS NEEDED	\$249.58	91521400-56130	EXTERNAL SERVICES	\$124.79
				91521400-56130	EXTERNAL SERVICES	\$124.79
	01P36340	MISC. PARTS AS NEEDED	\$179.27	20324100-58510	REIMBURSABLE JOBS	\$179.27
	Vendor Total:					\$2,942.59
OREILLY AUTO PARTS	2707-277281	1-PC ROTOR, DISC PAD	\$374.65	10020210-56130	EXTERNAL SERVICES	\$374.65
	2707-275427	SEMI-MAT PAD, BRAKE ROTOR, WHL CYLINDER	\$167.65	82027111-56130	EXTERNAL SERVICES	\$167.65
	Vendor Total:					\$542.30
OWEN EQUIPMENT SALES	00050778	SAVER SWEEP REAR BROOM	\$825.44	10024620-56130	EXTERNAL SERVICES	\$825.44
Vendor Total:					\$825.44	
PAC MACHINE CO INC	80833	EMERGENCY RENTAL TO INCLUDE:	\$5,933.23	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$3,825.23
				84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$2,108.00
				Vendor Total:		
PACE SUPPLY CORPORATION	026356108	MISC. ITEMS AS NEEDED	\$120.35	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$120.35
	026354713	MISC. ITEMS AS NEEDED	\$129.39	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$129.39
	026300919	MISC. ITEMS AS NEEDED	\$154.11	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$154.11
	026386596	MISC. ITEMS AS NEEDED	\$370.68	84027221-54100	SUPPLIES	\$370.68
	Vendor Total:					\$774.53
PACIFIC REDWOOD MEDICAL GROUP INC	3067	BACKGROUND & PHYSICALS	\$739.20	20016100-54161	BACKGROUND & PHYSICALS	\$470.40
				80026400-54161	BACKGROUND & PHYSICALS	\$134.40
				84027221-54161	BACKGROUND & PHYSICALS	\$134.40
				Vendor Total:		
PAPA	DV100820	CONTINUED EDUCATION - R GIBSON, R RAMOS, J THOMSEN	\$150.00	10022100-57100	LEARNING AND DEVELOPMENT	\$150.00
Vendor Total:					\$150.00	

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
PETER PUGGER MANUFACTURING INC	20854	FORCIBLE ENTRY DOOR WEDGE	\$376.29	90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$0.44)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$1.76)
				25321210-54102	SMALL TOOLS	\$1.10
				25321210-54102	SMALL TOOLS	\$188.14
				91621400-54102	SMALL TOOLS	\$1.10
				91621400-54102	SMALL TOOLS	\$188.15
				Vendor Total:		\$376.29
PETERSON POWER SYSTEMS INC	PC060162808	PARTS & SERVICE REPAIRS AS NEE	\$56.18	10024620-56130	EXTERNAL SERVICES	\$56.18
	PC060162702	PARTS & SERVICE REPAIRS AS NEE	\$959.03	10024620-56130	EXTERNAL SERVICES	\$959.03
	Vendor Total:		\$1,015.21			
PETERSON TRUCKS INC	231344R	PARTS & SERVICE REPAIRS AS NEE	\$602.02	10024620-56130	EXTERNAL SERVICES	\$602.02
	231335R	PARTS & SERVICE REPAIRS AS NEE	\$296.31	80026110-56130	EXTERNAL SERVICES	\$296.31
	Vendor Total:		\$898.33			
PG&E CO	1522-8 SEP 20	PACIFIC GAS & ELECTRIC	\$38.06	10021210-55210	UTILITIES	\$19.03
				91521400-55210	UTILITIES	\$19.03
	6124-2 SEP 20	PACIFIC GAS & ELECTRIC	\$1,167.88	10021210-55210	UTILITIES	\$583.94
				91521400-55210	UTILITIES	\$583.94
	7075-1 SEP 20	PACIFIC GAS & ELECTRIC	\$3.94	10022100-55210	UTILITIES	\$3.94
	0853-6 SEP 20	PACIFIC GAS & ELECTRIC	\$2,059.94	31122000-55210	UTILITIES	\$2,059.94
				Vendor Total:		\$3,269.82
PITNEY BOWES INC	1016383478	POSTAGE MACHINE LEASE & SUPPLI	\$168.15	20513300-54101	POSTAGE	\$168.15
				Vendor Total:		\$168.15
PUBLIC SERVICE DEPARTMENT	CITY AUG 20	CITY UTILITIES	\$170,379.21	10022100-55210	UTILITIES	\$29,633.04
				10022300-55210	UTILITIES	\$4,240.39
				10022700-55210	UTILITIES	\$3,568.93
				10024214-55210	UTILITIES	\$930.96
				10024620-55210	UTILITIES	\$531.25
				20620231-55210	UTILITIES	\$84.80

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
PUBLIC SERVICE DEPARTMENT	CITY AUG 20	CITY UTILITIES	\$170,379.21	20822500-55210	UTILITIES	\$12,576.42
				20824300-55210	UTILITIES	\$97.02
				20824300-55210	UTILITIES	\$953.79
				64020213-55210	UTILITIES	\$951.14
				72022400-55210	UTILITIES	\$29,202.23
				73022600-55210	UTILITIES	\$2,524.11
				77725200-55210	UTILITIES	\$1,983.28
				80026400-55210	UTILITIES	\$2,900.85
				80526150-55210	UTILITIES	\$12,225.53
				82027111-55210	UTILITIES	\$37,372.28
				84027221-55210	UTILITIES	\$81.54
				84027225-55210	UTILITIES	\$30,521.65
				Vendor Total: \$170,379.21		
R EMMETT JONES	SEP 20	MANAGEMENT ADVISORY SERVICES	\$750.00	20012100-52100	CONTRACTUAL SERVICES	\$225.00
				70024500-52100	CONTRACTUAL SERVICES	\$150.00
				77725200-52100	CONTRACTUAL SERVICES	\$375.00
				Vendor Total: \$750.00		
RAINBOW AGRICULTURAL SERVICES	758686	PARTS & MISC SUPPLIES AS NEEDED	\$18.03	82027111-56300	BUILDING MAINT. & REPAIR	\$18.03
	108319/1	PARTS & MISC SUPPLIES AS NEEDED	\$4.34	10021210-56120	EQUIPMENT MAINTENANCE & REPAIR	\$2.17
				91521400-56120	EQUIPMENT MAINTENANCE & REPAIR	\$2.17
	36687/1	PARTS & MISC SUPPLIES AS NEEDED	\$17.40	10022100-56210	FUEL & FLUIDS	\$6.52
				10022100-54100	SUPPLIES	\$10.88
	36817/1	PARTS & MISC SUPPLIES AS NEEDED	\$37.00	10024620-54120	PW - SPECIAL SUPPLIES	\$37.00
	36643/1	PARTS & MISC SUPPLIES AS NEEDED	\$32.65	10022100-54100	SUPPLIES	\$32.65
	36652/1	PARTS & MISC SUPPLIES AS NEEDED	\$76.19	10022100-54100	SUPPLIES	\$76.19
				Vendor Total: \$185.61		
REDWOOD COAST FUELS	2180864	CARDLOCK FUEL PURCHASES	\$52.31	10021210-56130	EXTERNAL SERVICES	\$52.31
	2183144	CARDLOCK FUEL PURCHASES	\$315.10	10024620-56130	EXTERNAL SERVICES	\$304.85

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
REDWOOD COAST FUELS	2183144	CARDLOCK FUEL PURCHASES	\$315.10	20324100-58410	GARAGE LUBRICANTS & PARTS	\$10.25
	2182717	CARDLOCK FUEL PURCHASES	\$355.20	20324100-58410	GARAGE LUBRICANTS & PARTS	\$355.20
	Vendor Total:					\$722.61
REDWOOD TREE SERVICE STATIONS INC	SEP 20	CAR WASHES & INTERIOR CLEANING	\$331.00	10020210-56130	EXTERNAL SERVICES	\$264.00
				10023320-56130	EXTERNAL SERVICES	\$7.00
				10024210-56130	EXTERNAL SERVICES	\$30.00
				82027111-56130	EXTERNAL SERVICES	\$30.00
				Vendor Total:		\$331.00
REXEL USA INC	Y308740	25S00WUL PORTABLE POWER CABLE	\$2,960.48	77725200-56300	BUILDING MAINT. & REPAIR	(\$2.36)
				77725200-56300	BUILDING MAINT. & REPAIR	\$279.30
				82027111-80100	MACHINERY & EQUIPMENT	(\$7.39)
				82027111-80100	MACHINERY & EQUIPMENT	(\$2.33)
				82027111-80100	MACHINERY & EQUIPMENT	\$279.29
				82027111-80100	MACHINERY & EQUIPMENT	\$884.29
				84427221-80100	MACHINERY & EQUIPMENT	(\$4.30)
				84427221-80100	MACHINERY & EQUIPMENT	(\$4.30)
				84427221-80100	MACHINERY & EQUIPMENT	(\$4.30)
				84427221-80100	MACHINERY & EQUIPMENT	\$514.19
				84427221-80100	MACHINERY & EQUIPMENT	\$514.19
				84427221-80100	MACHINERY & EQUIPMENT	\$514.20
	0T71702	MISC. ELECTRICAL SUPPLIES AS N	\$365.41	77725200-56130	EXTERNAL SERVICES	\$365.41
	0U04322	MISC. ELECTRICAL SUPPLIES AS N	\$415.13	77725200-56130	EXTERNAL SERVICES	\$415.13
	Vendor Total:					\$3,741.02
RICHARD THORNTON	0000011812	TELEPHONE PRODUCTS & SERVICES	\$1,843.00	20913900-54320	SOFTWARE	\$1,843.00
ROUND TABLE PIZZA	14-016	PUBLIC WORKS LUNCH MEETING	\$119.72	84027221-57100	LEARNING AND DEVELOPMENT	\$119.72

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
SACKS, RICKETTS & CASE, LLP	120824	LEGAL SERVICES	\$10,414.25	20016100-52150	LEGAL SERVICES/ EXPENSES	\$10,414.25
					Vendor Total:	\$10,414.25
SHN CONSULTING ENGINEERS & GEOLOGISTS INC	106260	COMPACTION TESTING FOR SPEC 19	\$3,291.60	82227113-80230	INFRASTRUCTURE	\$840.25
				84427221-80230	INFRASTRUCTURE	\$2,451.35
				Vendor Total:		\$3,291.60
SOLID WASTES SYSTEMS INC	440937	MISC. DUMP FEES	\$442.66	10024224-59101	FEES	\$72.75
				82027111-59101	FEES	\$366.40
				10022100-59400	OTHER EXPENSES	\$40.40
				10024620-54120	PW - SPECIAL SUPPLIES	(\$58.56)
				10024620-54120	PW - SPECIAL SUPPLIES	\$21.67
				Vendor Total:		\$442.66
STAPLES CREDIT PLAN	7312663840-0	CANON CARTRIDGE	\$23.61	10020210-54100	SUPPLIES	\$23.61
	7313239901-0	TAPE, SWIFFER DUSTER, STICKIES	\$44.40	10020210-54100	SUPPLIES	\$44.40
	7312663840-0	CARTRIDGE	\$51.16	10020210-54100	SUPPLIES	\$51.16
	7313952694-0	DISC CDR, POST-IT, ENVELOPES	\$104.71	10020210-54100	SUPPLIES	\$104.71
	7313952694-0	JAM PAPER	\$160.34	10020210-54100	SUPPLIES	\$160.34
	185886841-0-	WEBCAM	\$195.94	10020210-54100	SUPPLIES	\$195.94
	7306721089-0	WEBCAM	\$261.27	10020210-54100	SUPPLIES	\$261.27
	7312663840-0	TONER, SHIPPING LABELS	\$442.88	10020210-54100	SUPPLIES	\$442.88
	7314469485-0	TONERS	\$856.97	10020210-54100	SUPPLIES	\$856.97
	7312570505-0	CARTRIDGE	\$27.97	20013210-54100	SUPPLIES	\$27.97
	7312906950-0	TONER, FILE FOLDERS	\$129.45	20013210-54100	SUPPLIES	\$13.64
				20013210-54100	SUPPLIES	\$115.81
	7313400435-0	USB	\$13.72	20013400-54100	SUPPLIES	\$13.72
	7311799964-1	IPAD CASE RETURN	(\$141.53)	80026400-54100	SUPPLIES	(\$141.53)
	7314370919-0	COPY PAPER, CARTRIDGES	\$308.38	91521400-54100	SUPPLIES	\$154.19
				91721400-54100	SUPPLIES	\$154.19
				Vendor Total:		\$2,479.27

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
T & T VALVE AND INSTRUMENT INC	58521	#70-0061-113G-536/K BRAY SERIE	\$1,797.46	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$1,797.46
					Vendor Total:	\$1,797.46
THURSTON CHEVROLET TOYOTA SCION	227928	GLOW PLUG	\$32.46	10021210-56130	EXTERNAL SERVICES	\$32.46
	TOCS297071	TRANSMITTER	\$561.41	80026110-56130	EXTERNAL SERVICES	\$561.41
					Vendor Total:	\$593.87
THURSTON CHRYSLER DODGE JEEP RAM	19595	AA CLIP	\$16.57	10020210-56130	EXTERNAL SERVICES	\$16.57
	19559	HANDLE, STRIP	\$131.05	10020210-56130	EXTERNAL SERVICES	\$131.05
	19500	FILTER	\$136.70	10020210-56130	EXTERNAL SERVICES	\$136.70
	19490	WIRING	\$23.12	80026110-56130	EXTERNAL SERVICES	\$23.12
	19471	AB SEAL	\$71.07	80026110-56130	EXTERNAL SERVICES	\$71.07
	19469	AA & AB FILTERS	\$341.71	80026110-56130	EXTERNAL SERVICES	\$341.71
	19594	AA FILTERS	\$179.60	20324100-58510	REIMBURSABLE JOBS	\$179.60
					Vendor Total:	\$899.82
TRACI BOYL	DV100520	COVID-19 SUPPLIES AND MONITOR	\$168.34	20012100-54330	COMPUTER AND TECHNOLOGY	\$97.98
				20012100-54100	SUPPLIES	\$70.36
					Vendor Total:	\$168.34
TRACTOR SUPPLY CREDIT PLAN	300398724	PANEL	\$234.02	82027111-56300	BUILDING MAINT. & REPAIR	\$234.02
	300396903	SWIVEL CASTER	\$46.81	80026110-54100	SUPPLIES	\$46.81
					Vendor Total:	\$280.83
UKIAH AUTO PARTS	179297	AUTO & MACHINE PARTS & MATERIA	\$53.24	20324100-56112	EQUIPMENT PARTS FOR RESALE	\$53.24
	179436	AUTO & MACHINE PARTS & MATERIA	\$65.11	20324100-56112	EQUIPMENT PARTS FOR RESALE	\$65.11
	177728	AUTO & MACHINE PARTS & MATERIA	\$18.58	10020210-56130	EXTERNAL SERVICES	\$18.58
	176109	AUTO & MACHINE PARTS & MATERIA	\$7.08	10022100-56130	EXTERNAL SERVICES	\$7.08
	176239	AUTO & MACHINE PARTS & MATERIA	\$8.13	10022100-56130	EXTERNAL SERVICES	\$8.13
	179881	AUTO & MACHINE PARTS & MATERIA	\$7.07	10024210-56130	EXTERNAL SERVICES	\$7.07
	179001	AUTO & MACHINE PARTS & MATERIA	(\$20.00)	10024620-56130	EXTERNAL SERVICES	(\$20.00)
	179476	AUTO & MACHINE PARTS & MATERIA	\$23.83	10024620-56130	EXTERNAL SERVICES	\$23.83

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UKIAH AUTO PARTS	178962	AUTO & MACHINE PARTS & MATERIA	\$177.81	10024620-56130	EXTERNAL SERVICES	\$177.81
	179895	AUTO & MACHINE PARTS & MATERIA	\$83.77	20324100-56130	EXTERNAL SERVICES	\$83.77
	179477	AUTO & MACHINE PARTS & MATERIA	\$54.17	82027111-56130	EXTERNAL SERVICES	\$54.17
	178031	AUTO & MACHINE PARTS & MATERIA	\$36.61	82027114-56130	EXTERNAL SERVICES	\$36.61
	17803	AUTO & MACHINE PARTS & MATERIA	\$36.61	84027221-56130	EXTERNAL SERVICES	\$36.61
	179877	AUTO & MACHINE PARTS & MATERIA	\$20.16	20324100-58510	REIMBURSABLE JOBS	\$20.16
	176826	AUTO & MACHINE PARTS & MATERIA	\$30.46	20824300-54100	SUPPLIES	\$30.46
	180120	AUTO & MACHINE PARTS & MATERIA	\$5.12	82027114-54100	SUPPLIES	\$5.12
	176123	AUTO & MACHINE PARTS & MATERIA	\$53.15	82027114-54100	SUPPLIES	\$53.15
	177944	AUTO & MACHINE PARTS & MATERIA	\$27.39	84027221-54100	SUPPLIES	\$27.39
Vendor Total:						\$688.29
UKIAH DAILY JOURNAL	0006513282-	JOB ADVERTISEMENT	\$553.36	20016100-54162	ADVERTISING	\$553.36
	0006502785	PUBLIC NOTICE	\$118.25	10020210-52515	ADVERTISING & PUBLICATION	\$118.25
	0006515488	PUBLISHING SERVICES FY 20/21	\$64.63	20012500-52150	LEGAL SERVICES/ EXPENSES	\$64.63
	0006518355	PUBLISHING SERVICES FY 20/21	\$70.99	20012500-52150	LEGAL SERVICES/ EXPENSES	\$70.99
Vendor Total:						\$807.23
UKIAH PAPER SUPPLY	1514667	JANITORIAL SUPPLIES, MISC AS N	\$215.95	10022100-54100	SUPPLIES	\$215.95
	1514624	JANITORIAL SUPPLIES, MISC AS N	\$221.82	20822500-54100	SUPPLIES	\$221.82
	514952	JANITORIAL SUPPLIES, MISC AS N	\$311.96	77725200-54100	SUPPLIES	\$311.96
	1514860	JANITORIAL SUPPLIES, MISC AS N	\$144.88	80026120-54100	SUPPLIES	\$144.88
	514938	JANITORIAL SUPPLIES, MISC AS N	\$592.96	84027225-54100	SUPPLIES	\$592.96
Vendor Total:						\$1,487.57
UKIAH VALLEY MEDICAL CENTER	2735	BACKGROUND & PHYSICALS	\$260.80	20016100-54161	BACKGROUND & PHYSICALS	\$260.80
Vendor Total:						\$260.80
US POST OFFICE	243 FY 20/21	USPS MARKETING MAIL	\$240.00	20513300-54101	POSTAGE	\$240.00
Vendor Total:						\$240.00
USA BLUEBOOK	372625	HYDRANT ADJUSTABLE	\$225.74	82027114-54100	SUPPLIES	\$225.74
Vendor Total:						\$225.74
VALLEY PAVING	1920255 RET	CONTRACT 1920255 RETAINAGE	\$7,297.08	72000000-20150	AP CONTRACT RETAINAGE	\$7,297.08
Vendor Total:						\$7,297.08

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VERIZON WIRELESS	9864050195	DATA & EMERGENCY LOANER PHONES	\$418.11	10021210-55100	TELEPHONE	\$209.06
				91521400-55100	TELEPHONE	\$209.05
				Vendor Total:		\$418.11
VWR INTERNATIONAL INC	8802324457	LABORATORY SUPPLIES WWTP	\$113.73	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.45)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.45)
				84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$0.90
				84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$113.73
	8802376887	LABORATORY SUPPLIES WWTP	\$144.28	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.60)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.60)
				84027225-54103	LAB SUPPLIES	\$1.20
				84027225-54103	LAB SUPPLIES	\$144.28
	8802324456	LABORATORY SUPPLIES WWTP	\$526.99	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$2.37)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$2.37)
				84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$4.74
				84027225-56125	LAB EQUIP-REPAIR & MAINT.	\$526.99
			Vendor Total:		\$785.00	
WAHLUND CONSTRUCTION INC	092120	DOWNTOWN UTILITY UPGRADE & ELE	\$370,047.92	82227113-80230	INFRASTRUCTURE	\$292,136.56
				84427221-80230	INFRASTRUCTURE	\$77,911.36
				Vendor Total:		\$370,047.92
WAXIE SANITARY SUPPLY	79517086	KLEENLINE #850045 MULTIFOLD TO	\$2.58	10022700-54100	SUPPLIES	\$0.02
				20822500-54100	SUPPLIES	\$2.56
	79524535	KLEENLINE #850045 MULTIFOLD TO	\$1,189.46	10022700-54100	SUPPLIES	\$146.64
				20822500-54100	SUPPLIES	\$1,042.82
			Vendor Total:		\$1,192.04	
WELTY, WEAVER & CURRIE	2213	LEGAL SERVICES - WATER RESOURC	\$3,412.50	20014000-52150	LEGAL SERVICES/ EXPENSES	\$3,412.50
				Vendor Total:		\$3,412.50

List of Checks Presented for Approval on 10/16/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
WESCO DISTRIBUTION INC	916657	(S-181) SPLICE, AL 4/0 STR - 3	\$760.28	80000000-12104	INVENTORY - PURCHASES	\$760.28
	933927	(S-181) SPLICE, AL 4/0 STR - 3	\$1,232.68	80000000-12104	INVENTORY - PURCHASES	\$1,232.68
	Vendor Total:					\$1,992.96
WILLOW COUNTY WATER DIST	10010 SEP 20	WATER SERVICE - 1500 S STATE ST	\$77.16	10021210-55210	UTILITIES	\$38.58
				91521400-55210	UTILITIES	\$38.58
	40351 SEP 20	WATER SERVICE - 1640 S STATE ST	\$20.00	31122000-55210	UTILITIES	\$20.00
	40353 SEP 20	WATER SERVICE - 1640 S STATE ST	\$26.49	31122000-55210	UTILITIES	\$26.49
	81154 SEP 20	WATER SERVICE - SEWER TREATMENT PLANT	\$27.80	84027225-55210	UTILITIES	\$27.80
	Vendor Total:					\$151.45
WYATT IRRIGATION CO	280467 00	PARKING LOT A SUPPLIES	\$30.51	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.14)
				90000000-23028	MEASURE Y DISTRICT TAX	(\$0.14)
				10022100-54100	SUPPLIES	\$0.28
				10022100-54100	SUPPLIES	\$30.51
	281800 00	HAND PUMP, PVC SPAN	\$65.66	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.30)
				90000000-23028	MEASURE Y DISTRICT TAX	(\$0.30)
				10022100-54100	SUPPLIES	\$0.60
				10022100-54100	SUPPLIES	\$65.66
Vendor Total:					\$96.17	
INVOICE TOTAL:					\$1,475,376.20	

List of Checks Presented for Approval on 10/23/2020

The following list of bills payable was reviewed and approved for payment.

Sgt. Sanjiv

D. R. J.

CR 11/3/20

Signature

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
AACTION RENTS	503253-2	EQUIPMENT & MACHINERY RENTAL A	\$205.50	84027225-56504	FACILITY MAINTENANCE & REPAIR	\$205.50
					Vendor Total:	\$205.50
AIR QUALITY MANAGEMENT DISTRICT	5020 FY 20/21	ANNUAL PERMIT RENEWAL FEES	\$1,453.51	20822500-56300	BUILDING MAINT. & REPAIR	\$1,453.51
	5066 FY 20/21	ANNUAL PERMIT RENEWAL FEES	\$1,527.34	20824300-59101	FEES	\$766.66
				77725200-59101	FEES	\$760.68
	2730 FY 20/21	ANNUAL PERMIT RENEWAL FEE	\$110.57	70024500-59101	FEES	\$110.57
	5092 FY 20/21	ANNUAL PERMIT RENEWAL FEES	\$262.72	77725200-59101	FEES	\$262.72
	2859 FY 20/21	ANNUAL PERMIT RENEWAL FEES	\$431.88	80026220-59101	FEES	\$431.88
	2854 FY 20/21	ANNUAL PERMIT RENEWAL FEES	\$2,124.30	82027111-59101	FEES	\$1,062.15
				84027221-59101	FEES	\$1,062.15
	2805 FY 20/21	ANNUAL PERMIT RENEWAL FEES	\$855.26	84027225-59101	FEES	\$855.26
					Vendor Total:	\$6,765.58
AIR TECHNOLOGY WEST	746	HEAD OVERHAUL KIT	\$617.71	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$617.71
					Vendor Total:	\$617.71
ALTEC INDUSTRIES INC	11497844	PARTS & MATERIALS AS NEEDED	\$177.13	80026110-56130	EXTERNAL SERVICES	\$177.13
	11495850	PARTS & MATERIALS AS NEEDED	\$273.25	80026110-56130	EXTERNAL SERVICES	\$273.25
					Vendor Total:	\$450.38
AMAZON CAPITAL SERVICES	1NKN-D69N-V3YC	LAPTOP/DESKTOP WEBCAM	\$43.44	20513300-54330	COMPUTER AND TECHNOLOGY	\$43.44
	1WCC-R9Y3-3R6L	HOSE FITTINGS, GROOVE FITTINES	\$536.63	82027111-56120	EQUIPMENT MAINTENANCE & REPAIR	\$536.63
	13P4-LYG6-6MV1	PAD LOCKS	\$54.58	84027221-56120	EQUIPMENT MAINTENANCE & REPAIR	\$54.58
	14JJ-694M-YVLH	AIR FILTER	\$46.89	77725200-56130	EXTERNAL SERVICES	\$46.89
	1WCC-R9Y3-4HK1	HONDA STARTER ASSEMBLY	\$245.08	82027114-56130	EXTERNAL SERVICES	\$122.54
				84027221-56130	EXTERNAL SERVICES	\$122.54

List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
AMAZON CAPITAL SERVICES	1316-NHW4-HGPP	BEVEL PRO PVC PIPE BEVELING TOOLS	\$522.57	84027221-54102	SMALL TOOLS	\$522.57
	1WDT-WCYG-7HWV	FOOD STORAGE CONTAINERS	\$28.28	10020214-54100	SUPPLIES	\$28.28
	1CWG-JPRC-Q9R1	DIGITAL CAMERA, SD CARD READER, MEMORY CARD	\$101.33	10023320-54100	SUPPLIES	\$101.33
	1G1Y-WYWT-Q6YT	HDMI CABLE, 25FT	\$24.47	20913900-54100	SUPPLIES	\$24.47
	1G1Y-WYWT-LPC3	PNY CS2130 500GB M.3.2 INTERNAL DRIVE	\$65.31	20913900-54100	SUPPLIES	\$65.31
	1NKN-D69N-3H93	SAW BLADES	\$200.66	80026120-54100	SUPPLIES	\$200.66
	1T9C-R4QM-Q1RW	LED FLOOD LIGHT	\$174.18	80026220-54100	SUPPLIES	\$174.18
	1J4H-W79C-1WGQ	COPY PAPER, SMEAD FILE POCKETS, WRITING PADS	\$81.48	80026400-54100	SUPPLIES	\$81.48
	13FC-MKV6-K9CR	NEWTONS TELECOM DICTIONARIES	\$157.00	80026400-54100	SUPPLIES	\$157.00
	1P1N-HCXT-RGPP	TONER, MULTIPOINT ADAPTER, WIRELESS HEADSET	\$213.37	80026400-54100	SUPPLIES	\$213.37
	1GD7-9TLD-Y9PQ	EMERGENCY EYE WASH	\$51.71	84027225-54100	SUPPLIES	\$51.71
	19WX-9Q3M-PXCK	EYEWASH HOLDERS	\$215.52	84027225-54100	SUPPLIES	\$215.52
	1FRK-PXPQ-KP6D	INK CARTRIDGES	\$303.92	84027225-54100	SUPPLIES	\$303.92
	1YKT-3RH1-WVW6	FULL FACE RESPIRATORS	\$339.77	84027225-54100	SUPPLIES	\$339.77
	11WD-HQYG-7HWK	FULL FACE REPIRATORS	\$609.64	84027225-54100	SUPPLIES	\$609.64
	Vendor Total:					\$4,015.83
ANDREW SNYDER	DV101520	EQUIPMENT LOAN REIMBURSEMENT	\$168.32	10000000-20321	ACCRUED EXPENSES	\$168.32
	Vendor Total:					\$168.32
AT&T	00001540854	T1 TO INTERNET FOR DOJ/CLETS	\$292.25	10020210-55100	TELEPHONE	\$146.13
				20620231-55100	TELEPHONE	\$146.12
	00001540857	TELEPHONE SERVICES	\$15.74	10021210-55100	TELEPHONE	\$7.87
				91521400-55100	TELEPHONE	\$7.87
	00001540857	TELEPHONE SERVICES	\$21.85	10021210-55100	TELEPHONE	\$10.92
				91521400-55100	TELEPHONE	\$10.93
	Vendor Total:					\$329.84
AT&T MOBILITY	832118877X1 0142020	DATA & VOICE CELL PHONES	\$349.65	10020210-55100	TELEPHONE	\$129.69
				20620231-55100	TELEPHONE	\$14.87
				77725200-55100	TELEPHONE	\$30.35

List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
AT&T MOBILITY	832118877X10142020	DATA & VOICE CELL PHONES	\$349.65	80026400-55100	TELEPHONE	\$86.46
				82027110-55100	TELEPHONE	\$14.87
				82027111-55100	TELEPHONE	\$43.67
				84027221-55100	TELEPHONE	\$29.74
	832056361X10142020	APN MODEMS	\$473.04	10020210-55100	TELEPHONE	\$473.04
	875108535X10142020	VOICE & DATA CELL PHONES	\$37.19	84027221-55100	TELEPHONE	\$37.19
	Vendor Total:					\$859.88
BINGMAN ENTERPRISES INC	996	POWER LOAD INSTALL, GURNEY INSTALL	\$810.00	71021000-52110	AMBULANCE BILLING	\$810.00
				Vendor Total:		\$810.00
BOUND TREE MEDICAL LLC	83740065	BACTERIAL VIRAL FILTERS	\$77.50	10021210-54107	EMS SUPPLIES	\$38.75
				91521400-54107	EMS SUPPLIES	\$38.75
	83730016	LATEX GLOVES	\$173.20	10021210-54107	EMS SUPPLIES	\$86.60
				91521400-54107	EMS SUPPLIES	\$86.60
	Vendor Total:					\$250.70
BUSINESS CARD	5B9CWVJEW	FACEBOOK ADVERTISING	\$43.33	20012300-52510	ADVERTISING & PROMOTION	\$43.33
	WLP0001543	#14721 -HTH 70% CHLORINE CONTE	\$1,959.64	84027225-58202	CHEMICALS	\$1,959.64
	22965	CHAINSAW SCABBARD	\$261.29	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$1.13)
				90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$0.29)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$1.15)
				90000000-23028	MEASURE Y DISTRICT TAX	(\$1.15)
				90000000-23013	STATE USE TAX LIABILITY	(\$16.68)
				84027225-54100	SUPPLIES	\$20.40
				84027225-54100	SUPPLIES	\$261.29
	200928203	BUCKSTOP #F17020 NO GRILL-RGD	\$4,710.65	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$21.13)
				90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$5.29)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$21.14)
				10021210-80100	MACHINERY & EQUIPMENT	\$125.08
10021210-80100				MACHINERY & EQUIPMENT	\$2,355.33	

List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
BUSINESS CARD	200928203	BUCKSTOP #F17020 NO GRILL-RGD	\$4,710.65	90000000-23028	MEASURE Y DISTRICT TAX	(\$21.14)
				25321210-54102	SMALL TOOLS	\$125.08
				25321210-54102	SMALL TOOLS	\$1,177.66
				91621400-54102	SMALL TOOLS	\$125.08
				91621400-54102	SMALL TOOLS	\$1,177.66
				90000000-23013	STATE USE TAX LIABILITY	(\$306.54)
	1789810	FORKLIFT TILTING DRUM	\$673.88	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$673.88
	1777	STANDARD METHODS SUBSCRIPTION	\$295.00	84027225-54103	LAB SUPPLIES	\$295.00
	1448136041	REGISTRATION - S STRADER	\$225.00	10023421-57100	LEARNING AND DEVELOPMENT	\$225.00
	637803	REGISTRATION - D HARRIS	\$345.00	20013400-57100	LEARNING AND DEVELOPMENT	\$345.00
	12631	REGISTRATION - S MANNION	\$75.00	20016100-57100	LEARNING AND DEVELOPMENT	\$75.00
	136340	REGISTRATION - S MANNION	\$149.00	20016100-57100	LEARNING AND DEVELOPMENT	\$149.00
	091220	WALL ST JOURNAL SUBSCRIPTION	\$19.49	20013400-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$19.49
	100220	GOVERNMENT FINANCE ASSOC. RENEWAL	\$190.00	20013400-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$190.00
	FS1741	PRISONER SUPPLIES	\$426.45	10020210-54201	PRISONER EXPENSE	\$426.45
	20707693	USB ADAPTER	\$37.93	10020210-54100	SUPPLIES	\$37.93
	16482125	PD APPAREL	\$44.85	10020210-54100	SUPPLIES	\$44.85
	20682884	HIGH SPEED HDMI CABLE	\$161.84	10020210-54100	SUPPLIES	\$161.84
	WG16034399	NUPLA 48IN FIRE TOOL	\$460.98	10020210-54100	SUPPLIES	\$460.98
	100120	APPRECIATION BBQ SUPPLIES	\$179.20	10020214-54100	SUPPLIES	\$179.20
	664558	APPRECIATION BBQ SUPPLIES	\$597.58	10020214-54100	SUPPLIES	\$597.58
	110668	LAMINATOR ROLL	\$238.04	10022810-54100	SUPPLIES	\$238.04
	687369455	QUICKNOTES MONTHLY BOOK	\$49.39	10024210-54100	SUPPLIES	\$49.39
	092920	PORTABLE CD'S	\$54.18	20620231-54100	SUPPLIES	\$54.18
	S018777	AVPOS MONTHLY SERVICE FEE	\$50.00	77725200-54100	SUPPLIES	\$50.00
	S019351	AVPOS MONTHLY SERVICE FEE	\$50.00	77725200-54100	SUPPLIES	\$50.00

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List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
CA BUILDING STANDARDS COMMISSION	JUL-SEP 20	QUARTERLY REPORT FOR BSA	\$283.50	90000000-23027	BUILDING STDS ADMIN SPEC FD	\$315.00
				10000000-48110	MISCELLANEOUS RECEIPTS	(\$31.50)
				Vendor Total:		\$283.50
CA DEPT OF TAX AND FEE ADMISTRATION	3RD QTR 2020	3RD QTR 2020 ELECTRIC ENERGY SURCHARGE	\$9,076.00	90000000-23009	ELECTRIC SURCHARGE TRUST	\$9,076.00
				Vendor Total:		\$9,076.00
CA DIVISION OF THE STATE ARCHITECT	3RD QTR 20	3RD QTR 2020 DISABILITY FEE	\$79.60	90000000-23012	STATE \$1 BUS. LIC. SET ASIDE	(\$716.40)
				90000000-23002	STATE \$1 BUSINESS LICENSE FEE	\$796.00
				Vendor Total:		\$79.60
CHRISTOPHER V LARSEN	160061-26	PZ2S WATER TANK REPLACEMENT -	\$84,075.14	82227113-80230	INFRASTRUCTURE	\$84,075.14
				Vendor Total:		\$84,075.14
CHROMAGRAPHS	69696	BUSINESS CARDS - M TURNER	\$68.83	10023100-54100	SUPPLIES	\$68.83
	69682	BUSINESS CARDS - J THIELE	\$52.99	10024210-54100	SUPPLIES	\$52.99
	69690	BUSINESS CARDS - S UPADHYAY	\$52.99	80026400-54100	SUPPLIES	\$52.99
				Vendor Total:		\$174.81
CINTAS CORPORATION	4061204933	RUG/MAT & UNIFORM SERVICES	\$85.39	20822500-56300	BUILDING MAINT. & REPAIR	\$85.39
	4062567007	RUG/MAT & UNIFORM SERVICES	\$85.39	20822500-56300	BUILDING MAINT. & REPAIR	\$85.39
	4061204871	RUG/MAT & UNIFORM SERVICES	\$59.04	20324100-52100	CONTRACTUAL SERVICES	\$26.38
				20824300-52100	CONTRACTUAL SERVICES	\$32.66
	4062567073	RUG/MAT & UNIFORM SERVICES	\$59.04	20324100-52100	CONTRACTUAL SERVICES	\$26.38
				20824300-52100	CONTRACTUAL SERVICES	\$32.66
	4061889502	RUG/MAT & UNIFORM SERVICES	\$71.98	20324100-52100	CONTRACTUAL SERVICES	\$38.26
				20824300-52100	CONTRACTUAL SERVICES	\$33.72
	4060587000	RUG/MAT & UNIFORM SERVICES	\$194.43	20324100-52100	CONTRACTUAL SERVICES	\$43.26
				20824300-52100	CONTRACTUAL SERVICES	\$151.17
	4061204818	RUG/MAT & UNIFORM SERVICES	\$35.00	31122000-52100	CONTRACTUAL SERVICES	\$35.00
	4062566919	RUG/MAT & UNIFORM SERVICES	\$35.00	31122000-52100	CONTRACTUAL SERVICES	\$35.00
	4061204973	RUG/MAT & UNIFORM SERVICES	\$35.00	73022600-52100	CONTRACTUAL SERVICES	\$35.00
	4062566990	RUG/MAT & UNIFORM SERVICES	\$35.00	73022600-52100	CONTRACTUAL SERVICES	\$35.00

List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
CINTAS CORPORATION	4060708542	RUG/MAT & UNIFORM SERVICES	\$36.73	77725200-54100	SUPPLIES	\$36.73
	4061336519	RUG/MAT & UNIFORM SERVICES	\$36.73	77725200-54100	SUPPLIES	\$36.73
	4061994892	RUG/MAT & UNIFORM SERVICES	\$36.73	77725200-54100	SUPPLIES	\$36.73
	4062689688	RUG/MAT & UNIFORM SERVICES	\$36.73	77725200-54100	SUPPLIES	\$36.73
	Vendor Total:					\$842.19
CITY OF UKIAH	5743	PERMIT#5743 GRACE HUDSON MUSEUM	\$1,004.13	10022700-80220	BUILDING IMPROVEMENTS	\$1,004.13
					Vendor Total:	
CUMMINS INC	Y7-99100	CHECK ENGINE LIGHT SERVICE	\$117.50	80026110-56130	EXTERNAL SERVICES	\$117.50
					Vendor Total:	
DC ELECTRIC GROUP INC	416067	SEPTEMBER 2020 TRAFFIC SIGNAL	\$5,659.39	50024214-52100	CONTRACTUAL SERVICES	\$5,659.39
	416090	FURNISH & INSTALL NEW 4-CAMERA ITERIS	\$29,895.00	50024214-52100	CONTRACTUAL SERVICES	\$29,895.00
	Vendor Total:					\$35,554.39
DEPARTMENT OF JUSTICE	471919	FINGERPRINTS	\$637.00	10020210-54169	LIVESCAN	\$637.00
					Vendor Total:	
DEPT OF CONSERVATION	JUL-SEP 20	QUARTERLY TAX RETURN FOR SMIP	\$1,510.52	90000000-23006	STRONG MOTION ED. SET ASIDE	(\$79.50)
				90000000-23005	STRONG MOTION INSTR. PROG.	\$1,590.02
				Vendor Total:		\$1,510.52
DEPT OF FORESTRY & FIRE PROTECTION	0000001306462	STATE PARK PICNINC TABLES	\$900.00	91521400-54100	SUPPLIES	\$450.00
				91721400-54100	SUPPLIES	\$450.00
				Vendor Total:		\$900.00
DETROIT INDUSTRIAL TOOL	581221	EAR PLUGS UNCORDED NRR 30DB	\$472.79	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$2.21)
				90000000-23252	DISTRICT USE TAX-LIBRARIES	(\$0.54)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$2.21)
				90000000-23028	MEASURE Y DISTRICT TAX	(\$2.21)
				82027114-54100	SUPPLIES	\$3.58
				82027114-54100	SUPPLIES	\$236.39
				84027221-54100	SUPPLIES	\$3.59

List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
DETROIT INDUSTRIAL TOOL	581221	EAR PLUGS UNCORDED NRR 30DB	\$472.79	84027221-54100	SUPPLIES	\$236.40
					Vendor Total:	\$472.79
EFAX CORPORATE	3013304	EFAX SERVICES	\$150.22	20012200-52100	CONTRACTUAL SERVICES	\$150.22
					Vendor Total:	\$150.22
EPIC AVIATION LLC	7351649	JET A FUEL	\$7,082.94	77725200-58401	AVIATION FUEL	\$7,082.94
	7357038	JET A FUEL	\$12,519.96	77725200-58401	AVIATION FUEL	\$12,519.96
					Vendor Total:	\$19,602.90
FAMILY TREE RESOURCE INC	2020695	TREE TRIMMING PER CONTRACT 19	\$12,906.00	80026110-52100	CONTRACTUAL SERVICES	\$12,906.00
	2020687	TREE TRIMMING PER CONTRACT 19	\$17,208.00	80026110-52100	CONTRACTUAL SERVICES	\$17,208.00
					Vendor Total:	\$30,114.00
FEDERAL EXPRESS	3-302-48234	SHIPPING CHARGES	\$34.68	10020210-54101	POSTAGE	\$34.68
	7-152-44616	SHIPPING CHARGES	\$385.81	10020210-54101	POSTAGE	\$26.91
				10020210-54101	POSTAGE	\$31.40
				10020210-54101	POSTAGE	\$31.40
				10020210-54101	POSTAGE	\$70.40
				10020210-54101	POSTAGE	\$89.19
				10020210-54101	POSTAGE	\$98.28
				20513382-54101	POSTAGE	\$38.23
					Vendor Total:	\$420.49
FILETRAIL INC	2020-0814	HOSTED FILE MANAGMENT SYSTEM	\$610.00	20012500-54320	SOFTWARE	\$610.00
					Vendor Total:	\$610.00
FINANCIAL PACIFIC LEASING INC	5823497	FINANCING OF TWO PIERCE ENFORC	\$63,979.74	10000000-74501	CAPITAL LEASE INTEREST	\$10,860.79
				10000000-74500	CAPITAL LEASE PRINCIPAL	\$53,118.95
					Vendor Total:	\$63,979.74
FLEETPRIDE	60716067	MISC. PARTS & MATERIALS AS NEE	\$18.41	84027225-56130	EXTERNAL SERVICES	\$18.41
	60898733	MISC. PARTS & MATERIALS AS NEE	\$59.46	84027225-56130	EXTERNAL SERVICES	\$59.46
					Vendor Total:	\$77.87
GRANITE CONSTRUCTION COMPANY	1897863	MISC ROCK & ROAD PATCH MATERIA	\$381.33	82027114-54100	SUPPLIES	\$198.43
				84027221-54100	SUPPLIES	\$182.90

List of Checks Presented for Approval on 10/23/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
GRANITE CONSTRUCTION COMPANY	1895761	MISC ROCK & ROAD PATCH MATERIA	\$191.40	84027221-54100	SUPPLIES	\$191.40
					Vendor Total:	\$572.73
HERC RENTALS INC	31428727-005	WATER TRUCK RENTAL APRIL - NOV	\$2,825.79	82027114-52100	CONTRACTUAL SERVICES	\$2,825.79
					Vendor Total:	\$2,825.79
HOME DEPOT CREDIT SERVICES	0544138	SUPPLIES FOR BOFA BUILDING	\$19.54	20822500-56300	BUILDING MAINT. & REPAIR	\$19.54
	0361630	ABS PLUG, KNOCKOUT SEAL	\$20.97	20822500-56300	BUILDING MAINT. & REPAIR	\$20.97
	8030524	TWINTUBE	\$64.93	20822500-56300	BUILDING MAINT. & REPAIR	\$64.93
	9034155	CONCRETE	\$51.44	82027111-56300	BUILDING MAINT. & REPAIR	\$51.44
	2532099	STAPLE GUNS, STAPLES, SPRAY ADHESIVE	\$139.85	82027111-54102	SMALL TOOLS	\$139.85
	7073557	FUSE PULLER	\$31.88	84027225-54102	SMALL TOOLS	\$31.88
	7030596	ELECTRICIANS POUCH, WRENCH SET	\$176.09	84027225-54102	SMALL TOOLS	\$176.09
	8034957	32GAL BAGS	\$48.90	10024224-54100	SUPPLIES	\$48.90
	1512921	CONTRACTOR BAGS	\$169.65	10024224-54100	SUPPLIES	\$169.65
	8211986	LED STRIP, 8GAL BAGS	\$281.56	10024620-54100	SUPPLIES	\$281.56
	5074426	DBL PRONG STRAIGHT HOOK	\$25.61	84027225-54100	SUPPLIES	\$25.61
	2030213	SLIPJOINT, LED LIGHTS	\$66.84	84027225-54100	SUPPLIES	\$66.84
					Vendor Total:	\$1,097.26
INFOSEND INC	179318	UB PRINT & MAIL SERVICES	\$4,221.12	20513300-52100	CONTRACTUAL SERVICES	\$4,221.12
					Vendor Total:	\$4,221.12
INTERCOUNTY MECHANICAL & ELECTRICAL INC	7624	AC INOPERATIVE AT WWTP	\$120.00	84027225-56300	BUILDING MAINT. & REPAIR	\$120.00
					Vendor Total:	\$120.00
JACK MILLER	20038	LABOR - SCADA WORK TO UPDATE &	\$1,752.00	82027111-52100	CONTRACTUAL SERVICES	\$1,550.00
				80000000-12104	INVENTORY - PURCHASES	\$202.00
	20039	ALL LABOR, MATERIALS AND SOFTW	\$8,318.18	82027111-52100	CONTRACTUAL SERVICES	\$8,318.18
					Vendor Total:	\$10,070.18
JAROD THIELE	DV102020	REIMBURSEMENT - MEAL MAIN BREAK YOSEMITE	\$71.91	82027114-54100	SUPPLIES	\$71.91
					Vendor Total:	\$71.91

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
JOSE ANTONIO NARANJO GONZALEZ	DV101920	VEGETATION MANAGEMENT AND FIRE	\$21,946.20	10024620-52100	CONTRACTUAL SERVICES	\$5,107.20
				82027111-52100	CONTRACTUAL SERVICES	\$16,839.00
				Vendor Total:		\$21,946.20
LORELEI SCOTT	8054	DECALS FOR FIRE TRUCKS	\$350.09	10021210-56130	EXTERNAL SERVICES	\$175.04
				91521400-56130	EXTERNAL SERVICES	\$175.05
	8335	FIRE TRUCK MAGNETS	\$470.34	91521400-56130	EXTERNAL SERVICES	\$235.17
				91521400-56130	EXTERNAL SERVICES	\$235.17
				Vendor Total:		\$820.43
MICHELLE WAGENET	DV101920	REIMBURSEMENT - MEALS RECYCLED WATER POND REPAIR	\$219.72	82027111-57100	LEARNING AND DEVELOPMENT	\$219.72
				Vendor Total:		\$219.72
MOTION INDUSTRIES INC	CA23-522005	#Y32P2BCR-P HORIZONTAL MOTOR	\$3,441.80	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$3,441.80
				Vendor Total:		\$3,441.80
OFFICE DEPOT INC	12085644900	MOUSEPAD, HIGHLIGHTERS, POST ITS	\$27.41	10024210-54100	SUPPLIES	\$13.71
				82027110-54100	SUPPLIES	\$13.70
	12560238300	FOLDERS	\$53.98	10024210-54100	SUPPLIES	\$8.26
				20016100-54100	SUPPLIES	\$45.72
	12117219700	PLANNER, CALENDAR, FOLDERS	\$303.40	10024210-54100	SUPPLIES	\$58.03
				20016100-54100	SUPPLIES	\$129.29
				82027110-54100	SUPPLIES	\$58.04
				84027221-54100	SUPPLIES	\$58.04
	12542418500	COPY PAPER	\$46.81	20012200-54100	SUPPLIES	\$46.81
	12256123000	DOMTAR COPY PAPER: 8.5"x11", 2	\$1,431.71	20012200-54100	SUPPLIES	\$1,431.71
	12390509400	FOAM BOARD	\$31.81	20012600-54100	SUPPLIES	\$31.81
	12224842600	BLACK & COLOR TONER	\$656.31	20013210-54100	SUPPLIES	\$328.16
				20013400-54100	SUPPLIES	\$164.07
				20413500-54100	SUPPLIES	\$164.08
	12713590200	HP 727 CARTRIDGE - PHOTO BLACK	\$147.68	80026400-54100	SUPPLIES	\$147.68
	12713590400	HP 727 CARTRIDGE - PHOTO BLACK	\$157.13	80026400-54100	SUPPLIES	\$157.13

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
OFFICE DEPOT INC	12713590500	HP 727 CARTRIDGE - PHOTO BLACK	\$280.66	80026400-54100	SUPPLIES	\$280.66
	12712694700	HP 727 CARTRIDGE - PHOTO BLACK	\$594.24	80026400-54100	SUPPLIES	\$594.24
	12713590900	HP 727 CARTRIDGE - PHOTO BLACK	\$692.38	80026400-54100	SUPPLIES	\$692.38
	Vendor Total:					\$4,423.52
ONE TIME PAY VENDOR	124003-5	ENERGY REBATE - VALERIE WARDA	\$100.00	80626450-52135	ENERGY CONSERVATION PROGRAM	\$100.00
	120019-5 1	ENERGY REBATE - KATHERINE & WILLIAM	\$206.98	80626450-52135	ENERGY CONSERVATION PROGRAM	\$206.98
	123697-5	ENERGY REBATE - SCOTT CLAYPOOL	\$550.00	80626450-52135	ENERGY CONSERVATION PROGRAM	\$550.00
	Vendor Total:					\$856.98
OWEN EQUIPMENT SALES	00050831	NOZZEL, CONNECTING NPL, QUICK COUPLER	\$111.86	84027221-56130	EXTERNAL SERVICES	\$111.86
	00050805	ELBOW WELDMENT, GASKET	\$834.43	84027221-56130	EXTERNAL SERVICES	\$834.43
	00050842	ELBOW WELDMENT, GASKET	\$857.64	84027221-56130	EXTERNAL SERVICES	\$857.64
	Vendor Total:					\$1,803.93
PACE SUPPLY CORPORATION	026296026-3	(U-SLN16) STREET LIGHT BOXES -	\$1,003.66	80000000-12104	INVENTORY - PURCHASES	\$1,003.66
	026361653	3/4 PVC 80 SOC X MIP ADPT W/BR	\$262.49	82000000-12104	INVENTORY - PURCHASES	\$223.66
				82027114-54100	SUPPLIES	\$38.83
	026361653-1	3/4 PVC 80 SOC X MIP ADPT W/BR	\$4,096.93	82000000-12104	INVENTORY - PURCHASES	\$1,255.00
				82027114-54100	SUPPLIES	\$2,841.93
	026402003	MISC. ITEMS AS NEEDED	\$725.54	84000000-12104	INVENTORY - PURCHASES	\$725.54
	026386721	MISC. ITEMS AS NEEDED	\$240.07	82027114-54100	SUPPLIES	\$240.07
	026387184	MISC. ITEMS AS NEEDED	\$253.03	82027114-54100	SUPPLIES	\$253.03
Vendor Total:					\$6,581.72	
PACIFIC REDWOOD MEDICAL GROUP INC	3082	BACKGROUND & PHYSICALS	\$678.40	10021210-54161	BACKGROUND & PHYSICALS	\$339.20
				91521400-54161	BACKGROUND & PHYSICALS	\$339.20
			Vendor Total:			
PAYMENTUS GROUP INC	INV-15-106373	CREDIT CARD PROCESSING SERVICE	\$3,259.75	20513300-52100	CONTRACTUAL SERVICES	\$3,259.75
Vendor Total:					\$3,259.75	
PG&E CO	8716-1 OCT 20	PACIFIC GAS & ELECTRIC	\$345.78	82027111-55210	UTILITIES	\$345.78
Vendor Total:					\$345.78	

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
PIONEER LAW GROUP LLP	5805	LANDFILL EIR & CEQA LEGAL SERV	\$118.50	70224500-80230	INFRASTRUCTURE	\$118.50
	5809	LANDFILL EIR & CEQA LEGAL SERV	\$768.50	70224500-80230	INFRASTRUCTURE	\$768.50
	Vendor Total: -----					\$887.00
PITNEY BOWES INC	1016606917	POSTAGE MACHINE LEASE & SUPPLIES	\$163.31	20513300-54101	POSTAGE	\$163.31
	Vendor Total: -----					\$163.31
RAY C STARKEY	P-2001651	CAPS - WWTP	\$348.28	84027225-54100	SUPPLIES	\$348.28
	Vendor Total: -----					\$348.28
REDWOOD COAST FUELS	2177657	CARDLOCK FUEL PURCHASES	\$6,939.03	10020210-56210	FUEL & FLUIDS	\$2,098.20
				10022100-56210	FUEL & FLUIDS	\$580.81
				10023320-56210	FUEL & FLUIDS	\$65.03
				10024620-56210	FUEL & FLUIDS	\$1,181.14
				20324100-56210	FUEL & FLUIDS	\$111.62
				20513382-56210	FUEL & FLUIDS	\$28.05
				80026400-56210	FUEL & FLUIDS	\$1,457.47
				82027111-56210	FUEL & FLUIDS	\$337.87
				82027114-56210	FUEL & FLUIDS	\$53.47
				82027114-56210	FUEL & FLUIDS	\$208.31
				82027114-56210	FUEL & FLUIDS	\$257.43
				84027221-56210	FUEL & FLUIDS	\$177.45
				84027221-56210	FUEL & FLUIDS	\$219.30
				84027225-56210	FUEL & FLUIDS	\$162.88
	2184761	CARDLOCK FUEL PURCHASES	\$8,366.62	10020210-56210	FUEL & FLUIDS	\$2,077.29
				10022100-56210	FUEL & FLUIDS	\$766.80
				10023320-56210	FUEL & FLUIDS	\$59.45
				10024620-56210	FUEL & FLUIDS	\$994.15
				20324100-56210	FUEL & FLUIDS	\$146.22
				20822500-56210	FUEL & FLUIDS	\$120.47
				80026400-56210	FUEL & FLUIDS	\$1,292.33
				82027111-56210	FUEL & FLUIDS	\$332.42
				82027111-56210	FUEL & FLUIDS	\$556.02

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
REDWOOD COAST FUELS	2184761	CARDLOCK FUEL PURCHASES	\$8,366.62	82027114-56210	FUEL & FLUIDS	\$53.06
				82027114-56210	FUEL & FLUIDS	\$306.20
				82027114-56210	FUEL & FLUIDS	\$598.95
				84027221-56210	FUEL & FLUIDS	\$260.84
				84027221-56210	FUEL & FLUIDS	\$510.22
				84027225-56210	FUEL & FLUIDS	\$292.20
	2183665	CARDLOCK FUEL PURCHASES	(\$10.89)	10022100-56210	FUEL & FLUIDS	(\$10.89)
	2183167	CARDLOCK FUEL PURCHASES	\$410.18	10024620-56210	FUEL & FLUIDS	\$136.73
				82027114-56210	FUEL & FLUIDS	\$136.73
				84027221-56210	FUEL & FLUIDS	\$136.72
	3134604	CARDLOCK FUEL PURCHASES	\$425.71	84027221-56210	FUEL & FLUIDS	\$425.71
	2183170	CARDLOCK FUEL PURCHASES	\$410.18	84027225-56210	FUEL & FLUIDS	\$410.18
	2183450	CARDLOCK FUEL PURCHASES	\$788.22	20324100-58410	GARAGE LUBRICANTS & PARTS	\$788.22
	2184344	CARDLOCK FUEL PURCHASES	\$942.54	20324100-58410	GARAGE LUBRICANTS & PARTS	\$942.54
	2183171	CARDLOCK FUEL PURCHASES	\$228.29	84027225-54100	SUPPLIES	\$228.29
	Vendor Total:					\$18,499.88
	REDWOOD EMPIRE MUNICIPAL INSURANCE FUND	20-10 HEALTHCOMP	OCT 20 MEDICAL, DENTAL, VISION INSURANCE PREMIUMS	\$276,308.12	20700000-20524	NON-EMPLOYEE HEALTH INS.PREM
20700000-20524					NON-EMPLOYEE HEALTH INS.PREM	\$2,193.96
20700000-20524					NON-EMPLOYEE HEALTH INS.PREM	\$15,150.00
20700000-20520					P/R DEDUCT.-MEDICAL INS	\$238,056.00
20700000-20510					REMIF DENTAL	\$17,268.16
20700000-20511					REMIF VISION	\$3,185.00
Vendor Total:					\$276,308.12	
REDWOOD FORD	CM332991	CORE RETURN ON PO 46881	(\$435.50)	10020210-56130	EXTERNAL SERVICES	(\$435.50)
	333009	PARTS & SERVICE REPAIRS AS NEE	\$75.05	10020210-56130	EXTERNAL SERVICES	\$75.05
	333036	PARTS & SERVICE REPAIRS AS NEE	\$105.40	10020210-56130	EXTERNAL SERVICES	\$105.40
	333037	PARTS & SERVICE REPAIRS AS NEE	\$105.40	10020210-56130	EXTERNAL SERVICES	\$105.40

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
REDWOOD FORD	332852	PARTS & SERVICE REPAIRS AS NEE	\$130.44	10020210-56130	EXTERNAL SERVICES	\$130.44
	FOCS154798	PARTS & SERVICE REPAIRS AS NEE	\$253.95	10020210-56130	EXTERNAL SERVICES	\$253.95
	332991	EG1Z-3504-L GEAR ASSEMBLY	\$1,733.62	10020210-56130	EXTERNAL SERVICES	\$435.50
				10020210-56130	EXTERNAL SERVICES	\$1,298.12
	332691	PARTS & SERVICE REPAIRS AS NEE	\$13.84	10024620-56130	EXTERNAL SERVICES	\$13.84
	332966	PARTS & SERVICE REPAIRS AS NEE	\$136.37	20324100-56130	EXTERNAL SERVICES	\$136.37
	332848	PARTS & SERVICE REPAIRS AS NEE	\$5.64	80026110-56130	EXTERNAL SERVICES	\$5.64
	332950	PARTS & SERVICE REPAIRS AS NEE	\$198.24	80026110-56130	EXTERNAL SERVICES	\$198.24
	FOCS154545	PARTS & SERVICE REPAIRS AS NEE	\$239.82	80026110-56130	EXTERNAL SERVICES	\$239.82
	333007	PARTS & SERVICE REPAIRS AS NEE	\$78.70	91521400-56130	EXTERNAL SERVICES	\$78.70
	332842	PARTS & SERVICE REPAIRS AS NEE	\$12.59	20324100-58510	REIMBURSABLE JOBS	\$12.59
	332841	PARTS & SERVICE REPAIRS AS NEE	\$153.26	20324100-58510	REIMBURSABLE JOBS	\$153.26
	Vendor Total:					\$2,806.82
	RICHARD MARTIN	23692	SERVICE ON MILWAUKEE CORDLESS GINDER	\$72.50	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR
Vendor Total:					\$72.50	
ROUND TABLE PIZZA	14-014	LUNCH MEETING WITH CONTRACTOR ST FRANCIS	\$124.14	80026110-54100	SUPPLIES	\$124.14
Vendor Total:					\$124.14	
SONIC NET LLC	1001649941	INTERNET SERVICES - UVFA	\$18.20	10021210-55100	TELEPHONE	\$9.10
				91521400-55100	TELEPHONE	\$9.10
			Vendor Total:			
ST FRANCIS ELECTRIC, LLC	19099208	GOBBI ST UNDERGROUND - SPEC 19	\$122,751.50	80126100-80230	INFRASTRUCTURE	\$122,751.50
Vendor Total:					\$122,751.50	
THE CHARLES MACHINE WORKS INC	92443440	CONNECTOR	\$42.62	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.05)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$0.20)
				84027221-56130	EXTERNAL SERVICES	\$0.25
				84027221-56130	EXTERNAL SERVICES	\$42.62
	92443439	CAMERA ELEMENT, CABLE ASSEMBLY	\$688.09	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$0.79)
				90000000-23237	DISTRICT USE TAX-MEASURE S	(\$3.18)

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
THE CHARLES MACHINE WORKS INC	92443439	CAMERA ELEMENT CABLE ASSEMBLY	\$688.09	84027221-56130	EXTERNAL SERVICES	\$3.97
				84027221-56130	EXTERNAL SERVICES	\$688.09
	92449159	REPAIR LABOR	\$130.00	84027221-56130	EXTERNAL SERVICES	\$130.00
					Vendor Total:	\$860.71
TIM ERIKSEN	DV101320	ACH PA CYCLE RETURN	\$770.00	10024210-51110	REGULAR SALARIES & WAGES	\$770.00
					Vendor Total:	\$770.00
TUFTS POLYGRAPH & INVESTIGATION	2020-585(A)	POLYGRAPH & INVESTIGATION SERVICES	\$800.00	10020210-54161	BACKGROUND & PHYSICALS	\$800.00
	2020-590(A)	POLYGRAPH & INVESTIGATION SERVICES	\$800.00	10020210-54161	BACKGROUND & PHYSICALS	\$800.00
					Vendor Total:	\$1,600.00
UKIAH VALLEY ASSOCIATION FOR HABILITATION INC	IN23115	JANITORIAL SERVICES - WWTP FY	\$720.00	84027225-52100	CONTRACTUAL SERVICES	\$720.00
	IN23193	JANITORIAL SERVICES - WWTP FY	\$720.00	84027225-52100	CONTRACTUAL SERVICES	\$720.00
	IN23042	JANITORIAL SERVICES - WWTP FY	\$900.00	84027225-52100	CONTRACTUAL SERVICES	\$900.00
					Vendor Total:	\$2,340.00
UKIAH VALLEY SANITATION DIST	58070 SEP 20	SEWER - 432 OBSERVATORY AVE	\$53.47	10022100-55210	UTILITIES	\$53.47
	104613 SEP 20	SEWER - LOW GAP SKATE PARK	\$53.47	10022100-55210	UTILITIES	\$53.47
	113354 SEP 20	SEWER - 1350 HASTINGS RD	\$53.47	80026400-55210	UTILITIES	\$53.47
					Vendor Total:	\$160.41
UKIAH WASTE SOLUTIONS INC	440831	BIOSOLID REMOVAL	\$10,147.14	84027225-52100	CONTRACTUAL SERVICES	\$10,147.14
					Vendor Total:	\$10,147.14
ULINE	124863960	POLYTUBING	\$402.61	84027225-54100	SUPPLIES	\$402.61
					Vendor Total:	\$402.61
UNITED SITE SERVICES	114-11026513	PORTABLE TOILET RENTAL	\$421.41	10024224-52100	CONTRACTUAL SERVICES	\$421.41
					Vendor Total:	\$421.41
US CELLULAR	0398884706	CELL PHONES	\$541.41	10024620-55100	TELEPHONE	\$40.45
				80026400-55100	TELEPHONE	\$69.33
				80026400-55100	TELEPHONE	\$128.58
				82027110-55100	TELEPHONE	\$13.72
				82027111-55100	TELEPHONE	\$155.90

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
US CELLULAR	0398884706	CELL PHONES	\$541.41	84027221-55100	TELEPHONE	\$13.72
				84027225-55100	TELEPHONE	\$119.71
				Vendor Total: -----		\$541.41
USA BLUEBOOK	361291	THERMOMETER, PLASTIC TEST BOTTLES	\$411.71	90000000-20231	COUNTY MENTAL HEALTH .5%	(\$1.91)
				90000000-23028	MEASURE Y DISTRICT TAX	(\$1.91)
				82027111-54100	SUPPLIES	\$3.82
				82027111-54100	SUPPLIES	\$411.71
	392279	DISPENSER RETURN	(\$199.52)	82027111-54100	SUPPLIES	(\$199.52)
	371316	HACH	\$214.68	82027111-54100	SUPPLIES	\$214.68
	382535	DIRECTIONAL ARROW TAPES	\$141.88	84027225-54100	SUPPLIES	\$141.88
	Vendor Total: -----		\$568.75			
WASTE MANAGEMENT	2803949-2561	GARBAGE SERVICE - 141 LOVERS LN	\$59.50	10021210-55210	UTILITIES	\$29.75
				91521400-55210	UTILITIES	\$29.75
	2803753-2561	GARBAGE SERVICE - 1500 S STATE ST	\$59.50	10021210-55210	UTILITIES	\$29.75
				91521400-55210	UTILITIES	\$29.75
	Vendor Total: -----		\$119.00			
WEST YOST ASSOCIATED	2042461	RRWA EXECUTIVE DIRECTOR SERVIC	\$57,726.35	91190100-52100	CONTRACTUAL SERVICES	\$8,231.75
				91190100-52100	CONTRACTUAL SERVICES	\$16,055.75
				91190100-52100	CONTRACTUAL SERVICES	\$33,438.85
				Vendor Total: -----		\$57,726.35
WIPF CONSTRUCTION LLC	5441	DELIVERY OF VARIOUS MATERIALS	\$719.76	84027221-54100	SUPPLIES	\$719.76
				Vendor Total: -----		\$719.76
XEROX CORP	011538715	COPIER LEASE-SEE ADD'L DESCRIP	\$243.41	10022700-52100	CONTRACTUAL SERVICES	\$243.41
	011538714	COPIER LEASE-SEE ADD'L DESCRIP	\$303.79	73022600-52100	CONTRACTUAL SERVICES	\$303.79
	011538713	COPIER LEASE-SEE ADD'L DESCRIP	\$259.39	10020210-54500	EQUIP RENTS AND LEASES	\$181.57
				20620231-54500	EQUIP RENTS AND LEASES	\$51.88
				64020213-54500	EQUIP RENTS AND LEASES	\$25.94
	011538712	COPIER LEASE-SEE ADD'L DESCRIP	\$488.77	10020210-54500	EQUIP RENTS AND LEASES	\$342.14

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
XEROX CORP	011538712	COPIER LEASE-SEE ADD'L DESCRIP	\$488.77	20620231-54500	EQUIP RENTS AND LEASES	\$97.75
				64020213-54500	EQUIP RENTS AND LEASES	\$48.88
	011538711	XEROX CB070H COPIER LEASE	\$615.65	20012200-54500	EQUIP RENTS AND LEASES	\$615.65
	011538710	COPIER LEASE-SEE ADD'L DESCRIP	\$648.12	20012200-54500	EQUIP RENTS AND LEASES	\$648.12
	Vendor Total:					\$2,559.13
ZAB ENTERPRISES INC	SEP 20	PROVIDE MISC. FOOD DISHES AS N	\$175.00	10024224-57100	LEARNING AND DEVELOPMENT	\$175.00
Vendor Total:					\$175.00	
INVOICE TOTAL:					\$839,902.90	

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ALPHA ANALYTICAL LABORATORIES INC	0093172-UKIAH	MISC. LABORATORY WORK AS NEEDED	\$132.00	82027111-54100	SUPPLIES	\$132.00
Vendor Total:						\$4,552.00
ALTEC INDUSTRIES INC	11487602	ALTEC #070400538 FIBERGLASS PL	\$2,451.73	20324100-58510	REIMBURSABLE JOBS	\$2,451.73
Vendor Total:						\$2,451.73
AMAZON CAPITAL SERVICES	1176-41DD-JVXW	STEEL PIP TRACK ROLLER	\$23.11	82027114-54100	SUPPLIES	\$23.11
Vendor Total:						\$23.11
AMERICAN NATIONAL RED CROSS & ITS CONSTITUENT	22297606	FIRST AID/CPR/AED BLOODBORNE	\$228.00	10022300-57101	CONF & TRAINING-AQUATICS	\$228.00
	22295557	FIRST AID/CPR/AED BLOODBORNE	\$330.00	10022300-57101	CONF & TRAINING-AQUATICS	\$330.00
Vendor Total:						\$558.00
AMWINS GROUP BENEFITS INC	6555695	OCT/NOV 20 ELECTRIC UNIT UNION DUE	\$3,234.96	20700000-20524	NON-EMPLOYEE HEALTH INS.PREM	\$1,617.48
				20700000-20524	NON-EMPLOYEE HEALTH INS.PREM	\$1,617.48
Vendor Total:						\$3,234.96
ANIXTER	4685758-02	(TP-2) TAPE, VINYL, BLACK, 3/4	\$75.78	80000000-12104	INVENTORY - PURCHASES	\$75.78
	4698738-01	SPLICES	\$103.98	80000000-12104	INVENTORY - PURCHASES	\$103.98
	4698955-00	(CO-S-1-0) CONN, STEM, 1/0, 3M	\$238.44	80000000-12104	INVENTORY - PURCHASES	\$238.44
	4722686-00	(TE-1100) TERMINATION KIT, 110	\$322.27	80000000-12104	INVENTORY - PURCHASES	\$322.27
	4698955-01	(CO-S-1-0) CONN, STEM, 1/0, 3M	\$597.72	80000000-12104	INVENTORY - PURCHASES	\$597.72
	4685758-01	(TP-2) TAPE, VINYL, BLACK, 3/4	\$1,742.87	80000000-12104	INVENTORY - PURCHASES	\$1,742.87
Vendor Total:						\$3,081.06
ANTHONY CLOUSER	DV101320	SEWER LATERAL REIMBURSEMENT	\$2,000.00	84427222-52100	CONTRACTUAL SERVICES	\$2,000.00
Vendor Total:						\$2,000.00
ARROW FENCING	81052	REMOVAL OF TWO 12' GATES, INST	\$6,050.00	20824300-56300	BUILDING MAINT. & REPAIR	\$6,050.00
Vendor Total:						\$6,050.00
AT&T	000015405068	FIBER INTERNET GATEWAY	\$1,439.12	20913900-55100	TELEPHONE	\$1,439.12
	1718 OCT 20	CC TERMINAL	\$223.43	77725200-55100	TELEPHONE	\$223.43
Vendor Total:						\$1,662.55

List of Checks Presented for Approval on 10/30/2020

The following list of bills payable was reviewed and approved for payment.

Sgt. Sogian

D. R. J.

CR 11/3/20

Signature

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ADVANCED SECURITY SYSTEMS	539663	MONTHLY ALARM SERVICES FOR 130	\$25.75	10021210-52180	SECURITY SERVICES	\$12.87
				91521400-52180	SECURITY SERVICES	\$12.88
				Vendor Total:		\$25.75
AFLAC	827449	CANCER/LIFE/ACC INSURANCE	\$8,887.20	20700000-20527	SECTION 125 (CANCER & LIFE)	\$8,887.20
				Vendor Total:		\$8,887.20
AMAZON CAPITAL SERVICES	14CD-WRG4-DVFP	HANDHELP STABILIZER VLOG	\$124.11	10022700-54100	SUPPLIES	\$124.11
	1HMD-1WWQ-4971	DAYCAMP/COVID SUPPLIES	\$139.98	10022840-54100	SUPPLIES	\$139.98
	1LGV-TQKV-311M	DAYCAMP/COVID SUPPLIES	\$232.64	10022840-54100	SUPPLIES	\$232.64
	1VGJ-FFWQ-37M1	DAYCAMP/COVID SUPPLIES	\$236.99	10022840-54100	SUPPLIES	\$236.99
	1V6F-YDH7-MGF4	LENOVO LAPTOP DOCK	\$206.03	20013400-54100	SUPPLIES	\$206.03
	1MVT-WQ3W-WFM6	SAFETY SIGN DECALS	\$44.70	84027225-54100	SUPPLIES	\$44.70
	1PP6-71Y6-Y3XL	CAUTION, DANGER, FERRIC, EMERGENCY SIGNS	\$101.99	84027225-54100	SUPPLIES	\$101.99
	1Y4M-7MX1-Y4RX	MRE 2020 INSPECTION DATE CASE, MEAL SURPLUS	\$396.00	91521400-54100	SUPPLIES	\$198.00
				91721400-54100	SUPPLIES	\$198.00
				Vendor Total:	\$1,482.44	
AT&T	00001546995	FIBER INTERNET	\$1,570.56	20913900-52601	DATA STORAGE & CONNECTIVITY	\$1,570.56
	2463 OCT 20	FAX SERVICES - S STATION	\$52.40	10021210-55100	TELEPHONE	\$26.20
				91521400-55100	TELEPHONE	\$26.20
	00001543401	T1 TO INTERNET	\$573.75	20913900-55100	TELEPHONE	\$573.75
	00001543440	TELEPHONE SERVICES	\$5,117.00	20913900-55100	TELEPHONE	\$5,117.00
				Vendor Total:	\$7,313.71	
CA PEACE OFFICERS ASSOC	270860	ANNUAL RENEWAL - J WYATT	\$300.00	10020210-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$300.00

List of Checks Presented for Approval on 10/30/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
CA PEACE OFFICERS ASSOC	270940	ANNUAL RENEWAL - SEAN KAESER	\$300.00	10020210-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$300.00
					Vendor Total:	\$600.00
COMCAST	0472 OCT 20	INTERNET SERVICES	\$161.79	20913900-55100	TELEPHONE	\$161.79
					Vendor Total:	\$161.79
COPQUEST INC	C20587153	STRAIGHT STICK BATONS	\$97.22	10020210-54100	SUPPLIES	\$97.22
					Vendor Total:	\$97.22
CREWSENSE LLC	0017157	CREWSENSE ANNUAL SOFTWARE SUBSCRIPTION	\$1,869.84	91521400-54320	SOFTWARE	\$934.92
				91721400-54320	SOFTWARE	\$934.92
					Vendor Total:	\$1,869.84
DENBESTE LANDSCAPE SUPPLIES	8893	LANDSCAPE MATERIALS 3/4 SALT & PEPPER	\$1,024.30	84027225-56504	FACILITY MAINTENANCE & REPAIR	\$1,024.30
					Vendor Total:	\$1,024.30
DEPARTMENT OF JUSTICE	473400	FINGERPRINTS	\$245.00	10021210-54161	BACKGROUND & PHYSICALS	\$122.50
				91521400-54161	BACKGROUND & PHYSICALS	\$122.50
	475380	CHEM/TEST REPORT CRIMINAL INVE	\$350.00	10020210-52100	CONTRACTUAL SERVICES	\$350.00
	475487	FY 20/21 CLETS SERVICE	\$1,200.48	20620231-55100	TELEPHONE	\$1,200.48
					Vendor Total:	\$1,795.48
EFFICIENCY SERVICES GROUP LLC	2899	ADMIN OF EUD PUBLIC BENEFITS P	\$3,500.00	80626450-52137	PUBLIC BENEFITS PROGRAM MGMT	\$3,500.00
					Vendor Total:	\$3,500.00
EPIC AVIATION LLC	7358918	JET A FUEL	\$11,052.80	77725200-58401	AVIATION FUEL	\$11,052.80
					Vendor Total:	\$11,052.80
FAMILY TREE RESOURCE INC	2020548	TREE TRIMMING PER CONTRACT 19	\$3,226.50	80026110-52100	CONTRACTUAL SERVICES	\$3,226.50
	2020685	TREE TRIMMING PER CONTRACT 19	\$4,302.00	80026110-52100	CONTRACTUAL SERVICES	\$4,302.00
	2020547	TREE TRIMMING PER CONTRACT 19	\$8,066.25	80026110-52100	CONTRACTUAL SERVICES	\$8,066.25
	2020684	TREE TRIMMING PER CONTRACT 19	\$12,906.00	80026110-52100	CONTRACTUAL SERVICES	\$12,906.00
	2020503	TREE TRIMMING PER CONTRACT 19	\$17,208.00	80026110-52100	CONTRACTUAL SERVICES	\$17,208.00
	202352	TREE TRIMMING PER CONTRACT 19	\$17,208.00	80026110-52100	CONTRACTUAL SERVICES	\$17,208.00
					Vendor Total:	\$62,916.75
GHD INC	147235	BIOLOGICAL MONITORING SVCS AT	\$146.00	10024210-52100	CONTRACTUAL SERVICES	\$146.00
	148765	ENG SVCS FOR H2O STORAGE TANK	\$1,056.13	82027110-52100	CONTRACTUAL SERVICES	\$1,056.13

List of Checks Presented for Approval on 10/30/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
GHD INC	149720	ENG SVCS FOR H2O STORAGE TANK	\$4,521.01	82027110-52100	CONTRACTUAL SERVICES	\$4,521.01
	149950	DOWNTOWN STREETSCAPE - UNDERGR	\$27,183.50	12024200-80230	INFRASTRUCTURE	\$20,774.07
				50924200-80230	INFRASTRUCTURE	\$1,183.68
				82227113-80230	INFRASTRUCTURE	\$2,612.88
				84427221-80230	INFRASTRUCTURE	\$2,612.87
				Vendor Total:		\$32,906.64
GHILOTTI CONSTRUCTION COMPANY INC	5909*02	DOWNTOWN STREETSCAPE & ROAD DI	\$362,892.00	10024200-80230	INFRASTRUCTURE	\$127,925.44
				12024200-80230	INFRASTRUCTURE	\$133,516.19
				50024220-80230	INFRASTRUCTURE	\$74,286.82
				50924200-80230	INFRASTRUCTURE	\$3,117.54
				80126100-80230	INFRASTRUCTURE	\$3,078.50
				82227113-80230	INFRASTRUCTURE	\$11,072.32
				84427221-80230	INFRASTRUCTURE	\$9,895.19
				Vendor Total:		\$362,892.00
GOLDEN GATE BRIDGE TOLL	T717066968474	NOTICE OF TOLL EVASION	\$6.00	10024210-57100	LEARNING AND DEVELOPMENT	\$6.00
	T717087688712	NOTICE OF TOLL EVASION	\$6.00	10024210-57100	LEARNING AND DEVELOPMENT	\$6.00
				Vendor Total:		\$12.00
GRAINGER INC	9677422330	DISPOSABLE GOWNS	\$32.67	63020210-54100	SUPPLIES	\$32.67
	9650555866	LINTHIUM BATTERY	\$16.36	91521400-54100	SUPPLIES	\$8.18
				91721400-54100	SUPPLIES	\$8.18
	9680638476	DRY WIPE ROLL	\$26.80	91521400-54100	SUPPLIES	\$13.40
				91721400-54100	SUPPLIES	\$13.40
	9681517117	PAPER TOWEL ROLLS, CLEANER	\$141.92	91521400-54100	SUPPLIES	\$70.96
				91721400-54100	SUPPLIES	\$70.96
				Vendor Total:		\$217.75
HACH COMPANY	12152429	NITRATE, AMMONIA	\$658.07	84027225-54103	LAB SUPPLIES	\$658.07
				Vendor Total:		\$658.07
HOME ENERGY ASSISTANCE PROGRAM	54610-1	UTILITY REFUND-STEPHEN BOUISSEY	\$40.55	90100000-10421	UTILITY RECEIVABLES CLEARING	\$40.55
				Vendor Total:		\$40.55

List of Checks Presented for Approval on 10/30/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
ICMA	FY 20/21	ANNUAL MEMBERSHIP DUES	\$1,400.00	20012100-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$1,400.00
					Vendor Total:	\$1,400.00
INDEPENDENT ELECTRIC SUPPLY INC	S104905683.0	(U-B36-F) BOX, POLYMER CONCRETE	\$1,873.31	80000000-12104	INVENTORY - PURCHASES	\$1,873.31
					Vendor Total:	\$1,873.31
INTEGRITY SHRED LLC	111527	DOCUMENT SHREDDING	\$28.50	10020210-54100	SUPPLIES	\$14.25
				20620231-54100	SUPPLIES	\$14.25
					Vendor Total:	\$28.50
INTERNATIONAL CODE COUNCIL INC	3290414	MEMBERSHIP RENEWAL - MATT KEIZER	\$145.00	10023320-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$145.00
					Vendor Total:	\$145.00
ISABEL MADRIGAL	TR 10/5-6/20	TRAVEL REIMBURSEMENT	\$197.39	10020210-57100	LEARNING AND DEVELOPMENT	\$197.39
					Vendor Total:	\$197.39
JACK MILLER	20041	LABOR TO TROUBLESHOOT INFLUENT	\$1,752.00	82027111-52100	CONTRACTUAL SERVICES	\$1,752.00
					Vendor Total:	\$1,752.00
JENNIFER M BRAUS	20201796	AMBULANCE BILLING SERVICES	\$213.85	71021000-52110	AMBULANCE BILLING	\$213.85
	20201568	AMBULANCE BILLING SERVICES	\$388.85	71021000-52110	AMBULANCE BILLING	\$388.85
	20202066	AMBULANCE BILLING SERVICES	\$457.20	71021000-52110	AMBULANCE BILLING	\$457.20
					Vendor Total:	\$1,059.90
JOHN MENDOZA	DV101920	FY 20/21 PUMPKIN WEIGH OFF WINNER	\$966.00	90000000-23219	PUMPKINFEST	\$966.00
					Vendor Total:	\$966.00
KONOCI RIDGE CORPORATION	74105	EXTERMINATION SERVICES	\$98.00	10021210-56300	BUILDING MAINT. & REPAIR	\$49.00
				91521400-56300	BUILDING MAINT. & REPAIR	\$49.00
					Vendor Total:	\$98.00
MATT KEIZER	BA FY 20/21	BOOT ALLOWANCE	\$150.00	10023320-54100	SUPPLIES	\$150.00
					Vendor Total:	\$150.00
MICHEAL WELLINGTON	DV100720 12-15	INSTRUCTOR	\$163.10	10022850-52100	CONTRACTUAL SERVICES	\$163.10
	DV100720 7-8	INSTRUCTOR	\$176.40	10022850-52100	CONTRACTUAL SERVICES	\$176.40
	DV100620	INSTRUCTOR	\$273.00	10022850-52100	CONTRACTUAL SERVICES	\$273.00
					Vendor Total:	\$612.50

List of Checks Presented for Approval on 10/30/2020

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
MOTION INDUSTRIES INC	CA23-522298	BEARING, FITTINGS & MISC. ITEM	\$233.43	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$233.43
					Vendor Total:	\$233.43
MUNICIPAL MAINTENANCE EQUIPMENT	0153707-IN	8" DBL 4" NPTM REDUCER	\$1,010.95	84027221-56130	EXTERNAL SERVICES	\$1,010.95
					Vendor Total:	\$1,010.95
NFPA	3055940	MEMBERSHIP- J BUCKINGHAM	\$175.00	10021210-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$87.50
				91521400-57300	MEMBERSHIPS & SUBSCRIPTIONS	\$87.50
				Vendor Total:		\$175.00
NOBLE WAIDELICH	FY 20/21	ANNUAL BUY FUND 20/21	\$2,000.00	10020210-54100	SUPPLIES	\$2,000.00
					Vendor Total:	\$2,000.00
ONE TIME PAY VENDOR	DV101920	BUSINESS LICENSE REFUND - REGENCY INN	\$319.20	31200000-41440	BUSINESS LICENSE TAX	\$319.20
	DV101920 1	BUSINESS LICENSE REFUND - VALLEY AUTO CENTER	\$421.33	31200000-41440	BUSINESS LICENSE TAX	\$421.33
	0019300	REC REFUND - HEATHER WATSON	\$75.00	10022850-44915	RECREATION PROGRAM INCOME	\$75.00
	122746-1	UTILITY REFUND - CAROLYN MAYSHARK	\$22.97	90100000-10421	UTILITY RECEIVABLES CLEARING	\$22.97
	102563-4	UTILITY REFUND - MONICA VANCAMP	\$160.86	90100000-10421	UTILITY RECEIVABLES CLEARING	\$160.86
	122292-6 1	UTILITY REFUND - HAROLD GUTKNECHT	\$255.42	90100000-10421	UTILITY RECEIVABLES CLEARING	\$255.42
				Vendor Total:		\$1,254.78
PACE SUPPLY CORPORATION	026425460	MISC. ITEMS AS NEEDED	\$31.89	82027111-56300	BUILDING MAINT. & REPAIR	\$31.89
	026405959	MISC. ITEMS AS NEEDED	\$107.86	82027111-56300	BUILDING MAINT. & REPAIR	\$107.86
	026410433	MISC. ITEMS AS NEEDED	\$305.58	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$305.58
	026421842	MISC. ITEMS AS NEEDED	\$379.10	84027225-56120	EQUIPMENT MAINTENANCE & REPAIR	\$379.10
	CM025784712	MISC. ITEMS AS NEEDED	(\$612.82)	82000000-12104	INVENTORY - PURCHASES	(\$612.82)
	026423562	MISC. ITEMS AS NEEDED	\$67.87	82027114-54100	SUPPLIES	\$67.87
	026416403	MISC. ITEMS AS NEEDED	\$207.36	82027114-54100	SUPPLIES	\$207.36
	016425317	MISC. ITEMS AS NEEDED	\$403.97	82027114-54100	SUPPLIES	\$403.97
				Vendor Total:		\$890.81

List of Checks Presented for Approval on 10/30/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
PG&E CO	6833-2 SEP 20	PACIFIC GAS & ELECTRIC	\$478.79	10021210-55210	UTILITIES	\$239.39
				91521400-55210	UTILITIES	\$239.40
	3822-9 SEP 20	PACIFIC GAS & ELECTRIC	\$7,269.49	10022100-55210	UTILITIES	\$8.65
				10022300-55210	UTILITIES	\$8.11
				10022700-55210	UTILITIES	\$21.73
				20822500-55210	UTILITIES	\$127.97
				70024500-55210	UTILITIES	\$517.17
				73022600-55210	UTILITIES	\$8.12
				73022600-55210	UTILITIES	\$15.63
				77725200-55210	UTILITIES	\$16.70
				82027111-55210	UTILITIES	\$4,134.80
				84027221-55210	UTILITIES	\$123.09
				84027225-55210	UTILITIES	\$2,287.52
				Vendor Total:		\$7,748.28
PRI MANAGEMENT GROUP	10098	REGISTRATION- N GARCIA, T PORTER, J CASTANON, C CROOK	\$596.00	10020210-57100	LEARNING AND DEVELOPMENT	\$596.00
				Vendor Total:		\$596.00
R EMMETT JONES	AUG 20 1	MANAGEMENT ADVISORY SERVICES	\$1,125.00	20012100-52100	CONTRACTUAL SERVICES	\$900.00
				77725200-52100	CONTRACTUAL SERVICES	\$225.00
				Vendor Total:		\$1,125.00
R&B COMPANY - RWC	S1957983.001	(CL-405) CLAMP, FULL CIRCLE RE	\$1,351.14	82000000-12104	INVENTORY - PURCHASES	\$1,351.14
				Vendor Total:		\$1,351.14
REDWOOD COAST FUELS	2181134	CARDLOCK FUEL PURCHASES	\$8,734.83	10020210-56210	FUEL & FLUIDS	\$2,176.14
				10022100-56210	FUEL & FLUIDS	\$761.39
				10022810-56210	FUEL & FLUIDS	\$51.20
				10023320-56210	FUEL & FLUIDS	\$66.01
				10024620-56210	FUEL & FLUIDS	\$958.13
				20324100-56210	FUEL & FLUIDS	\$875.57
				20513382-56210	FUEL & FLUIDS	\$29.30
				20822500-56210	FUEL & FLUIDS	\$106.79
				80026400-56210	FUEL & FLUIDS	\$1,715.90

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Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
REDWOOD COAST FUELS	2181134	CARDLOCK FUEL PURCHASES	\$8,734.83	82027111-56210	FUEL & FLUIDS	\$248.03
				82027114-56210	FUEL & FLUIDS	\$53.92
				82027114-56210	FUEL & FLUIDS	\$370.52
				82027114-56210	FUEL & FLUIDS	\$511.09
				84027221-56210	FUEL & FLUIDS	\$315.63
				84027221-56210	FUEL & FLUIDS	\$435.38
				84027225-56210	FUEL & FLUIDS	\$59.83
REDWOOD EMPIRE MUNICIPAL INSURANCE FUND	3139661	CARDLOCK FUEL PURCHASES	\$463.02	77725200-56210	FUEL & FLUIDS	\$463.02
				Vendor Total:		\$9,197.85
				20700000-20524	NON-EMPLOYEE HEALTH INS.PREM	\$17,798.96
				20700000-20520	P/R DEDUCT.-MEDICAL INS	\$240,598.00
				20700000-20510	REMIF DENTAL	\$17,233.20
				20700000-20511	REMIF VISION	\$3,148.60
				20700000-20520	P/R DEDUCT.-MEDICAL INS	\$550.96
RICHARD ANDERSON	20-09 HEALTHCOMP	SEPT 20 MEDICAL, DENTAL, VISION	\$278,778.76	Vendor Total:		\$279,329.72
				20913900-52100	CONTRACTUAL SERVICES	\$3,950.00
				Vendor Total:		\$3,950.00
				10021210-56210	FUEL & FLUIDS	\$958.49
				91521400-56210	FUEL & FLUIDS	\$958.49
				10021210-56210	FUEL & FLUIDS	\$1,076.35
				91521400-56210	FUEL & FLUIDS	\$1,076.34
RONALD DONOHUE	CL32405	FUEL CARD CHARGES AS NEEDED	\$1,916.98	Vendor Total:		\$4,069.67
				10020210-57100	LEARNING AND DEVELOPMENT	\$194.02
				Vendor Total:		\$194.02
				80026110-54100	SUPPLIES	\$168.22
				Vendor Total:		\$168.22
				10020214-54100	SUPPLIES	\$123.39
				10022840-54100	SUPPLIES	\$32.44
SAFEWAY INC	STMT SEP 20	MISC. PURCHASES AS REQUIRED	\$155.83	Vendor Total:		\$155.83

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Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
SAVINGS BANK OF MENDOCINO COUNTY	OCT 20	LOVERS LANE LOAN PAYMENT	\$1,945.41	91500000-70103	LOAN INTEREST	\$317.59
				91800000-70103	LOAN INTEREST	\$741.04
				91500000-70201	LOAN PRINCIPAL PAYMENTS	\$266.04
				91800000-70201	LOAN PRINCIPAL PAYMENTS	\$620.74
				Vendor Total:		\$1,945.41
SEHI COMPUTER PRODUCTS INC	100206695	OPTOMA #ZH506-W LASER PROJECTO	\$1,996.77	90000000-23256	SPECIAL EVENTS TRUST	\$1,996.77
				Vendor Total:		\$1,996.77
SHN CONSULTING ENGINEERS & GEOLOGISTS INC	106654	COMPACTION TESTING FOR SPEC 19	\$1,245.60	82227113-80230	INFRASTRUCTURE	\$317.96
				84427221-80230	INFRASTRUCTURE	\$927.64
				Vendor Total:		\$1,245.60
SONSRAY MACHINERY LLC	P25183-04	HOSE ASSEMBLY	\$142.08	84027221-56130	EXTERNAL SERVICES	\$142.08
				Vendor Total:		\$142.08
STB ELECTRICAL TEST EQUIPMENT INC	64203	RUBBER GOODS SAFETY TESTING FO	\$1,442.70	80026110-52100	CONTRACTUAL SERVICES	\$1,442.70
				Vendor Total:		\$1,442.70
STERICYCLE INC	3005290716	"SHARPS" DISPOSAL AS NEEDED	\$21.02	10020210-54100	SUPPLIES	\$21.02
				Vendor Total:		\$21.02
THOMAS & ASSOCIATES	31762	ENGINE CONTROLLER	\$1,012.99	84027225-56130	EXTERNAL SERVICES	\$1,012.99
				Vendor Total:		\$1,012.99
THOMPSON GAS LLC	2155267	PROPANE PURCHASES AS NEEDED FY	\$18.88	20824300-56210	FUEL & FLUIDS	\$18.88
				Vendor Total:		\$18.88
TIM SANTO	BA FY 20/21	BOOT ALLOWANCE	\$150.00	80026110-54100	SUPPLIES	\$150.00
				Vendor Total:		\$150.00
TKP ENTERPRISE, INC	117747	DAYCAMP/COVID	\$128.96	10022840-54100	SUPPLIES	\$128.96
	117746	DAYCAMP/COVID	\$225.33	10022840-54100	SUPPLIES	\$225.33
				Vendor Total:		\$354.29
TYLER MAGNAN	1527709	WINDOW TINT	\$250.00	82027114-56130	EXTERNAL SERVICES	\$250.00
				Vendor Total:		\$250.00

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Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
UKIAH VALLEY MEDICAL CENTER	1195001	SART EXAM	\$700.00	10020210-52100	CONTRACTUAL SERVICES	\$700.00
Vendor Total:						\$700.00
UKIAH VALLEY SANITATION DIST	PAYMENT 3	SETTLEMENT PAYMENT #3	\$1,090,000.00	84000000-21032	LAWSUIT SETTLEMENT LIABILITY	\$1,090,000.00
	81411 SEP 20	SEWER - 1500 S STATE ST	\$87.21	10021210-55210	UTILITIES	\$43.60
				91521400-55210	UTILITIES	\$43.61
	90558 SEP 20	SEWER - 141 LOVERS LN	\$112.87	10021210-55210	UTILITIES	\$56.43
				91521400-55210	UTILITIES	\$56.44
Vendor Total:						\$1,090,200.08
UNITED SITE SERVICES	114-11092415	PORTABLE TOILET RENTAL	\$123.35	10022840-54100	SUPPLIES	\$123.35
Vendor Total:						\$123.35
UPS	000E19R54420	SHIPPING CHARGES	\$19.81	80026120-52100	CONTRACTUAL SERVICES	\$19.81
Vendor Total:						\$19.81
US BANK EQUIPMENT FINANCE	425781036	COPYSTAR LEASE	\$130.53	10021210-54500	EQUIP RENTS AND LEASES	\$65.26
				91521400-54500	EQUIP RENTS AND LEASES	\$65.27
Vendor Total:						\$130.53
VERNLIN V FARNSWORTH	P-654	REIMBURSEMENT - SEWER LATERAL	\$2,000.00	84427222-52100	CONTRACTUAL SERVICES	\$2,000.00
Vendor Total:						\$2,000.00
WAHLUND CONSTRUCTION INC	1920217 6	DOWNTOWN UTILITY UPGRADE & ELE	\$240,037.50	82227113-80230	INFRASTRUCTURE	\$26,213.75
				84427221-80230	INFRASTRUCTURE	\$213,823.75
Vendor Total:						\$240,037.50
WALMART COMMUNITY	008099	DAYCAMP/COVID	\$77.64	10022840-54100	SUPPLIES	\$77.64
	016506	DAYCAMP/COVID	\$117.08	10022840-54100	SUPPLIES	\$117.08
	015549	WATER	\$18.80	84027225-54100	SUPPLIES	\$18.80
Vendor Total:						\$213.52
WHITLOCK & WEINBERGER TRANSPORTATION INC	25411	TRAFFIC SIGNAL DESIGN AT GOBBI	\$9,275.00	50924210-80230	INFRASTRUCTURE	\$9,275.00
Vendor Total:						\$9,275.00
WITMER PUBLIC SAFETY GROUP	E1933401.001	FIRE GLOVES	\$68.39	25321210-54106	SPECIALTY SUPPLIES	\$34.20

List of Checks Presented for Approval on 10/30/2020

Invoices

Vendor Name	Invoice #	Invoice Description	Invoice Amt	Account Detail and Allocation Detail		
WITMER PUBLIC SAFETY GROUP	E1933401.001	FIRE GLOVES	\$68.39	91621400-54106	SPECIALTY SUPPLIES	\$34.19
					Vendor Total:	\$68.39
XEROX CORP	011661655	COPIER LEASE-SEE ADD'L DESCRIP	\$303.36	20012200-54500	EQUIP RENTS AND LEASES	\$303.36
					Vendor Total:	\$303.36
ZAP MFG	4053	REMOVE & RESHEET 6X24 WITH HIP	\$2,439.02	10024620-54127	PW - SIGN POSTS/SHEETING	\$2,439.02
					Vendor Total:	\$2,439.02
					INVOICE TOTAL:	\$2,173,277.89



AGENDA SUMMARY REPORT

SUBJECT: Consideration of Adoption of the State of California Governor's Designation of Applicant's Agent Resolution Allowing the City Manager to Apply for Public Assistance and Recovery Funding.

DEPARTMENT:	City Manager / Admin	PREPARED BY:	Tami Bartolomei, Office of Emergency Services Coordinator
		PRESENTER:	Consent Calendar

ATTACHMENTS:

1. Designation of Applicant's Agent Resolution For Non-State Agencies- Cal OES 130 W Signature
2. Designation of Applicant's Agent Resolution For Non-State Agencies-Cal OES 130

Summary: City Council to consider approval of the State of California Governor's Designation of Applicant's Agent Resolution allowing the City Manager to apply for public assistance and recovery funding on the behalf of the City of Ukiah.

Background: In order to request recovery funds, the City is required to submit a Request for Public Assistance (RPA) application. As part of the RPA application package, City Council must adopt the resolution to designate the City's agents. The State-formatted resolution identifies the City Manager as designated agent to apply for public assistance and recovery funding on behalf of the City for a period up to three years. On December 6, 2017, the City Council adopted such a Resolution allowing the City to be eligible for funding from past disasters (Attachment 1).

Discussion: During declared Federal, State and local emergencies, cities have the opportunity to submit reimbursement or obtain assistance to fund costs associated with an emergency. Designating representative agents through the adoption of the California OES formatted resolution allows the City to apply for possible reimbursements.

Staff recommends City Council adopt the State of California Governor's Designation of Applicant's Agent Resolution designating the City Manager as the City's agent for purposes of obtaining federal emergency financial assistance and authorize the City Manager to execute all federal, state, and county documents related to emergency financial assistance forms and related documents (Attachment 2).

Recommended Action: Adopt the State of California Governor's Designation of Applicant's Agent Resolution allowing the City Manager to apply for public assistance and recovery funding on the behalf of the City of Ukiah.

BUDGET AMENDMENT REQUIRED: N/A

CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: City Attorney

Approved: 
Sage Sangiacomo, City Manager

DESIGNATION OF APPLICANT'S AGENT RESOLUTION FOR NON-STATE AGENCIES

BE IT RESOLVED BY THE City Council OF THE City of Ukiah
(Governing Body) (Name of Applicant)

THAT _____, City Manager, OR
(Title of Authorized Agent)

_____, OR
(Title of Authorized Agent)

(Title of Authorized Agent)

is hereby authorized to execute for and on behalf of the City of Ukiah, a public entity
(Name of Applicant)

established under the laws of the State of California, this application and to file it with the California Governor's Office of Emergency Services for the purpose of obtaining certain federal financial assistance under Public Law 93-288 as amended by the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, and/or state financial assistance under the California Disaster Assistance Act.

THAT the City of Ukiah, a public entity established under the laws of the State of California,
(Name of Applicant)

hereby authorizes its agent(s) to provide to the Governor's Office of Emergency Services for all matters pertaining to such state disaster assistance the assurances and agreements required.

Please check the appropriate box below:

- ☒ This is a universal resolution and is effective for all open and future disasters up to three (3) years following the date of approval below.
- ☐ This is a disaster specific resolution and is effective for only disaster number(s) _____

Passed and approved this _____ day of _____, 20____

(Name and Title of Governing Body Representative)

(Name and Title of Governing Body Representative)

(Name and Title of Governing Body Representative)

CERTIFICATION

I, Kristine lawler, duly appointed and City Clerk of _____

(Name) (Title)

_____, do hereby certify that the above is a true and correct copy of a
(Name of Applicant)

Resolution passed and approved by the City Council of the City of Ukiah
(Governing Body) (Name of Applicant)

on the _____ day of _____, 20____.

(Signature)

(Title)

Cal OES Form 130 Instructions

A Designation of Applicant's Agent Resolution for Non-State Agencies is required of all Applicants to be eligible to receive funding. A new resolution must be submitted if a previously submitted Resolution is older than three (3) years from the last date of approval, is invalid or has not been submitted.

When completing the Cal OES Form 130, Applicants should fill in the blanks on page 1. The blanks are to be filled in as follows:

Resolution Section:

Governing Body: This is the group responsible for appointing and approving the Authorized Agents.
Examples include: Board of Directors, City Council, Board of Supervisors, Board of Education, etc.

Name of Applicant: The public entity established under the laws of the State of California. Examples include: School District, Office of Education, City, County or Non-profit agency that has applied for the grant, such as: City of San Diego, Sacramento County, Burbank Unified School District, Napa County Office of Education, University Southern California.

Authorized Agent: These are the individuals that are authorized by the Governing Body to engage with the Federal Emergency Management Agency and the Governor's Office of Emergency Services regarding grants applied for by the Applicant. There are two ways of completing this section:

1. **Titles Only:** If the Governing Body so chooses, the titles of the Authorized Agents would be entered here, not their names. This allows the document to remain valid (for 3 years) if an Authorized Agent leaves the position and is replaced by another individual in the same title. If "Titles Only" is the chosen method, this document must be accompanied by a cover letter naming the Authorized Agents by name and title. This cover letter can be completed by any authorized person within the agency and does not require the Governing Body's signature.
2. **Names and Titles:** If the Governing Body so chooses, the names **and** titles of the Authorized Agents would be listed. A new Cal OES Form 130 will be required if any of the Authorized Agents are replaced, leave the position listed on the document or their title changes.

Governing Body Representative: These are the names and titles of the approving Board Members.
Examples include: Chairman of the Board, Director, Superintendent, etc. The names and titles **cannot** be one of the designated Authorized Agents, and a minimum of two or more approving board members need to be listed.

Certification Section:

Name and Title: This is the individual that was in attendance and recorded the Resolution creation and approval.
Examples include: City Clerk, Secretary to the Board of Directors, County Clerk, etc. This person **cannot** be one of the designated Authorized Agents or Approving Board Member (if a person holds two positions such as City Manager and Secretary to the Board and the City Manager is to be listed as an Authorized Agent, then the same person holding the Secretary position would sign the document as Secretary to the Board (not City Manager) to eliminate "Self Certification."



AGENDA SUMMARY REPORT

SUBJECT: Consideration of Adoption of a Resolution Terminating the Proclamation of a Local Emergency Due to Extreme Heat Emergency.

DEPARTMENT:	City Manager / Admin	PREPARED BY:	Tami Bartolomei, Office of Emergency Services Coordinator
		PRESENTER:	Tami Bartolomei, Office of Emergency Management Coordinator

ATTACHMENTS:

1. Resolution Terminating Proclamation of Local Emergency

Summary: On August 12, 2020, the National Weather Service issued an Excessive Heat Watch for Mendocino County due to above-average afternoon temperatures that were expected to develop and continue through Saturday, August 15, 2020. August 13, 2020, the National Weather Service revised the Excessive Heat Watch to an Excessive Heat Warning as temperatures were expected to reach as high as 105 degrees in some areas. In addition to the Excessive Heat Warning on August 15, 2020, the National Weather Service issued a Fire Weather Watch followed by a Red Flag Warning on August 16, 2020.

On September 27, 2020, the National Weather Service issued a Heat Advisory and Red Flag Warning along with Critical Fire Weather Conditions through September 28, 2020.

Background: On August 16, 2020, the Governor of the State of California responded to the extreme heat conditions caused by the statewide heat wave that began on August 14, 2020, by issuing a Proclamation of State of Emergency ("Governor's Proclamation") under the authority of California Government Code Section 8625.

On August 18, 2020, under the Ukiah City Code §5125, which states that when the City Council is not in session, the City Manager, operating as Director of Emergency Services in the Emergency Operations Center, may proclaim a local emergency, issued a Proclamation 2020-2 declaring a local heat emergency. Under Ukiah City Code Section 5130, in a declared local emergency, City Manager has the authority to promulgate orders and regulations to provide for the protection of life and property, when necessary to preserve the public order and safety.

On August 19, 2020, under Government Code Section 8550, et.seq., including Section 8558(c), City Council passed a Resolution 2020-48 ratifying the declaration of a local emergency due to the threat to the City by conditions of disaster or extreme peril to the safety of persons and property within the City that are likely to be beyond the control of the services, personnel, equipment, and facilities of the City.

On August 16 and 17, 2020, 38 separate fires were started by lightning strikes in the Mendocino Forest near the Covelo and Lake Pillsbury areas. The August fire continues to grow and as of September 29, 2020, had burned 938,044 acres and was at 43% containment.

On September 3, 2020, the Governor of the State of California signed an emergency proclamation in response to the extreme heat conditions, possible power outages and rolling blackouts to free up more energy capacity and resources.

On September 7, 2020, the Oak Fire ignited in the Willits area west of highway 101, over 3,200 people were given orders to evacuate. The fire threatened and eventually crossed Highway 101, resulting in the highway's closure and destroyed several structures. The fire is 100% contained, all evacuation orders, warnings and roads closures have been lifted.

September 27, 2020, a fast-moving fire the Glass Fire quickly grew overnight to 11,000 acres causing thousands to evacuate in our neighboring Sonoma and Napa counties.

On October 7, 2020, City Council passed a Resolution 2020-57 continuing the declaration of a local emergency due to the extreme heat conditions and continued threat to the City.

Discussion: As of November 2, 2020, the National Weather Service weather predictions no longer forecast threats of excess heat conditions that would threaten the City. Staff is recommending Council adopt the Resolution (Attachment 1) ending the local extreme heat emergency.

Recommended Action: Adopt a Resolution terminating the proclamation of a local emergency related to the extreme heat emergency.

BUDGET AMENDMENT REQUIRED: N/A

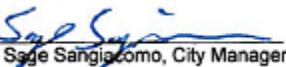
CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: Sage Sangiacomo, City Manager and City Attorney

Approved: 
Sage Sangiacomo, City Manager

RESOLUTION NO. 2020-XX

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF UKIAH,
TERMINATING A PROCLAMATION DECLARING THE EXISTENCE
OF A LOCAL EMERGENCY FOR THE CITY OF UKIAH**

WHEREAS:

1. On August 18, 2020, pursuant to Ukiah City Code Section 5125, the City Manager, as the Director of Emergency Management for the City of Ukiah, proclaimed the existence of a local emergency (“Emergency Proclamation”) as a result of conditions created by the excess heat conditions affecting the City of Ukiah; and
2. On August 19, 2020, the City Council adopted Resolution 2020-48 ratifying the Director’s Emergency Proclamation and proclaimed and ordered that said local emergency would continue to exist until its termination was proclaimed by the City Council; and
3. On October 7, 2020, the City Council reviewed the conditions leading to the declaration of a local emergency and found that circumstances required the continuance of the Emergency Proclamation due to excess heat conditions affecting the City of Ukiah; and
- 4.) As of November 2, 2020, the National Weather Service weather predictions no longer forecast threats of excess heat conditions.
- 5.) The City Council finds that the need for continuing the local emergency has ended, and that the Emergency Proclamation should be terminated as of November 18, 2020.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Ukiah, State of California, does hereby terminate the Emergency Proclamation.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Ukiah on the 18th day of November 2020 by the following roll call vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Douglas F. Crane, Mayor

ATTEST:

Kristine Lawler, City Clerk



AGENDA SUMMARY REPORT

SUBJECT: Approval of Notice of Completion for the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01, and Approval of Corresponding Budget Amendment.

DEPARTMENT: Public Works **PREPARED BY:** Jarod Thiele, Public Works Management Analyst
PRESENTER: Consent Calendar

ATTACHMENTS:

1. Notice of Completion-Spec 20-01

Summary: Council will consider approval of Notice of Completion for the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01, and approval of a corresponding budget amendment.

Background: On August 19, 2020, Council awarded a contract to Pavement Coating Company (PCC) in the amount of \$330,494 for the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01.

On September 30, 2020, Council approved Change Order No. 1 in the amount of \$77,175 for additional work to be performed under this contract as the final bid amount came in significantly lower than the Fiscal Year 2020-2010 Capital Improvement Program Budget.

Discussion: The work for this contract was completed in substantial conformance with the Plans and Specifications on October 30, 2020. The final contract price based on the Change Order approved and actual quantities billed was \$444,753.34. City Engineering Staff made some field decisions to thicken the slurry section on some of the streets that had more deflection than was assumed. This will make for a much smoother surface long term, but required more material from the contractor. These decisions are what required the additional funds and the budget amendment in the amount of \$37,083.34.

Staff is requesting approval of the Notice of Completion (Attachment 1) and a budget amendment in the amount of \$37,083.34 from Measure Y Funds. Final payment of retention will be made 35 days from the date the Notice of Completion is filed with the County Recorder.

Recommended Action: Approve the Notice of Completion for the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01, and Approval of Corresponding Budget Amendment

BUDGET AMENDMENT REQUIRED: Yes.

CURRENT BUDGET AMOUNT: 12024200.80230.18151- \$407,670

PROPOSED BUDGET AMOUNT: 12024200.80230.18151- \$18,027

FINANCING SOURCE: Measure Y Fund

PREVIOUS CONTRACT/PURCHASE ORDER NO.: Contract 2021-108

COORDINATED WITH: Tim Eriksen, Director of Public Works/City Engineer

Approved: 
Sage Sangiacomo, City Manager

Please return to:

CITY OF UKIAH
300 Seminary Avenue
Ukiah, California 95482-5400
(707) 463-6200

No fee pursuant to Government Code 27383

NOTICE OF COMPLETION

NOTICE IS HEREBY GIVEN:

- 1. That the real property described is owned by the following whose address is: City of Ukiah, a Municipal Corporation, 300 Seminary Avenue, Ukiah, California 95482-5400.
- 2. That the nature of the title to the 2020 Slurry Seal of Local Streets Project, Specification No. 20-01 of all said owners is that of fee simple.
- 3. That on the 31st day of October, 2020, the Contract work for this project was actually completed.
- 4. That the name and address of the Contractor is Pavement Coatings Company. 10240 San Sevaine Way, Jurupa Valley, CA 91752.
- 5. That the real property herein referred to is described as the specific street sections in Mendocino County, California within the Ukiah City Limits.

I hereby certify under penalty of perjury that the forgoing is true and correct:

City Council Approval CITY OF UKIAH, a Municipal Corporation

_____ By: _____ _____
Date Kristine Lawler, City Clerk Date

State of California
County of Mendocino

Exempt from recording fees pursuant to Government Code Section 27383



AGENDA SUMMARY REPORT

SUBJECT: Approval of Notice of Completion for the Gobbi Street Underground District No. 3, Specification No. 19-03, and Approve the Final Payment of the 5% Retention to St. Francis Electric, LLC.

DEPARTMENT: Electric Utility **PREPARED BY:** Cindy Sauers, Assistant Electric Utility Director
PRESENTER: Consent Calendar

ATTACHMENTS:

1. Spec 19-03 - Gobbi Street Undergrounding Project
2. 2020-11-18 Notice of Completion-St. Francis Const

Summary: Council will consider approving the Notice of Completion for the Electric Utility Department's Gobbi Street Underground District No. 3, and approve the final payment of the 5% retention to St. Francis Electric, LLC.

Background: The Electric Utility Department has completed the Gobbi Street Underground project that installed electric, phone and cable TV substructures from State Street to Orchard Ave, including Marshall and the 600 block of Leslie Street. The original contract amount was \$2,024,419.

Council received a report on the status of the project on June 3, 2020, outlining the additional work required to remove two undocumented fuel storage tanks and a large redwood duct that were discovered near State Street. Council authorized a budget amendment and an additional 10% of the new contract amount to cover the expense of the obstructions. The revised contract amount was \$2,176,255.

Discussion: The contract work was completed in conformance with the Plans and Specifications (Attachment 1) on November 2, 2020. The actual quantities and change orders, resulted in a revised total contract amount of \$2,536,707.80. Final payment of the retention will be made to the contractor after 35 days from the date the Notice of Completion (Attachment 2) is filed with the County Recorder.

Recommended Action: Approve notice of completion for the Gobbi Street Underground District No. 3, Specification No. 19-03, and direct the City Clerk to file the Notice of Completion with the County Recorder.

BUDGET AMENDMENT REQUIRED: No

CURRENT BUDGET AMOUNT: \$2,601,174.80; 80126100.80230.18045

PROPOSED BUDGET AMOUNT:

FINANCING SOURCE:

PREVIOUS CONTRACT/PURCHASE ORDER NO.: Contract 1920-111

COORDINATED WITH: Mary Horger, Financial Services Manager

Approved: 
Sage Sangiacomo, City Manager

CITY OF UKIAH
MENDOCINO COUNTY, CALIFORNIA

**SPECIAL PROVISIONS
FOR
GOBBI STREET UNDERGROUNDING PROJECT
STATE STREET TO ORCHARD AVENUE**

SPECIFICATION NO. 19-03

CITY OF UKIAH
DEPARTMENT OF ELECTRIC UTILITY
300 SEMINARY AVENUE
Ukiah, California 95482-5400

Bids Open:

2:00 p.m.
Office of City Clerk

CITY OF UKIAH
MENDOCINO COUNTY, CALIFORNIA

CITY COUNCIL:

MAUREEN MULHEREN – MAYOR
DOUGLAS CRANE – VICE-MAYOR
JIM BROWN – COUNCIL MEMBER
STEVE SCALMANINI – COUNCIL MEMBER
JUAN OROZCO – COUNCIL MEMBER

SAGE SANGIACOMO – CITY MANAGER

MEL GRANDI – DIRECTOR OF ELECTRIC UTILITY

MARY HORGER – PROCUREMENT MANAGER

KRISTINE LAWLER – CITY CLERK

R. ALLEN CARTER - CITY TREASURER

CITY OF UKIAH
DEPARTMENT OF ELECTRIC UTILITY
MARCH 2019

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317 2425-4	TRANSFORMER BOX PAD INSTALLATION
317 2426-4	PADMOUNT SWITCH BOX PAD INSTALLATION DETAIL
317 2527	JUNCTION BOX COVER INSTALLATION DETAIL
317 2431	PEDESTAL BOX PAD INSTALLATION
317 3001	PEDESTAL SPEC
503 0101	STREETLIGHT WIRING (6 SHEETS)
504 0201-1	STREETLIGHT SPEC BOW 1
504 0201-2	STREETLIGHT SPEC BOW 2
504 0201-3	STREETLIGHT SPEC BOW 3
922 5402	TRANSFORMER BOX PAD
922 5405	PEDESTAL BOX PAD
922 5406	PADMOUNT SWITCH BOX PAD
922 5679-2	UKIAH 504LA EX RING
922 5680	UKIAH 504LA VAULT H-20 COVER
922 5701	UKIAH 48 EX RING
922 5703	UKIAH 48 H-20 COVER
922 5764	UKIAH 48
326 1503	BUMPER POST
C401	RAIL TRAIL CROSSING
	AT&T BOX SPECIFICATION
	AT&T UG SPECIFICATIONS (8 SHEETS).
	COMCAST VAULT AND SUBSTRUCTURE SPECIFICATIONS (9 SHEETS)

DRAFT

CITY OF UKIAH, MENDOCINO COUNTY, CALIFORNIA
NOTICE TO BIDDERS FOR GOBBI STREET UNDERGROUNDING PROJECT–SPECIFICATION NO. 19-03

NOTICE IS HEREBY GIVEN that sealed standard proposals for GOBBI STREET UNDERGROUNDING PROJECT will be received at the Office of the City Clerk, Ukiah Civic Center, 300 Seminary Avenue, Ukiah California until 2:00 p.m. on , , 20 , at which time, or as soon thereafter as possible, they will be publicly opened and read. Bids shall be addressed to the City Clerk and shall be endorsed "GOBBI STREET UNDERGROUNDING PROJECT". Bids are required for the entire work described herein. No fax bids will be accepted.

ESTIMATE OF QUANTITIES

Item No.	Description	Quantity	Unit
1.	Excavate, trench, backfill and compaction (12"x36" Trench)	1592	LF
2.	Excavate, trench, backfill and compaction (18"x36" Trench)	95	LF
3.	Excavate, trench, backfill and compaction (18"x48" Trench)	1207	LF
4.	Excavate, trench, backfill and compaction (24"x48" Trench)	20	LF
5.	Excavate, trench, backfill and compaction (24"x 59" Trench)	2227	LF
6.	Excavate, trench, backfill and compaction (24"x75" to 80" Trench)	85	LF
7.	Excavate, trench, backfill and compaction (30"x48" Trench)	64	LF
8.	Excavate, trench, backfill and compaction (30"x59" Off-Street Trench)	32	LF
9.	Excavate, trench, backfill and compaction (30"x60" to 89" Trench)	987	LF
10.	Remove and replace asphalt concrete (12" Trench)	1412	SF
11.	Remove and replace asphalt concrete (18" Trench)	1962	SF
12.	Remove and replace asphalt concrete (24" Trench)	2965	SF
13.	Remove and replace asphalt concrete (30" Trench)	2607	SF
14.	1" PVC SCH 40 Conduit (COMCAST) including installation	997	FT
15.	2" PVC SCH 40 Conduit (COMCAST) including installation	10944	FT
16.	3" PVC SCH 40 Conduit (COMCAST) including installation	35	FT
17.	2" PVC SCHE 40 Conduit (AT&T) including installation	1084	FT
18.	4" PVC SCH 40 Conduit (AT&T) including installation	16098	FT
19.	2" PVC SCH 40 Conduit including installation (ELECTRIC)	808	FT
20.	3" PVC SCH 40 Conduit including installation (ELECTRIC)	1614	FT
21.	4" PVC SCH 40 Conduit including installation (ELECTRIC)	4198	FT
22.	6" PVC SCH 40 Conduit including installation (ELECTRIC)	3226	FT

23.	Sidewalk removal and replacement for installation of Electric, Cable & AT&T Vaults and Boxes	675	SF
24.	Curb and Gutter Removal and Replacement for installation of Electric, Cable & AT&T Vaults and Boxes	15	LF
25.	Excavate, backfill, compact and install Cable Service Vaults B48 (Comcast)	12	EA
26.	Excavate, backfill, compact and install Cable Service Vaults N36 (Comcast)	8	EA
27.	Excavate, backfill, compact and install Cable Service Vaults N30 (Comcast)	12	EA
28.	Excavate, backfill, compact and install Service Vaults 24X36X30AT (AT&T)	25	EA
29.	Excavate, backfill, compact and install Service Vaults 30X60X48AT (AT&T)	4	EA
30.	Excavate, backfill, compact and install Service Vaults 48X78X48AT (AT&T)	6	EA
31.	Excavate, backfill, compact and install Concrete Vault (City to Provide Vault 48)	2	EA
32.	Excavate, backfill, compaction and install Pedestel Box Pad (City to Provide)	3	EA
33.	Excavate, backfill, compaction and install Transformer Box Pad (City to Provide)	2	EA
34.	Excavate, backfill, compaction and install Padmount Switch Box Pad (City to Provide)	1	EA
35.	Excavate, backfill, compaction and install Secondary Service Box(City to Provide)	19	EA
36.	Driveway, sidewalk AC removal and replacement behind right-a-way along Leslie and Marshall Streets	815	SF
37.	Landscape removal and replacement-Gobbi, Leslie, Marshall Streets and Orchard Avenue	1	LS
38.	Lane Striping	1400	FT
39.	Traffic Loop Repair	2	LS
40.	1" HDPE conduit including installation	2115	FT
41.	Streetlight foundations including removal and replacement of sidewalk and installation of streetlight standard and luminaire (City to Provide Standard and Luminaire)	22	EA
42.	Install streetlight junction boxes and make electric connections. (City to Provide)	23	EA
43.	#8 AWG THWN including installation	6750	FT
44.	#12 AWG THWN including installation	5000	FT
45.	Bore and Jack 12" Steel Casing (Electric)	14	FT
46.	Bore and Jack 16" Steel Casing (AT&T and CATV)	14	FT

Plans and Special Provisions may be inspected and/or copies obtained from the City's website at www.cityofukiah.com/purchasing. No bid will be considered unless it is made on the forms furnished by the City and is made in accordance with the details of the Special Provisions. Each bidder must be licensed as required by law. Further information regarding the work or these specifications can be obtained by calling Mary Horger, Procurement Manager at (707) 463-6233 or by email at mhorger@cityofukiah.com.

The City Council reserves the right to reject any or all bids and to determine which proposal is, in its opinion, the lowest responsive bid by a responsible bidder and which it deems in the best interest of the City to accept. The City Council also reserves the right, but not the obligation, to waive any irregularity or failure to strictly comply with the

bidding requirements, that the City determines in the reasonable exercise of its discretion does not provide the bidder with a competitive advantage over other bidders.

No contractor or subcontractor may be listed on a bid proposal for a public works unless registered with the Department of Industrial Relations ("DIR") pursuant to Labor Code section 1725.5 except as allowed. under Labor Code section 1771.1(a)The prime contractor shall be responsible for posting job site notices as prescribed by regulation. This project is subject to compliance monitoring and enforcement by the DIR.

Pursuant to provisions of Section 1770, including amendments thereof, of the Labor Code of the State of California, the DIR Director has ascertained the general prevailing rate of wages for straight time, overtime, Saturdays, Sundays and Holidays including employer payment for health and welfare, vacation, pension and similar purposes for the City of Ukiah. Copies of his General Prevailing Wage Determination are available on the Internet at web address: <http://www.dir.ca.gov/DLSR/PWD/> The prime contractor for the work herein shall possess a current, valid State of California, Class A Contractor's License. Pursuant to California Public Contract Code §22300, this contract includes provisions that allow substitutions of certain types of securities in lieu of the City withholding a portion of the partial payments due the Contractor to insure performance under this contract.

By order of the City Council, City of Ukiah, County of Mendocino, State of California.

Dated: _____

Kristine Lawler, City Clerk, City of Ukiah, California

PUBLISH TWO TIMES:

INSTRUCTIONS TO BIDDERS

GOBBI STREET UNDERGROUNDING PROJECT shall be performed in accordance with the Plans and Special Provisions therefor adopted, to which special reference is hereby made.

Each bidder must supply all the information required by the bid documents and Special Provisions.

Minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color or national origin in consideration for an award of any contract entered into pursuant to this advertisement. Women will be afforded equal opportunity in all areas of employment. However, the employment of women shall not diminish the standards or requirements for the employment of minorities.

All proposals or bids shall be accompanied by a cashier's check or certified check payable to the order of the City of Ukiah amounting to 10 percent of the bid, or by a bond in said amount and signed by the bidder and a corporate surety, payable to said City. Said check shall be forfeited, or said bond shall become payable to said City in case the bidder depositing the same does not, within fifteen (15) days after written notice that the contract has been awarded to him: (a) enter into a contract with the City and (b) furnish certificates of insurance and endorsements, a bond of faithful performance and a payment bond as described in the Special Provisions.

No bidder shall withdraw his or her bid for a period of thirty (30) calendar days after the date set by the City for the opening thereof.

The Contractor and any subcontractors shall each possess a valid City of Ukiah Business License prior to the start of any work.

The Contractor shall furnish a project schedule to the Engineer prior to the start of any work and start work as scheduled.

The work is to be completed within one-hundred (100) calendar days. The Contractor will pay to the City the sum of five hundred (\$500.00) dollars per day for each and every calendar day's delay beyond the time prescribed.

The staff shall notify a bidder by telephone, email or fax, if it intends to recommend the rejection of the bidder's bid. Any bid protest must be filed with the City Clerk not more than five calendar days following the bid opening, or 2 calendar days following notice that staff is recommending the rejection of a bid. If any such timely written protest is filed, all bidders shall be provided a copy of the protest within 2 calendar days of its receipt, which may be delivered to the bidders as an email attachment or by fax. All such bidders may file with the City Manager a written objection or other response to the protest.

All objections or responses filed not more than 5 days after receipt of the written protest will be presented to the City Council at its next regular meeting occurring not less than 12 calendar days following the bid opening. The City Council will resolve the bid protest at that meeting based on the written protest, any staff recommendation and all timely written objections and responses. In accordance with the Brown Act, any person may address the City Council on this item during the meeting. The City Council action on the protest shall represent a final decision by the City on the protest.

Examination of Site, Drawings, Etc.

Each bidder shall visit the site of the proposed work and fully acquaint himself with local conditions, construction and labor required so that he or she may fully understand the facilities, difficulties and restrictions attending the execution of the work under the Contract. Bidders shall thoroughly examine and be familiar with the Plans and Special Provisions. The failure of any bidder to receive or examine any form, instrument, addendum, or other document, or to visit the site and acquaint himself with conditions there existing, shall in no way relieve the bidder from any obligation with respect to his or her proposal or to the contract. The drawings for the work show conditions as they are supposed or believed by the Engineer to exist; but, it is neither intended nor shall it be inferred that the conditions as shown thereon constitute a representation by the Engineer, the City or its officers that such conditions are actually existent, nor shall the City, the Engineer or any of their officers or representatives be liable for any loss sustained by the Contractor as a result of a variance between the conditions shown on the drawings and the conditions actually revealed during the progress of the work or otherwise.

The bidder's attention is directed to the possible existence of obstructions and public improvements within the limits of the work or adjacent thereto, which may or may not be shown on the Drawings. Any bid shall take into consideration that conditions may exist underground or otherwise that are not known to the City or easily detected during a site inspection that could impact the time or cost of completing the project. The City expects the bids to anticipate such conditions so that it can know for budgeting and other purposes the total cost to complete the project before accepting a bid and undertaking the legal obligation to construct the project. In awarding the contract the City relies on the contractor's representation that its bid anticipates differing site conditions and the additional time or cost that such conditions may necessitate.

The bidder shall investigate to his or her satisfaction the conditions to be encountered, the character, quality and quantities of work to be performed and materials to be furnished and the requirements of the Plans, Special Provisions, Standard Specifications, Standard Plans, and Contract Documents. The submission of a proposal shall be considered conclusive evidence that the bidder has made such examination and has accepted the project workplace as a safe workplace to perform the work of the Contract.

Bidder Inquiries and Questions

Inquiries and questions must be submitted in writing via fax or email to the following designated contact person:

Mary Horger, Procurement Manager
Fax: (707) 313-3621
Email: mhorger@cityofukiah.com

The City reserves the right to not respond to inquiries or questions submitted within 3 business days of the bid opening.

Location of the Work

All of the work to be performed will be on East Gobbi, Marshall and Leslie Streets between State Street and Orchard Avenue Street, located in, Ukiah, California.

All work is anticipated to be performed during regular work hours.

GENERAL CONDITIONS

SECTION 1. PROPOSAL REQUIREMENTS AND GENERAL CONDITIONS

1-01. Definitions. Whenever any word or expression defined in this section, or pronoun used in its stead, occurs in these contract documents, it shall have and is mutually understood to have the meaning given:

- a. "City of Ukiah" or "City" shall mean the City of Ukiah, Mendocino County, California, acting through its City Council or any other board, body, official or officials to which or to whom the power belonging to the Council shall by virtue of any act or acts, hereafter pass or be held to appertain.
- b. "Engineer" shall mean the Engineer duly and officially appointed by the City to supervise and direct the work of construction under this contract, acting personally or through agents or assistants duly authorized by him, such agents or assistants acting within the scope of the particular duties entrusted to them.
- c. "Inspector" shall mean the engineering or technical inspector or inspectors duly authorized or appointed by the Engineer, limited to the particular duties entrusted to him or her or them.
- d. "Contractor" shall mean the party entering into contract with the City of Ukiah for the performance of work covered by this contract and his or her authorized agents or legal representatives.
- e. "Date of signing of contract" or words equivalent thereto, shall mean the date upon which this contract, with the signature of the Contractor affixed, together with the prescribed bonds, shall be or shall have been delivered to the City or its duly authorized representatives.
- f. "Day" or "days", unless herein otherwise expressly defined, shall mean a calendar day or days of twenty-four hours each.
- g. "The work" shall mean and include all the work specified, indicated, shown or contemplated in the contract to construct the improvement, including all alterations, amendments or extensions thereto made by contract change order or other written orders of the Engineer.
- h. "Contract drawings", "drawings", "plans" shall mean and include 1) all drawings or plans which may have been prepared by or on behalf of the City, as a basis for proposals, when duly signed and made a part of this contract by incorporation or reference, 2) all drawings submitted in pursuance of the terms of this contract by the successful bidder with his or her proposal and by the Contractor to the City if and when approved by the Engineer and 3) all drawings submitted by the Engineer to the Contractor during the progress of the work as provided for herein.
- i. Where "as shown", "as indicated", "as detailed" or words of similar import are used, it shall be understood that reference to the drawings accompanying these Special Provisions is made unless stated otherwise.

Where "as directed", "as permitted", "approved" or words of similar import are used, it shall be understood that the direction, requirements, permission, approval or acceptance of the Engineer is intended unless stated otherwise.

As used herein, "provide" or "install" shall be understood to mean "provide or install complete in place", that is, "furnish and install". "Shall" is mandatory; "may" is permissive.

1-02. Examination of Plans, Special Provisions and Site of Work. The bidder shall examine carefully the Proposal, Plans, Special Provisions, Contract forms and the site of the work contemplated therefor. It will be assumed that the bidder has investigated to his or her satisfaction the conditions to be encountered and the character, quality and requirements of all Plans, Special Provisions, Standard Specifications, and Standard Plans involved.

1-03. Proposal. Bids shall be made on the blank forms prepared by the City. All bids shall give the prices bid, both in writing and in figures and shall be signed by the bidder or his or her authorized representative, with his or her address. If the bid is made by an individual or partner, his or her name and the post office address of his or her

business or partnership, along with his or her signature or the signature of one or more partners must be shown; if made by a corporation, the bid shall show the name of the state under the laws of which the corporation is chartered, the name of the corporation and the title of the person who signs on behalf of the corporation.

Each proposal shall be enclosed in a sealed envelope, endorsed as specified in the notice to bidders. Bidders are warned against making erasures or alterations of any kind and proposals which contain omissions, erasures, conditions, alterations, additions not called for, additional proposals or irregularities of any kind may be rejected.

1-04. Withdrawal of Bids. Any bid may be withdrawn at any time prior to the hour fixed in the notice to bidders for the openings of bids, provided that a request in writing, executed by the bidder or his or her duly authorized representative, for the withdrawal of such bid is filed with the City. The withdrawal of a bid will not prejudice the right of a bidder to file a new bid.

1-05. Public Opening of Bids. Bids will be opened and read publicly at the time and place indicated in the notice to bidders. Bidders or their agents are invited to be present.

1-06. Bid Guaranty. Each bid must be accompanied by a certified check, cashier's check or bidder's bond executed by an admitted surety insurer, payable to the order of the City of Ukiah in an amount not less than 10 percent of the bid as a guarantee that the bidder will enter into a contract, if awarded the work.

1-07. Qualification of Bidders. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]. No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. The prime contractor shall be responsible for posting job site notices as prescribed by regulation. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Each bidder shall be licensed under the provisions of Chapter 9, Division 3 of the Business and Professions Code and shall be skilled and regularly engaged in the general class or type of work called for under this contract. A statement setting forth this experience and business standing shall be submitted by each bidder on the form provided herewith. It is the intention of the City to award a contract only to a bidder who furnishes satisfactory evidence that he or she has the requisite experience and ability and that he or she has sufficient capital, facilities and equipment to enable him or her to prosecute the work successfully and promptly within the time and in the manner agreed.

In determining the degree of responsibility to be credited to a bidder, the City may weigh evidence that the bidder or his or her personnel charged with the responsibility in the work, has performed satisfactorily other contracts of like nature and magnitude or comparable difficulty at similar rates of progress.

1-08. Disqualification of Bidders. More than one bid from an individual business, partnership, corporation or association, under the same or different names, will not be considered. Reasonable grounds for believing that any bidder is financially interested in more than one bid for the work will cause the rejection of all bids in which he or she is so interested. If there is reason to believe that collusion exists among the bidders, none of the participants in such collusion will be considered. Bids in which the prices obviously are unbalanced may be rejected.

1-09. Identification of Subcontractors. All bids shall comply with the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100 and following) and shall set forth:

(a) The name and the location of the place of business of each subcontractor who will perform work or labor, or render service to the prime contractor in or about the construction of the work, or to a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work according to detailed drawings contained in the plans and Special Provisions, in an amount in excess of one-half of 1 percent of the prime contractor's total bid.

(b) The portion of the work which will be done by each such subcontractor. The prime contractor shall list only one subcontractor for each such portion defined by the prime contractor in his or her bid.

1-10. General Provisions of the Standard Specifications. All provisions of the General Provisions, Sections 1 through 11, of the Standard Specifications, shall be applicable to the contract except as modified by these Special Provisions. The Standard Specifications are set forth in Section 12-06 of these Special Provisions.

SECTION 2. AWARD AND EXECUTION OF CONTRACT

2-01. Award of Contract. Award of the contract, if it be awarded, will be to the lowest responsible bidder whose bid complies with all the specified requirements. The award, if made, will be made within thirty (30) days after opening of the bids. The City reserves the right to reject any and all bids and to waive any irregularity in the proposal not pertaining to cost.

2-02. Return of Proposal Guaranties. All bid guaranties will be held until the contract has been fully executed, after which they will be returned upon request to the respective bidders whose bids they accompany.

2-03. Execution of Contract. The contract agreement shall be executed in duplicate by the successful bidder and returned, together with the contract bonds, insurance certificates and endorsements, within fifteen (15) days after written notice of the award of the contract. After execution by the City; one copy shall be filed with the City and one copy shall be returned to the Contractor. If the bidder fails or refuses to enter into the contract agreement within the required time, then the bid guaranty accompanying the bid shall be forfeited to the City.

SECTION 3. SCOPE AND INTENT OF CONTRACT

3-01. Effect of Inspection and Payments. Neither the inspection by the Engineer or an inspector, nor any order, measurement or approved modification, nor certificate or payment of money, nor acceptance of any part or whole of the work, nor any extension of time, nor any possession by the City or its agents, shall operate as a waiver of any provision of this contract or of any power reserved therein to the City, or of any right to damages thereunder; nor shall any breach of this contract be held to be a waiver of any subsequent breach. All remedies shall be construed as cumulative.

3-02. Effect of Extension of Time. The granting of any extension of time on account of delays which, in the judgement of the City, are avoidable delays shall in no way operate as a waiver on the part of the City of its rights under this contract.

3-03. Extra Work. If extra work orders are given in accordance with provisions of this contract, such work shall be considered a part hereof and shall be subject to each and all of its terms and requirements.

3-04. Assignment of Contract. The contract may be assigned or sublet in whole or in part only upon the written consent of the City acting through its authorized agents. Consent will not be given to any proposed assignment which would relieve the original contractor or its surety of their responsibilities under the contract nor will the Engineer consent to any assignment of a part of the work under the contract.

3-05. Subcontractors. The Contractor shall be as fully responsible for the acts and omissions of his or her subcontractors and of persons either directly or indirectly employed by them, as he or she is for the acts and omissions of persons directly employed by him.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the terms of this Contract which are applicable to the work of subcontractors.

Nothing contained in this contract shall be construed to create or shall be relied upon to create any contractual relationship between any subcontractor and the City and no action may be brought by any subcontractor against the City based on this contract.

3-06. Interpretation of Special Provisions and Drawings. The Special Provisions and the Contract Drawings are intended to be explanatory of each other. Any work indicated in the Contract Drawings and not in the Special Provisions, or vice versa, is to be executed as if indicated in both. In case of a discrepancy or conflict between the Technical Specifications and Contract Plans, the Technical Specifications shall govern. All work shown on the Contract Drawings, the dimensions of which are not figured, shall be accurately followed to the scale to which the

drawings are made, but figured dimensions are in all cases to be followed, where given, though they differ from scaled measurements. Large scale drawings shall be followed in preference to small scale drawings. Should it appear that the work to be done, or any of the matters relative thereto, are not sufficiently detailed or explained in these contract documents, including the contract drawings, the Contractor shall apply to the Engineer for such further explanations as may be necessary and shall conform thereto as part of this contract, so far as may be consistent with the terms of this contract. In the event of any doubt or questions arising respecting the true meaning of the Special Provisions, reference shall be made to the Engineer and his or her decision thereon shall be final. If the Contractor believes that a clarification or interpretation justifies an increase in the contract price or contract time, the Contractor must comply with the written notice provisions of Sections 9-05 and 10-07 of these Special Provisions. Contractor's attention is directed to Section 12-06 of the Technical Specifications regarding the Standard Specifications and Standard Plans.

3-07. Liability of City Officials. No city official, nor the Engineer, nor any authorized assistant of any of them, shall be personally responsible for any liability arising under this contract.

3-08. Dispute Resolution. Claims of \$375,000 or less by the Contractor that arise under this Contract are subject to the mandatory dispute resolutions provisions in Public Contract Code Sections 20104-20104.6.

SECTION 4. BONDS

4-01. Faithful Performance Bond. As a part of the execution of this contract, the Contractor shall furnish a bond of a surety company or other securities providing equivalent protection such as cash, letter of credit, or certificates of deposit, acceptable to the City, conditioned upon the faithful performance of all covenants and stipulations under this contract. The amount of the bond shall be 100 percent of the total contract price, as this sum is set forth in the agreement.

4-02. Material and Labor Bond. As a part of the execution of this contract, the Contractor shall furnish a bond of a surety company or other securities providing equivalent protection such as cash, letter of credit or certificates of deposit acceptable to the City in a sum not less than 50 percent of the total contract price, as this sum is set forth in the agreement for the payment in full of all persons, companies or corporations who perform labor upon or furnish materials to be used in the work under this contract, in accordance with the provisions of Sections 3247 through 3252 inclusive of the Civil Code of the State of California and any acts amendatory thereof.

4-03. Defective Material and Workmanship Bond. As a condition precedent to the completion of this contract, the Contractor shall furnish a bond of a surety company acceptable to the City in an amount not less than 5 percent (5%) of the final contract price, to hold good for a period of one (1) year after the completion and acceptance of the work, to protect the City against the results of defective materials, workmanship and equipment during that time. This bond shall be delivered to the City before the final payment under this contract will be made.

4-04. Notification of Surety Companies. The surety companies shall familiarize themselves with all of the conditions and provisions of this contract and they waive the right of special notification of any change or modification of this contract or of extension of time, or decreased or increased work, or of the cancellation of the contract, or of any other act or acts by the City or its authorized agents, under the terms of this contract; and failure to so notify the aforesaid surety companies of changes shall in no way relieve the surety companies of their obligation under this contract.

SECTION 5. INSURANCE REQUIREMENTS FOR CONTRACTORS (WITH CONSTRUCTION RISKS)

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his or her agents, representatives, employees or subcontractors.

5-01. Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial Liability Coverage (occurrence form CG 0001).
2. Insurance Services Office form number CA 0001 (Ed. 1/87) covering Automobile Liability, code 1 (any auto).
3. Worker's Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. Course of Construction insurance covering for "all risks" of loss.

5-02. Minimum Limits of Insurance

Contractor shall maintain limits no less than:

1. General Liability: \$2,000,000 per occurrence for bodily injury, personal injury and property damage including operations, products and completed operations. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: \$2,000,000 per accident for bodily injury and property damage.
3. Employer's Liability: \$1,000,000 per accident for bodily injury and property damage.
4. Course of Construction: Completed value of the project with no co-insurance penalty provisions.

5-03. Deductibles and Self-insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the City guaranteeing payment of losses and related investigations, claim administration and defense expenses.

5-04. Other Insurance Provisions

The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. The City, its officers, officials, employees and volunteers are to be covered as Additional Insured with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance, or as a separate owner's policy.
2. The workers' compensation policy is to be endorsed with a waiver of subrogation. The insurance company, in its endorsement, agrees to waive all rights of subrogation against the City, its officers, officials, employees and volunteers for losses paid under the terms of this policy which arises from the work performed by the named insured for the City.
3. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees or volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
4. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City.
5. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of Civil Code.

6. Course of Construction policies shall contain the following provisions:
 - a.) The City shall be named as loss payee.
 - b.) The insurer shall waive all rights of subrogation against the City.

5-05. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than the following:

A++ VII	A- VIII
A+ VII	B++ X
A VII	B+ X

5-06. Verification of Coverage. Contractor shall furnish the City with original certificates and amendatory endorsements effecting coverage required by this clause. The endorsements shall be on forms provided by the City or on other than the City's forms, provided those endorsements or policies conform to the requirements. All certificates and endorsements are to be received within 15 days from written notice of contract award, and the work shall not commence until the certificates and endorsements have been approved by the City. The City reserves the right to require complete certified copies of all required insurance policies, including endorsements affecting the coverage required by these Special Provisions at any time.

5-07. Subcontractors. Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

SECTION 6. RESPONSIBILITIES AND RIGHTS OF CONTRACTOR

6-01. Legal Address of Contractor. Both the address given in the proposal and the Contractor's office in the vicinity of the work are hereby designated as places to either of which drawings, samples, notices, letters or other articles or communications to the Contractor may be mailed or delivered. The delivery at either of these places of any such thing from the City or its agents to the Contractor shall be deemed sufficient service thereof upon the Contractor and the date of such service shall be the date of such delivery. The address named in the proposal may be changed at any time by notice in writing from the Contractor to the City. Nothing herein contained shall be deemed to preclude or render inoperative the service of any drawing, sample, notice, letter or other article or communication to or upon the Contractor personally.

6-02. Office of Contractor at Site. During the performance of this contract, the Contractor shall maintain a suitable office at the site of the work which shall be the headquarters of a representative authorized to receive drawings and any such thing given to the said representatives or delivered at the Contractor's office at the site of work in his or her absence shall be deemed to have been given to the Contractor.

6-03. Attention to Work. The Contractor shall give his or her personal attention to and shall supervise the work to the end that it shall be prosecuted faithfully and when he or she is not personally present on the work, he or she shall at all reasonable times be represented by a competent superintendent or foreman who shall receive and obey all instructions or orders given under this contract and who shall have full authority to execute the same and to supply materials, tools and labor without delay and who shall be the legal representative of the Contractor. The Contractor shall be liable for the faithful observance of any instructions delivered to him or her or to his or her authorized representative.

6-04. Liability of Contractor. The Contractor shall do all of the work and furnish all labor, materials, tools and appliances, except as otherwise herein expressly stipulated, necessary or proper for performing and completing the work herein required in the manner and within the time herein specified. The mention of any specific duty or liability imposed upon the Contractor shall not be construed as a limitation or restriction of any general liability or duty imposed upon the Contractor by this contract, said reference to any specific duty or liability being made herein merely for the purpose of explanation.

The right of general supervision by the City shall not make the Contractor an agent of the City and the liability of the Contractor for all damages to persons or to public or private property, arising from the Contractor's execution of the work, shall not be lessened because of such general supervision.

Until the completion and final acceptance by the City of all the work under and implied by this contract, the work shall be under the Contractor's responsible care and charge. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erections and repairs, occasioned or rendered necessary by causes of any nature whatsoever, excepting only acts of God and none other, to all or any portions of the work, except as otherwise stipulated.

To the fullest extent permitted by law, Contractor shall indemnify and hold harmless the City and its officers, directors, agents and employees from and against all claims, damages, losses and expenses including but not limited to attorneys' fees, costs of suit, expert witness fees and expenses and fees and costs of any necessary private investigators arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, other than the work itself, including the loss of use resulting therefrom and (2) is caused in whole or in part by any act or omission of the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder, or by the negligence or omission of a party indemnified herein.

In any and all claims against the City or any of its agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts. The obligation to indemnify shall extend to and include acts of the indemnified party which may be negligent or omissions which may cause negligence.

The City shall have the right to estimate the amount of such damage and to cause the City to pay the same and the amount so paid for such damage shall be deducted from the money due the Contractor under this contract; or the whole or so much of the money due or to become due the Contractor under this contract as may be considered necessary by the City, shall be retained by the City until such suits or claims for damages shall have been settled or otherwise disposed of and satisfactory evidence to that effect furnished to the City.

6-05. Protection of Persons and Property. The Contractor shall furnish such watchman, guards, fences, warning signs, walks and lights as shall be necessary and shall take all other necessary precautions to prevent damage or injury to persons or property.

All property line fences and improvements in the vicinity of the work shall be protected by the Contractor and, if they are injured or destroyed, they and any other property injured by the Contractor, his or her employees or agents, shall be restored to a condition as good as when he or she entered upon the work.

6-06. Protection of City Against Patent Claims. All fees, royalties or claims for any patented invention, article or method that may be used upon or in any manner connected with the work under this contract shall be included in the price bid for the work and the Contractor and his or her sureties shall protect and hold the City, together with all of its officers, agents, servants and employees, harmless against any and all demands made for such fees or claims brought or made on account of this contract. The Contractor shall, if requested by the Engineer, furnish acceptable proof of a proper release from all such fees or classes.

Should the Contractor, his or her agents, servants or employees, or any of them be enjoined from furnishing or using any invention, article, material or appliance supplied or required to be supplied or used under this contract, the Contractor shall promptly substitute other articles, materials or appliance, in lieu thereof, of equal efficiency, quality, finish, suitability and market value and satisfactory in all respects to the Engineer. Or, in the event that the Engineer elects, in lieu of such substitution, to have supplied and to retain and use, any such invention, article, material or appliance, as may by this contract be required to be supplied, in that event the Contractor shall pay such royalties and secure such valid licenses as may be requisite and necessary for the City, its officers, agents, servants and employees, or any of them, to use such invention, article, material or appliance without being disturbed or in any way interfered with by any proceeding in law or equity on account thereof. Should the Contractor neglect or refuse to make the substitution promptly, or to pay such royalties and secure such licenses as may be necessary, then in that event the Engineer shall have the right to make such substitution, or the City may pay such royalties and secure such licenses and charge the cost thereof against any money due to the Contractor from the City or recover the amount thereof from him or her and his or her sureties notwithstanding final payment under this contract may have been made.

6-07. Protection of Contractor's Work Property. The Contractor shall protect his or her work, supplies and materials from damage due to the nature of the work, the action of the elements, trespassers, or any cause whatsoever under his or her control, until the completion and acceptance of the work. Neither the City nor any of its agents assumes any responsibility for collecting indemnity from any person or persons causing damage to the work of the Contractor.

6-08. Regulations and Permits. The Contractor shall secure and pay for all permits, give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Plans and Special Provisions are at variance therewith, he or she shall promptly notify the Engineer in writing and any necessary changes shall be adjusted as provided in the contract for changes in the work. The contractor and any subcontractors shall each secure and maintain a valid City of Ukiah Business License. The City of Ukiah will issue a no fee encroachment permit to the Contractor allowing him or her to perform work within City right of way or within City property after the Contract Documents have been executed and insurance certificates and endorsements have been approved by the City.

6-09. Construction Utilities. The Contractor shall be responsible for providing for and in behalf of his or her work under this contract, all necessary utilities, such as special connection to water supply, telephones, power lines, fences, roads, watchmen, suitable storage places, etc.

6-10. Approval of Contractor's Plans. The approval by the Engineer of any drawing or any method of work proposed by the Contractor in accordance with paragraph 8-06 shall not relieve the Contractor of any of his or her responsibility for his or her errors therein and shall not be regarded as any assumption of risk or liability by the City or any officer or employee thereof and the Contractor shall have no claim under this contract on account of the failure or partial failure or inefficiency of any plan or method so approved. Such approval shall be considered to mean merely that the Engineer has no objection to the Contractor's using, upon his or her own full responsibility the plan or method approved.

6-11. Suggestions to the Contractor. Any plan or method of work suggested by the Engineer to the Contractor, but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor; and the Engineer and the City shall assume no responsibility thereof.

6-12. Termination of Unsatisfactory Subcontracts. Should any subcontractor fail to perform in a satisfactory manner the work undertaken by him, such subcontract shall be terminated immediately by the Contractor upon notice from the Engineer.

6-13. Preservation of Stakes and Marks. The Contractor shall preserve carefully bench marks, reference points and stakes and in case of destruction he or she shall replace his or her stakes, reference points and bench marks and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance. Contractor's attention is directed to Section 7-03 of these Special Provisions.

6-14. Assistance to Engineer. At the request of the Engineer the Contractor shall provide men from his or her force and tools, stakes and other materials to assist the Engineer temporarily in making measurements and surveys and in establishing temporary or permanent reference marks. Payment for such materials and assistance will be made as provided for under the caption "Extra Work," provided, however, that the cost of setting stakes and marks carelessly lost or destroyed by the Contractor's employees will be assessed to the Contractor.

6-15. Removal of Condemned Materials and Structures. The Contractor shall remove from the site of the work, without delay, all rejected and condemned materials or structures of any kind brought to or incorporated in the work and upon his or her failure to do so, or to make satisfactory progress in so doing, within forty-eight (48) hours after the service of a written notice from the Engineer, the condemned material or work may be removed by the City and the cost of such removal shall be taken out of the money that may be due or may become due the Contractor on account of or by virtue of this contract. No such rejected or condemned material shall again be offered for use by the Contractor under this Contract.

6-16. Proof of Compliance with Contract. In order that the Engineer may determine whether the Contractor has complied with the requirements of this contract, not readily enforceable through inspection and tests of the work and materials, the Contractor shall, at any time when requested, submit to the Engineer properly authenticated documents or other satisfactory proofs as to his or her compliance with such requirements.

6-17. Errors and Omissions. If the Contractor, in the course of the work, finds any errors or omissions in plans or in the layout as given by survey points and instruction, or if he or she finds any discrepancy between the plans and the physical conditions of the locality, he or she shall immediately inform the Engineer, in writing and the Engineer shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the Contractor's risk.

6-18. Cooperation. The Contractor shall cooperate with all other contractors who may be performing work in behalf of the City and workmen who may be employed by the City on any work in the vicinity of the work to be done under this contract with the work of such contractors or workmen. he or she shall make good promptly, at his or her own expense, any injury or damage that may be sustained by other contractors or employees of the City at his or her hands.

Any difference or conflict which may arise between the Contractor and other contractors, or between the contractor and workmen of the City in regard to their work shall be adjusted and determined by the Engineer. If the work of the Contractor is delayed because of any acts or omissions of any other contractor or of the City, the Contractor shall on that account have no claim against the City other than for an extension of time.

6-19. Right of Contractor to Stop Work. Under the following conditions the Contractor shall have the right, if he or she so desires, to stop the work and terminate the contract upon ten (10) days written notice to the Engineer and recover from the City payment for all work actually performed and for all satisfactory materials actually delivered to the site of the work for permanent incorporation therein, all as may be shown by the estimate of the Engineer.

- (1) If the work is stopped under an order of any court or other competent public authority for a period of time of three (3) months through no act or fault of the Contractor or of anyone employed by him.
- (2) If the Engineer fails to issue the monthly certificate for payment in accordance with the terms of this contract.
- (3) If the City fails to pay the Contractor within sixty (60) days after it shall have become due, as provided by the terms of this contract, any sum certified by the Engineer or awarded by the City.

All provided that if such action to terminate the contract be not instituted by the Contractor within ten (10) days after the alleged existence of such condition and if written notice of such action be not at that time delivered to the City and the Engineer, then such right shall lapse until another occasion arises according to this section.

6-20. Hiring and Dismissal of Employees. The Contractor shall employ only such foremen, mechanics and laborers as are competent and skilled in their respective lines of work and whenever the Engineer shall notify the Contractor that any person on the work is, in his or her opinion, incompetent, unfaithful, intemperate or disorderly, or refuses to carry out the provisions of this contract, or uses threatening or abusive language to any person on the work representing the City, or is otherwise unsatisfactory, such person shall be discharged immediately from the work and shall not be re-employed upon it except with the consent of the Engineer.

6-21. Wage Rates.

1. Contractor shall pay all mechanics and laborers employed or working upon the site of the work unconditionally and without subsequent deductions or rebate on any account the full amounts due at the time of payment at wage rates not less than those contained in the applicable prevailing wage determination, regardless of any contractual relationship which may be alleged to exist between the Contractor and subcontractors and such laborers and mechanics.
2. Contractor shall comply with the California Labor Code Section 1775. In accordance with said Section 1775, Contractor shall forfeit as a penalty to the Owner, \$50.00 (or the higher minimum penalty as provided in Section 1775(B)(ii) – (iii)) for each calendar day or portion thereof, for each workman paid less than the stipulated prevailing rates for such work or craft in which such workman is employed for any work done under the Contract by him or her or by any subcontractor under him or her in violation of the provisions of the Labor Code and in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each workman for each calendar day or portion thereof for which each workman was paid less than the stipulated prevailing wage rate shall be paid to each workman by the Contractor.

3. Pursuant to the provision of Section 1770 of the Labor Code of the State of California, Owner has ascertained the general prevailing rate of wages (which rate includes employer payments for health and welfare, vacation, pension and similar purposes) applicable to the work to be done, for straight time work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned. Copies of the General Prevailing Wage Determination are available on the Internet at web address: <http://www.dir.ca.gov/DLSR/PWD> The Contractor shall post the wage determination at the site of work in a prominent place where it can easily be seen by the workers.
4. City will not recognize any claim for additional compensation because the Contractor has paid any rate in excess of the prevailing wage rate obtained by the Contractor. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his or her bid and will not in any circumstances be considered as the basis for a claim against the City.
5. The Labor Commissioner through the Division of Labor Standards Enforcement (DLSE) may at any time require contractors and subcontractors to furnish electronic certified payroll records directly to DLSE. Commencing with contracts awarded or after April 1, 2015, all contractors and subcontractors must furnish electronic certified payroll records directly to the DLSE.
6. Travel and Subsistence Payments.

Contractor shall make travel and subsistence payments to each workman needed to execute the work in accordance with the requirements in Section 1773.8 of the Labor Code (Chapter 880, Statutes of 1968).

7. Apprentices.

Attention is directed to the provisions in Sections 1777.5 (Chapter 1411, Statutes of 1968) and 1777.6 of the California Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him. Contractor and any subcontractor under him or her shall comply with the requirements of said sections in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

6-22. Cleaning Up. The Contractor shall not allow the site of the work to become littered with trash and waste material, but shall maintain the same in a neat and orderly condition throughout the construction period. The Engineer shall have the right to determine what is or is not waste material or rubbish and the place and manner of disposal.

On or before the completion of the work, the Contractor shall without charge therefore carefully clean out all pits, pipes, chambers or conduits and shall tear down and remove all temporary structures built by him or her and shall remove rubbish of all kind from any of the grounds which he or she has occupied and leave them in first class condition.

6-23. Guaranty. All work shall be guarantied for a period of one year from the date of acceptance by the City. The Contractor shall promptly make all needed repairs arising out of defective materials, workmanship and equipment.

The City is hereby authorized to make such repairs if within ten days after the mailing of a notice in writing to the Contractor or his or her agent, the Contractor shall neglect to make or undertake with due diligence the aforesaid repairs, provided, however, that in case of an emergency where, in the opinion of the City delay would cause serious loss or damage, repairs may be made without notice being sent to the Contractor and the Contractor shall pay the costs thereof.

Pursuant to the provisions of Section 4-03 of these Special Provisions, the Contractor shall furnish a Defective Material and Workmanship Bond in an amount not less than 5 percent of the final contract price, which shall be effective for a period of one (1) year after the completion and acceptance of the work.

SECTION 7. RESPONSIBILITIES AND RIGHTS OF CITY

7-01. Authority of the Engineer. All work done under this contract shall be done in a workmanlike manner and shall be performed to the reasonable satisfaction of the Engineer, who shall have general supervision of all work included hereunder. To prevent disputes and litigation, the Engineer (1) shall in all cases determine the amount, quality, acceptability and fitness of the several kinds of work and materials which are to be paid for under this contract, (2) shall decide all questions relative to the true construction, meaning and intent of the Special Provisions and Drawings, (3) shall decide all questions which may arise relative to the classifications and measurements of quantities and materials and the fulfillment of this contract and (4) shall have the power to reject or condemn all work or material which does not conform to the terms of this contract. his or her estimate and decision in all matters shall be a condition precedent to an appeal for arbitration, or the right of the Contractor to receive, demand, or claim any money or other compensation under this agreement and a condition precedent to any liability on the part of the City to the Contractor on account of this contract. Whenever the Engineer shall be unable to act, in consequence of absence or other cause, then such engineer as the Engineer or the City shall designate, shall perform any and all of the duties and be vested with any or all of the powers herein given to the Engineer.

7-02. Inspection. The City will provide engineering personnel for the inspection of the work.

The Engineer and his or her representatives shall at all times have access to the work whenever it is in preparation or progress and the Contractor shall provide proper facilities for such access and inspection.

If the Special Provisions, the Engineer's instruction, laws, ordinances, or any public authority require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection and, if the inspection is by an authority other than the Engineer, of the date fixed for such inspection. Inspections by the Engineer shall be promptly made at the source of supply where practicable. If any work shall be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination and properly restored at the Contractor's expense.

Re-examination of any work may be ordered by the Engineer and, if so ordered, the work must be uncovered by the Contractor. If such work is found to be in accordance with the contract documents, the City shall pay the cost of re-examination and replacement. If such work is not in accordance with the contract documents, the Contractor shall pay such cost.

Properly authorized and accredited inspectors shall be considered to be the representatives of the City limited to the duties and powers entrusted to them. It will be their duty to inspect materials and workmanship of those portions of the work to which they are assigned, either individually or collectively, under instructions of the Engineer and to report any and all deviations from the Drawings, Special Provisions and other contract provisions which may come to their notice. Any inspector may be considered to have the right to order the work entrusted to his or her supervision stopped, if in his or her opinion such action becomes necessary, until the Engineer is notified and has determined and ordered that the work may proceed in due fulfillment of all contract requirements.

7-03. Surveys. Contractor shall furnish all land surveys, establish all base lines and bench marks and make sufficient detailed surveys needed for working points, lines and elevations. The Contractor shall develop all slope stakes and batter boards. Contractor shall also develop all additional working points, lines and elevations as he or she may desire to facilitate his or her methods and sequence of construction.

7-04. Rights-of-Way. The City will provide all necessary rights-of-way and easements in or beneath which work will be performed by the Contractor under this contract.

7-05. Retention of Imperfect Work. If any portion of the work done or material furnished under this contract shall prove defective and not in accordance with the Plans and Special Provisions, and if the imperfection in the same shall not be of sufficient magnitude or importance to make the work dangerous or undesirable, the Engineer shall have the right and authority to retain such work instead of requiring the imperfect work to be removed and reconstructed, but he or she shall make such deductions therefor in the payments due or to become due the Contractor as may be just and reasonable.

7-06. Changes in the Work. The Engineer shall have the right, in writing, to order additions to, omissions from, or corrections, alterations and modifications in the line, grade, form, dimensions, plan, or kind or amount of work or

materials herein contemplated, or any part thereof, either before or after the beginning of construction. However, the arithmetical sum of the cost to the City of additions and subtractions from the work under this contract shall not exceed 10 percent of original contract amount or \$5,000, whichever is the greater, unless based upon a supplementary agreement to be made therefore.

The order of such additions, omissions, corrections, alterations and modifications shall be in writing and signed by the Engineer and, in order, shall then be binding upon the Contractor. The Contractor shall proceed with the work as changed and the value of such change shall be determined as provided for in section 10-07 of these Special Provisions.

Such alterations shall in no way affect, vitiate, or make void this contract or any part thereof, except that which is necessarily affected by such alterations and is clearly the evident intention of the parties to this contract.

7-07. Additional Drawings by City. The drawings made a part of this contract at the time of its execution are intended to be fairly comprehensive and to indicate in more or less detail the scope of the work. In addition to these drawings, however, the Engineer shall furnish such additional drawings from time to time during the progress of the work as are necessary to make clear or to define in greater detail the intent of the Special Provisions and the contract drawings and the Contractor shall make his or her work conform to all such drawings.

7-08. Additional and Emergency Protection. Whenever, in the opinion of the Engineer, the Contractor has not taken sufficient precautions for the safety of the public or the protection of the works to be constructed under this contract, or of adjacent structures or property which may be injured by the processes of construction on account of such neglect and whenever, in the opinion of the Engineer, an emergency shall arise and immediate action shall be considered necessary in order to protect public or private, personal or property interest, then and in that event, the Engineer, with or without notice to the Contractor may provide suitable protection to the said interests by causing such work to be done and such material to be furnished as shall provide such protection as the Engineer may consider necessary and adequate.

The cost and expense of such work and material so furnished shall be borne by the Contractor and, if the same shall not be paid on presentation of the bills therefor, then such costs shall be deducted from any amounts due or to become due the Contractor.

The performance of such emergency work under the direction of the Engineer shall in no way relieve the Contractor from any damages which may occur during or after such precaution has been taken by the Engineer.

7-09. Suspension of Work. The City may at any time suspend the work or any part thereof by giving five (5) days written notice to the Contractor. The work shall be resumed by the Contractor within ten (10) days after the date fixed in the written notice from the City to the Contractor so to do. The City shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this contract as a result of such suspension.

If the work, or any part thereof, shall be stopped by the notice in writing aforesaid and if the City does not give notice in writing to the Contractor to resume work at a date within ten (10) days of the date fixed in the written notice to suspend, then the Contractor may abandon that portion of the work so suspended and he or she will be entitled to the estimates and payments for all work done on the portions so abandoned, if any, plus 5 percent of the value of the work so abandoned, to compensate for loss of overhead, plant expense and anticipated profit.

7-10. Right of City to Terminate Contract. If the Contractor should be adjudged a bankrupt, or if he or she should make a general assignment for the benefit of his or her creditors, or if a receiver should be appointed on account of his or her insolvency, or if he or she should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply sufficient properly skilled workmen or proper materials, or if he or she should fail to make prompt payments to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Engineer, or otherwise be guilty of a substantial violation of any provision of the contract, then the City, upon the certificate of the Engineer that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor seven days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances and finish the work by whatever method the City may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid

balance, the Contractor shall pay the difference to the City. The expense incurred by the City as herein provided and the damage incurred through the Contractor's default, shall be certified by the Engineer.

7-11. Use of Completed Portions. The City shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work or such portions which may not have expired; but such taking possession and using shall not be deemed an acceptance of any work not completed in accordance with the contract documents. If such prior use increases the cost of or delays the work, the Contractor shall be entitled to such extra compensation, or extension of time or both, as the Engineer may determine.

SECTION 8. WORKMANSHIP, MATERIALS and EQUIPMENT

8-01. General Quality. Materials and equipment shall be new and of a quality equal to that specified or approved. Work shall be done and completed in a thorough and workmanlike manner.

8-02. Quality in Absence of Detailed Specifications. Whenever under this contract it is provided that the Contractor shall furnish materials or manufactured articles or shall do work for which no detailed specifications are set forth, the materials or manufactured articles shall be of the best grade in quality and workmanship obtainable in the market from firms of established good reputation, or, if not ordinarily carried in stock, shall conform to the usual standards for first-class materials or articles of the kind required, with due consideration of the use to which they are to be put. In general, the work performed shall be in full conformity and harmony with the intent to secure the best standard of construction and equipment of the work as a whole or in part.

8-03. Materials and Equipment Specified by Name. Whenever any material or equipment is indicated or specified by patent or proprietary name or by the name of the manufacturer, such specification shall be considered as used for the purpose of describing the material or equipment desired and shall be considered as followed by the words "or approved equal". The Contractor may offer any material or equipment which shall be equal in every respect to that specified, provided that written approval first is obtained from the Engineer.

8-04. Source of Materials. Price, fitness and quality being equal, preference shall be given by the Contractor for supplies grown, manufactured or produced in the State of California and, next, for such products partially produced in this State in accordance with Government Code Section 4332.

8-05. Storage of Materials. Materials shall be so stored to ensure the preservation of their quality and fitness for the work. They shall be so located and disposed that prompt and proper inspection thereof may be made.

8-06. Drawings, Samples and Tests. As soon as possible after execution of the contract, the Contractor shall submit to the Engineer, in quintuplicate, sufficient information including, if necessary, assembly and detail drawings to demonstrate fully that the equipment and materials to be furnished comply with the provisions and intent of these Special Provisions and Drawings. If the information thus submitted indicates the equipment or materials is acceptable, the Engineer will return one copy stamped with his or her approval; otherwise, one copy will be returned with an explanation of why the equipment or material is unsatisfactory. The Contractor shall have no claims for damages or for extension of time on account of any delay due to the revision of drawings or rejection of material. Fabrication or other work performed in advance of approval shall be done entirely at the Contractor's risk. After approval of equipment or material, the Contractor shall not deviate in any way from the design and specifications given without the written consent of the Engineer.

When requested by the Engineer, a sample or test specimens of the materials to be used or offered for use in connection with the work shall be prepared at the expense of the Contractor and furnished by him or her in such quantities and sizes as may be required for proper examination and tests, with all freight charges prepaid and with information as to their sources.

All samples shall be submitted before shipment and in ample time to permit the making of proper tests, analyses, or examination before the time at which it is desired to incorporate the material into the work. All tests of materials furnished by the Contractor shall be made by the Engineer. Samples shall be secured and tested whenever necessary to determine the quality of the material.

SECTION 9. PROSECUTION OF WORK

9-01. Equipment and Methods. The work under this contract shall be prosecuted with all materials, tools, machinery, apparatus and labor and by such methods as are necessary to the complete execution of everything described, shown, or reasonably implied. If at any time before the beginning or during the progress of the work, any part of the Contractor's plant or equipment, or any of his or her methods of execution of the work, appear to the Engineer to be unsafe, inefficient, or inadequate to insure the required quality or the rate of progress of the work, he or she may order the Contractor to increase or improve his or her facilities or methods and the Contractor shall comply promptly with such orders; but, neither compliance with such orders nor failure of the Engineer to issue such orders shall relieve the Contractor from his or her obligation to secure the degree of safety, the quality of the work and the rate of progress required of the Contractor. The Contractor alone shall be responsible for the safety, adequacy and efficiency of his or her plant, equipment and methods.

9-02. Time of Completion. The Contractor shall promptly begin the work under this contract and shall complete and make ready for full use all portions of the project made the subject of this contract within the time set forth in the agreement bound herewith.

9-03. Avoidable Delays. Avoidable delays in the prosecution or completion of the work shall include all delays which might have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor. The City will consider as avoidable delays within the meaning of this contract (1) delays in the prosecution of parts of the work, which may in themselves be unavoidable, but do not necessarily prevent or delay the prosecution of other parts of the work nor the completion of the whole work within the time herein specified, (2) reasonable loss of time resulting from the necessity of submitting plans to the Engineer for approval and from the making of surveys, measurements, inspections, and testing and (3) such interruptions as may occur in the prosecution of the work on account of the reasonable interference of other contractors employed by the City which do not necessarily prevent the completion of the whole work within the time herein specified.

9-04. Unavoidable Delays. Unavoidable delays in the prosecution or completion of the work under this contract shall include all delays which may result, through cause beyond the control of the Contractor and which he or she could not have provided against by the exercise of care, prudence, foresight and diligence. Orders issued by the City changing the amount of work to be done, the quantity of material to be furnished or the manner in which the work is to be prosecuted and unforeseen delays in the completion of the work of other contractors under contract with the City will be considered unavoidable delays, so far as they necessarily interfere with the Contractor's completion of the whole of the work. Delays due to normally adverse weather conditions will not be regarded as unavoidable delays. However, truly abnormal amounts of rainfall, temperatures or other weather conditions for the location of the work and time of year may be considered as unavoidable delays if those conditions necessarily cause a delay in the completion of the work.

9-05. Notice of Delays. Whenever the Contractor foresees any delay in the prosecution of the work and, in any event, immediately upon the occurrence of any delay which the contractor regards as an unavoidable delay, he or she shall notify the Engineer in writing of the probability of the occurrence of such delay and its cause, in order that the Engineer may take immediate steps to prevent, if possible, the occurrence or continuance of the delay, or, if this cannot be done, may determine whether the delay is to be considered avoidable or unavoidable, how long it continues and to what extent the prosecution and completion of the work are to be delayed thereby.

9-06. Extension of Time. Should any delays occur which the Engineer may consider unavoidable, as herein defined, the Contractor shall, pursuant to his or her application, be allowed an extension of time proportional to said delay or delays, beyond the time herein set forth, in which to complete this contract; and liquidated damages for delay shall not be charged against the Contractor by the City during an extension of time granted because of unavoidable delay or delays.

Any claim by Contractor for a time extension based on unavoidable delays shall be based on written notice delivered to the Engineer within 15 days of the occurrence of the event giving rise to the claim. Failure to file said written notice within the time specified shall constitute a waiver of said claim. Notice of the full extent of the claim and all supporting data must be delivered to the Engineer within 45 days of the occurrence unless the Engineer specifies in writing a longer period. All claims for a time extension must be approved by the Engineer and incorporated into a written change order.

9-07. Unfavorable Weather and Other Conditions. During unfavorable weather and other conditions, the Contractor shall pursue only such portions of the work as shall not be damaged thereby. No portions of the work whose satisfactory quality or efficiency will be affected by any unfavorable conditions shall be constructed while these conditions remain, unless, by special means or precautions approved by the Engineer, the Contractor shall be able to overcome them.

The Contractor shall be granted a time extension of one day for each unfavorable weather day which prevents him or her from placing concrete forms or placing and finishing concrete or asphalt concrete. Such unfavorable weather day is defined as a rain day where precipitation prevents the contractor from performing the work more than four (4) continuous hours within the authorized work period or a temperature day where the ambient temperature is below that specified for the placement of materials associated with the controlling work item for more than four (4) continuous work hours of the authorized work period.

9-08. Saturday, Sunday, Holiday and Night Work. No work shall be done between the hours of 6 p.m. and 7 a.m., nor on Saturdays, Sundays or legal holidays except such work as is necessary for the proper care and protection of work already performed, or except in cases of absolute necessity and in any case only with the permission of the Engineer.

It is understood, however, that night work may be established as a regular procedure by the Contractor if he or she first obtains the written permission of the Engineer and that such permission may be revoked at any time by the Engineer if the Contractor fails to maintain at night adequate force and equipment for reasonable prosecution and to justify inspection of the work.

9-09. Hours of Labor. Eight (8) hours of labor shall constitute a legal day's work and the Contractor or any subcontractor shall not require or permit more than eight hours of labor in a day from any person employed by him or her in the performance of the work under this contract, unless paying compensation for all hours worked in excess of eight (8) hours per day at not less than 1½ times the basic rate of pay. The Contractor shall forfeit to the City, as a penalty, the sum of twenty-five dollars (\$25.00) for each workman employed in the execution of the contract by him or her or by any subcontractor, for each calendar day during which such laborer, workman, or mechanic is required or permitted to labor more than eight hours in violation of the provisions of Section 1810 to 1816, inclusive, (Article 3, Chapter 1, Part 7, Division 2) of the Labor Code of the State of California and any acts amendatory thereof.

SECTION 10. PAYMENT

10-01. Certification by Engineer. All payments under this contract shall be made upon the presentation of certificates in writing from the Engineer and shall show that the work covered by the payments has been done and the payments thereof are due in accordance with this contract.

10-02. Progress Estimates and Payment. The Engineer shall, within the first seven (7) days of each month, make an estimate of the value of the work performed in accordance with this contract during the previous calendar month.

The first estimate shall be of the value of the work satisfactorily completed in place and meeting the requirements of the contract. And every subsequent estimate, except the final estimate, shall be of the value of the work satisfactorily completed in place since the last preceding estimate was made; provided, however, that should the Contractor fail to adhere to the program of completion fixed in this contract, the Engineer shall deduct from the next and all subsequent estimates the full calculated accruing amount of the liquidated damages to the date of said estimate, until such time as the compliance with the program has been restored.

The estimate shall be signed by the Engineer and, after approval, the City shall pay or cause to be paid to the Contractor in the manner provided by law, an amount equal to 95 percent of the estimated value of the work satisfactorily performed and complete in place.

10-03. Substitution of Securities.

1. At such times that Public Contract Code Section 22300 is in effect Contractor may propose the substitution of securities of at least equal market value for any moneys to be withheld to ensure performance under the Contract. Market value shall be determined as of the day prior to the date such substitution is to take place. Such substitution

shall be made at the request and expense of the Contractor. The securities shall be one or more of the following types:

- (a) Bonds or interest-bearing notes or obligations of the United States, or those for which the faith and credit of the United States are pledged for the payment of principal and interest.
- (b) Bonds or interest-bearing notes on obligations that are guaranteed as to principal and interest by a federal agency of the United States.
- (c) Bonds of the State of California, or those for which the faith and credit of the State of California are pledged for the payment of principal and interest.
- (d) Bonds or warrants, including, but not limited to, revenue warrants, of any county, city, metropolitan water district, California water district, California water storage district, irrigation district in the State of California, municipal utility district, or school district of the State of California, which are rated by Moody's or Standard and Poor as A or better.
- (e) Bonds, consolidated bonds, collateral trust debentures, consolidated debentures, or other obligations issued by federal land banks or federal intermediate credit banks established under the Federal Farm Loan Act, as amended; debentures and consolidated debentures issued by the Central Bank for Cooperatives and banks for cooperatives established under the Farm Credit Act of 1933, as amended; bonds, or debentures of the Federal Home Loan Bank Board established under the Federal Home Loan Bank Act; and stock, bonds, debentures and other obligations of the Federal National Mortgage Association established under the National Housing Act as amended and bonds of any Federal Home Loan Mortgage Corporation.
- (f) Commercial paper of "prime" quality as defined by a nationally recognized organization which rates such securities. Eligible paper is further limited to issuing corporations: (1) organized and operating within the United States; (2) having total assets in excess of five hundred million dollars (\$500,000,000); and (3) approved by the Pooled Money Investment Board of the State of California. Purchases of eligible commercial paper may not exceed 180 days' maturity, nor represent more than 10 percent of the outstanding paper of an issuing corporation.
- (g) Bills of exchange or time drafts on and accepted by a commercial bank, otherwise known as bankers acceptances, which are eligible for purchase by the Federal Reserve System.
- (h) Certificates of deposits issued by a nationally or state-chartered bank or savings and loan association.
- (i) The portion of bank loans and obligations guaranteed by the United States Small Business Administration or the United States Farmers Home Administration.
- (j) Student loan notes insured under the Guaranteed Student Loan Program established pursuant to the Higher Education Act of 1965, as amended (20 U.S.C. 1001, et seq.) and eligible for resale to the Student Loan Marketing Association established pursuant to Section 133 of the Education Amendments of 1972, as amended (20 U.S.C. 1087-2).
- (k) Obligations issued, assumed or guaranteed by International Bank for Reconstruction and Development, the Inter-American Development Bank, the Asian Development Bank, or the Government Development Bank of Puerto Rico.
- (l) Bonds, debentures and notes issued by corporations organized and operating within the United States. Such securities eligible for substitution shall be within the top three ratings of a nationally recognized rating service.

2. The securities shall be deposited with City or with any commercial bank as escrow agent, who shall arrange for transfer of such securities to the Contractor upon satisfactory completion of the contract. Any interest accrued or paid on such securities shall belong to the Contractor and shall be paid upon satisfactory completion of the contract.

The market value of the securities deposited shall at all times be maintained in an amount at least equal, in the sole judgment of City, to the moneys to be withheld pursuant to the Contract Documents to ensure performance of the Contract. In order to comply with this condition, Contractor shall deposit additional securities as necessary upon request by City or the escrow agent.

3. Upon acceptance of any Proposal that includes substituting securities for amounts withheld to ensure performance, a separate escrow agreement satisfactory in form and substance to City shall be prepared and executed by City, the Contractor and the escrow agent, which may be City. The escrow agreement shall specify, among other matters, value of securities to be deposited; procedures for valuing the securities and for adding or withdrawing securities to maintain the market value of the deposited securities at least equal to the amount of moneys which would otherwise be withheld; the terms and conditions of conversion to cash in case of the default by the Contractor; and terms, conditions and procedure for termination of the escrow. City shall have no obligation to enter any such Agreement that does not provide the City with the unilateral right to convert securities to cash and to gain immediate possession of the cash.

10-04. Acceptance. The work must be accepted by vote of the City Council of the City of Ukiah when the whole shall have been completed satisfactorily. The Contractor shall notify the Engineer, in writing, of the completion of the work, whereupon the Engineer shall promptly, by personal inspection, satisfy himself as to the actual completion of the work in accordance with the terms of the contract and shall thereupon recommend acceptance by the City Council.

10-05. Final Estimate and Payment. The Engineer shall, as soon as practicable after the final acceptance of the work done under this contract, make a final estimate of the amount of work done thereunder and the value thereof.

Such final estimate shall be signed by the Engineer, and after approval, the City shall pay or cause to be paid to the Contractor, in the manner provided by law, the entire sum so found to be due hereunder, after deducting therefrom all previous payments and such other lawful amounts as the terms of this contract prescribe.

In no case will final payment be made in less than thirty-five (35) days after the filing of the notice of completion with the County Recorder.

10-06. Delay Payments. Should any payment due the Contractor or any estimate be delayed, through fault of the City beyond the time stipulated, such delay shall not constitute a breach of contract or be the basis for a claim for damages, but the City shall pay the Contractor interest on the amount of the payment at the rate of 6 percent per annum for the period of such delay. The terms for which interest will be paid shall be reckoned, in the case of any monthly or progress payment, from the twentieth day of the month next succeeding the month in which the work was performed to the date of payment of the estimate; and in the case of the final estimate, from the forty-fifth day after acceptance to the date of payment of the final estimate.

The date of payment of any estimate shall be considered the day on which the payment is offered or mailed as evidenced by the records of the Treasurer of the City. If interest shall become due on any delayed payment, the amount thereof, as determined by the City, shall be added to a succeeding payment. If the interest shall become due on the final payment, it shall be paid on a supplementary voucher to interest or any sum or sums which, by the terms of this contract, the City is authorized to reserve or retain.

10-07. Extra Work and Work Omitted. Whenever corrections, alterations, or modifications of the work under this contract ordered by the Engineer and approved by the City increase the amount of work to be done, such added work shall be known as "extra work"; and when such corrections, alterations, or modifications decrease the amount of work to be done, such subtracted work shall be known as "work omitted".

When the Contractor considers that any changes ordered involve extra work, he or she shall immediately notify the Engineer in writing and subsequently keep him or her informed as to when and where extra work is to be performed and shall make claim for compensation therefor each month not later than the first day of the month following that in which the work claimed to be extra work was performed and he or she shall submit a daily complete statement of materials and labor used and expenses incurred on account of extra work performed, showing allocation of all materials, labor and expenses.

All such claims shall state the date of the Engineer's written order and the date of approval by the City authorizing the work on account of which claim is made. Unless such notification is made in writing within the time specified and unless complete statements of materials used and expenses incurred on account of such extra work are

furnished as above required, the Contractor shall not be entitled to payment on account of extra work and Contractor shall be deemed to have waived the right to make any future claims for compensation for such extra work.

When changes decrease the amount of work to be done, they shall not constitute a claim for damages on account of anticipated profits on the work that may be omitted.

10-08. Compensation for Extra Work or Work Omitted. Whenever corrections, additions, or modifications in the work under this contract change the amount of work to be done or the amount of compensation due the Contractor, excepting increases or decreases in contract items having unit contract prices for each measurable quantity installed in place, and such changes have been ordered in writing by the Engineer and approved by the City prior to the Contractor performing the extra work, then a price may be agreed upon. Failing such an agreement in price, the Contractor shall be compensated for performing extra work pursuant to the provisions of Section 4-1.03 D, "Extra Work", and Section 9-1.03, "Force Account Payment" of the Standard Specifications.

This method of determining the price of work shall not apply to the performance of any work which is required or reasonably implied to be performed or furnished under this contract.

10-09. Compensation to the City for Extension of Time. In case the work called for under this contract is not completed within the time limit stipulated herein, the City shall have the right as provided hereinabove, to extend the time of completion thereof. If the time limit be so extended, the City shall have the right to charge to the Contractor and to deduct from the final payment for the work the actual cost to the City of engineering, inspection, superintendence and other overhead expenses which are directly chargeable to the contract and which accrue during the period of such extension, except that the cost of final unavoidable delays shall not be included in such charges.

10-10. Liquidated Damages for Delay. It is agreed by the parties to the contract that time is of the essence and that, in case all the work is not completed before or upon the expiration of the time limit as set forth, damage, other than those cost items identified in section 10-09, will be sustained by the City and that it is and will be impracticable to determine the actual amount of damage by reason of such delay; and it is therefore agreed that the Contractor will pay to the City the sum of five hundred dollars (\$500.00) per day for each and every calendar day's delay beyond the time prescribed.

SECTION 11. MISCELLANEOUS

11-01. Notice. Whenever any provision of the contract documents requires the giving of written notice, it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice. If mailed, the notice shall be deemed received on the date of delivery stated in the return receipt.

11-02. Computation of Time. When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

11-03. Claims Procedure Required by Public Contract Code Section 9204. This section shall apply to any claim by the Contractor arising in connection with this project in accordance with Public Contract Code Section 9204.

a, For purposes of this section "Claim" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City under this contract.

(B) Payment by the City of money or damages arising from work done by, or on behalf of, the Contractor pursuant to this contract and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled.

(C) Payment of an amount that is disputed by the City.

b.

(1)

(A) Upon receipt of a claim pursuant to this section, the City shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and the contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The Contractor shall furnish reasonable documentation to support the claim.

(C) If the City needs approval from its governing body to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the City shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, paragraph (3) shall apply.

(2)

(A) If the Contractor disputes the City's written response, or if the City fails to respond to a claim issued pursuant to this section within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the City shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to in writing by the City and the Contractor, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

(3) Failure by the City to respond to a claim from the Contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the Contractor.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the Contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

c. A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) the City may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

11-04. Litigation and Forum Selection. Contractor and City stipulate and agree that any litigation relating to the enforcement or interpretation of this contract, arising out of Contractor's performance or relating in any way to the work shall be brought in Mendocino County and that venue will lie in Mendocino County.

Except as otherwise expressly provided by law, the parties waive any objections they might otherwise have to the propriety of jurisdiction or venue in the state courts in Mendocino County and agree that California law shall govern any such litigation.

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto and, in particular but without limitation, the warranties, guaranties and obligations imposed upon the Contractor and all of the rights and remedies available to the City thereunder, shall be in addition to and shall not be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by law or contract, by special warranty or guaranty, or by other provisions of the contract documents and the provisions of this paragraph shall be as effective as if repeated specifically in the contract documents in connection with each particular duty, obligation, right and remedy to which they apply. All warranties and guaranties made in the contract document shall survive final payment and termination or completion of this contract. The City disclaims an express or implied warranty that the plans and specifications identify all site conditions that could affect the time or cost to complete the Work.

11-05. Waiver. The Contractor shall strictly comply with all notices and other contract requirements. Waiver by the City of any failure of the Contractor to comply with any term of the contract, including the notice provisions, shall not be deemed a waiver of a subsequent breach.

TECHNICAL SPECIFICATIONS

SECTION 12. GENERAL INFORMATION

12-01. Location and Scope of Work. All of the work to be performed will be on East Gobbi, Marshall and Leslie Streets between State Street and Orchard Avenue Street, Ukiah, California.

Work required, and to be more clearly defined in this specification under Section 13. Construction Details:

Trench, backfill, compact and install underground conduits for electric, AT&T and Comcast. Install vault(s), boxes, secondary service boxes for electric, AT&T and Comcast. Install electric box pads for switch, transformer and pedestal(s) (installed by Contractor, provide by City) for underground duct system. Bore and jack two (2) steel casings under NWR for electric, AT&T and Comcast and install streetlight foundations, streetlight standards, luminaires and streetlight junction boxes (provided by City), conduit system by horizontal directional drilling (boring), streetlight conductor, as specified, on Gobbi, Marshall and Leslie Street between State Street and Orchard Avenue.

The Contractor should familiarize himself with the local conditions of the project sites. Failure to do so will in no way relieve him of the responsibility for performing any of the work or operations required as a part of this contract. Further information regarding the work or these specifications can be obtained from Mary Horger at (707) 463-6233.

12-02. Examination of Site. The Contractor should familiarize himself with the local conditions of the project sites, and shall be responsible for having acquired full knowledge of the job and all problems affecting it. Failure to do so will in no way relieve him of the responsibility for performing any of the work or operations required as a part of this contract. Further information regarding the work or these specifications can be obtained from Mary Horger, (707) 463-6233.

12-03. Arrangement of Technical Specifications. The Technical Specifications are arranged in sections covering the various phases of work as follows:

Section No.	Title
12	General Information
13	Construction Details
14	Exclusions from General Conditions
15	Amendments to General Conditions

12-04. Arrangement of Plans. Plans delineating the scope of work are provided and indexed per Appendix "A" List of Drawings.

12-05. Standard Specifications and Standard Plans. The Standard Specifications and Standard Plans of the California State Department of Transportation, May 2006, are hereby made a part of these Special Provisions and are hereinafter referred to as "California Standard Specifications" and "California Standard Plans."

Whenever in the California Standard Specifications and the California Standard Plans the following terms are used, they shall be understood to mean and refer to the following:

Department of Transportation – The Ukiah City Council.

Director of Public Works – The City of Ukiah Director of Public Works.

Engineer – The Engineer, designated by the City Council, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

State – The City of Ukiah

Other terms appearing in the California Standard Specifications and the California Standard Plans shall have the intent and meaning specified in Section I, Definition of terms of the California Standard Specifications. In case of discrepancy between the contract documents, the order of precedence from the highest to lowest is as follows:

1. (City) Special Provisions
2. (City) Project Plans
3. City Standard Plans and Details
4. California Standard Plans
5. California Standard Specifications

12-06. Business Licenses. The Contractor and any subcontractors shall each secure and maintain a valid City of Ukiah Business License prior to the start of any portion of the work.

12-07. Permits. The Contractor shall provide, procure, and pay for all permits required to complete this work.

12-08. Temporary Facilities. All temporary facilities are the responsibility of the Contractor. The removal of said facilities shall be the responsibility of the Contractor. The Contractor shall be responsible for any and all damages to existing facilities which are a result of the work.

12-09. Public Convenience and Safety. The Contractor shall conduct operations so as to cause the least possible obstruction and inconvenience to the public traffic. The Contractor shall, at his or her expense, furnish such flag persons and furnish, erect, construct and maintain such fences, barriers, lights, signs, detours, pedestrian walkways, driveway ramps and bridging as may be necessary to give adequate warning to the public that work is in progress and that dangerous conditions exist, to provide access to abutting properties and to permit the flow of pedestrian and vehicular traffic to safely and expeditiously pass until all work is completed.

12-10. Maintaining Traffic. Attention is directed to Section 7-1.08 "Public Convenience. "7-1.09, "Public Safety. "7-1.092. "Lane Closure." and 7-1.095. "Flagging Costs." of the California Standard Specifications.

Streets shall be open to through vehicular traffic during non-working hours. All public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible.

Full costs for "Maintaining Traffic", including "flagging Costs", shall be considered as included in the various items of work and no additional compensation will be made.

12-11. Warranties. Unless otherwise indicated, the Contractor shall warrant all materials provided and work performed under this contract for a period of one year from the date of final acceptance. He shall replace promptly and at his own expense any materials and/or workmanship which fail during this warranty period.

12-12. Utilities. No water, sewer or electrical services will be provided by the City. It is the contractor's sole responsibility to arrange such services as necessary.

12-13. Preconstruction Conference. A preconstruction conference will be held before any work will be allowed to commence. This meeting will cover inspection, schedule for work, and among other items, the responsibilities and procedures of each of the interested parties to assure that the project will be completed in accordance with the contract documents.

12-14. Safety Requirements. The Contractor shall comply with all pertinent provisions of the Department of Labor "Safety and Health Regulations for Construction (29 FCS Part 1518, 36 CFR 7340)", with additions or modifications thereto, in effect during this project.

12-15. Notification of Underground Service Alert (USA). The Contractor shall notify Underground Service Alert (USA) two (2) working days prior to any excavation.

USA dial (toll free) 1-800-227-2600

SECTION 13 - CONSTRUCTION DETAILS

13-01. General. Contractor shall be responsible for furnishing all labor, materials, equipment, tools and incidentals necessary for trenching, backfilling and compacting, bore and jack two (2) steel casing, provide and install conduits forelectric, ATT and Comcast. Install vault(s), box pads and secondary service boxes (furnished by City), install cable vaults and AT&T boxes, blacktopping, sidewalk, curb and gutter removal and replacement. Install streetlight foundations, streetlight standards, luminaires and streetlight junction boxes (provided by City), conduit system by horizontal directional drilling (boring), streetlight conductor, as specified, and other incidental and related work, all as shown on the plans and specifications for the Gobbi Street Undergrounding Project. Location of the work will be on East Gobbi, Marshall and Leslie Streets between State Street and Orchard Avenue Ukiah, California, as more specifically in the construction drawings defined in Appendix "A".

WHERE INTERRUPTION OF ELECTRIC SERVICE WILL RESULT DURING THE INSTALLATION OF A SECONDARY SERVICE JUNCTION BOX, TRANSFORMER BOX PAD, AND PRIMARY PEDESTAL BOX PAD THE CONTRACTOR SHALL COORDINATE THIS WORK WITH CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT (UEUD). UEUD WILL TURN OFF POWER TO EQUIPMENT AND ASSIST THE CONTRACTOR WITH THE INSTALLATION OF CONDUITS INTO EQUIPMENT. CUSTOMER SERVICE OUTAGE TIME SHALL BE CUT TO A MINIMUM AND SHALL NOT EXCEED ONE WORK DAY.

13-02. Materials. Materials shall be new and of merchantable grade, free from defect. Contractor shall be responsible for providing any and all materials necessary for the completion of the project, which include, but are not limited to, all conduits, conduit sweeps and conduit fittings. Conduit sizes shall be as specified on the plans. PVC conduit, elbows and sweeps shall meet NEMA TC-2, TC-3 and UL 651 (Conduit) and 514b (Fittings) specifications for type Sch 40 and Sch 80. Rigid steel conduit at all riser pole locations shall be U.L. 6 listed and meet ANSI C80.1 specifications. The ¾" NPT threads (ANSI B1.20.1) shall be full cut and hot galvanized after cutting. All elbows and sweeps shall be minimum 48" radius for 6" conduit, minimum 36" radius for 4" conduit and minimum 24" for 2" conduit. Long line couplings shall be used. Five degrees angle couplings, flexible adapters and PVC flexible couplings shall not be used. Standard type duct spacers which proved for a 2" air space between conduits shall be throughout the project on electric duct system. All conduits shall be proved in a manner acceptable to the Electric Utility Department. Conduit shall be free of dirt, rocks or other obstructions which could prevent, hinder or harm the installation of electric cable. Mule Tape must be installed in each conduit. The open end of all conduits must be protected in such a manner that it prohibits dirt and debris from entering. The ends of all stub conduit shall be securely capped. Below ground at capped location, one Greenlee Unimarker electronic marker shall be placed for each type of conduit using the uniform color code. Insulated bonding bushings will be required on metal conduit. No substitutions shall be permitted from the original specifications unless bidder obtains prior written approval.

13-03. Quantities. The preliminary estimate of the quantities of work to be done and materials to be furnished shown in the proposal are approximate only, being given as a basis for the comparison of bids. The City of Ukiah does not expressly or by implication agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of work or to omit portions of the work that may be deemed necessary or expedient by the City.

Upon completion of successful bid, the Contractor shall furnish to the Engineer a cost break-down for each contract lump sum item.

The contractor shall determine the quantities of the items required to complete all work shown on the plans. Such quantities and their values (including labor, equipment and materials) shall be included in the cost break-down submitted to the Engineer for approval. The sum of the quantity units times the unit price shall equal the contract quantities and values used in the cost break-down submitted for approval. Unbalancing of the unit prices will not be allowed.

Overhead, profit, bond premium, temporary construction facilities, and other such items shall be included in each individual unit listed in the cost break-down, however, costs for traffic control system shall not be included.

No adjustment of the compensation will be made in the contract lump sum prices paid for various work items due to any differences between quantities shown in the cost break-down furnished by the Contractor and the quantities required to complete the work as shown on the plans and as specified in these Special Provisions.

The cost break-down shall be submitted to the Engineer within 10 working days after the contract has been approved. The cost break-down shall be approved by the Engineer, in writing, before any partial payments for the items of work will be made. The approved cost break-down will be used to determine partial payments during the progress of the work and as the basis of calculating the adjustment of compensation for the item(s) of work due to the changes ordered by the Engineer. When an ordered change increases or decreases the quantities of an approved cost break-down, the adjustment in the compensation will be determined in the same manner specified for increases and decreases in the quantity of a contract item of work in accordance with increases and decreases in the quantity of a contract item of work in accordance with the Contractor bid price.

Additions or deletions in the quantity of work as set forth in these specifications and accompanying drawings for lump sum items may be ordered by the Engineer after the contract price has been adjusted accordingly to the satisfaction of both the Contractor and the City of Ukiah, and they have been accepted in writing by the Engineer.

13-04. Payment. Payment will be at the unit price bid and will be compensation in full for all labor, materials, equipment, tools, including any and all incidentals.

13-05. Primary Junction Boxes, Transformer, Switch and Pedestal Box Pads. Primary Junction Boxes, Transformer, Switch and Pedestal Box Pads shall be provided by the City and installed by the Contractor. Primary Junction Box grade shall be equal to or slightly (maximum 0.5") above adjacent grade. Asphaltic vault sealant shall be installed between the junction box cover and the extension ring (if used) and between the extension ring (if used) and the junction box. Bottom of the primary junction box excavation shall be compacted to 90% compaction prior to installation of drain rock and junction box. Where "term-a duct" conduit ends are not installed in the vault, bell ends shall be installed on the conduit ends and grouted in flush with the vault surface. Grounding shall be installed per Ukiah Electric Utility Department specifications at each primary junction box and primary pedestal location. Primary Pedestals shall be installed per Ukiah Electric Utility Department specifications.

13-06. Streetlight Specifications, Material and Installation. The streetlight system shall be installed in accordance with these specifications including applicable drawings, which are part of these specifications, and the drawings(s) for the specific project. Streetlight standards, luminaires, (provided by City) shall be installed in accordance with the manufacturer's published installation procedures unless otherwise noted on the plans. A streetlight junction box (provided by City) shall be placed adjacent to each streetlight standard.

Standards shall not be placed on foundations until at least seven (7) days after placement of the foundation concrete. Standards shall be installed plumb (vertical). Shimming is not acceptable. Adjustments shall be made with the double nut arrangement. Grouting mortar, non-shrink, non-metallic grouting mortar such as Masterflow 713 Grout (manufactured by Master Builders Division of Martin Marietta, Corp.) or an approved equal shall be mixed and placed as recommended by the manufacturer. Grout Mortar shall be placed between the base of the standard and the foundation. It shall be solidly packed a minimum of three (3) inches under the standard as measured from the outside edge of the base plate and be struck vertical with the outside edge of the base plate to the top of the foundation. The thickness of the grouting mortar shall be a minimum of one (1) inch, i.e. the distance between the base plate and the foundation shall be one (1) inch minimum.

Concrete shall be ready-mixed in accordance with ASTM 94 and shall be sufficiently mixed to ensure complete uniformity of the batch. The concrete shall have a minimum compressive strength of 4000 PSI at twenty-eight (28) days. Absolute water-cement ratio shall not exceed 0.45. Slump shall not exceed four (4) inches without the approval of the City. Maximum normal coarse aggregate size shall not exceed one (1) inch. A minimum of six (6) bags of cement per yard of mix shall be used. Cement shall be Portland Cement Type II in accordance with ASTM C150, unless otherwise specified on the plans. Fine aggregate shall be in accordance with ASTM C33, with the exception that only natural sand shall be accepted. Coarse aggregate shall consist of clean, durable, hard-crushed stone, gravel, or a proper combination thereof, in accordance with ASTM C33. Only natural materials shall be accepted. Water for mixing and curing concrete shall be potable and free from injurious amounts of any substance that may be detrimental to concrete or anchor bolts. No additives shall be used in concrete without the written approval of the City. Chlorides shall not be used in concrete mix.

The Contractor, unless otherwise instructed, shall be required to make a set of compressive test specimens, each set consisting of four (4) compressive test cylinders made in accordance with ASTM C31. One set of compressive test specimens shall be made from each truck load (batch). Testing of the cylinders shall be handled by the Contractor through a qualified testing laboratory and the cost of testing

shall be borne by the Contractor. Contractor shall require the laboratory to send the compressive test reports to the City of Ukiah, Electric Utility Department (UEUD). One sample shall be tested at seven (7) days and two (2) at twenty-eight (28) days. One cylinder shall be held for a 45-day break in the event of a low break. The Contractor shall identify low break test. The Contractor shall maintain a record identifying the location of all streetlight foundations poured from each truck load. A copy of these records shall be forwarded to the Ukiah Electric Utility Department.

Connection to the power source (point of interconnection) at padmount transformers, secondary boxes or other source will be made by the Ukiah Electric Utility Department. Only authorized City of Ukiah employees shall be permitted access to City owned/maintained electrical equipment. The contractor shall provide and install all conductors and make all electric connections up to the point of interconnection. Fuseholders, insulating boots, fuses shall be provide by the City. The contractor shall coordinate work at the point of interconnection with the Ukiah Electric Utility Department - call (707)467-5775.

All conductor junction connectors shall be properly sized for the number and size of conductors to be connected and shall be separable without cutting the conductors. Wire nuts and splitbolt connectors are acceptable types of connectors. All conductor junction connections shall be capable of satisfactory operation under continuous submersion in water. The Dryconn™ silicone-filled wire connector Type KB - Aqua/Blue from King Innovation™ is an acceptable product. Other connectors may be waterproofed with the following product: The 3M™ Scotch® Scotchseal Compound #2229.

Ground electrodes shall be one-piece lengths of galvanized steel rod or copper clad steel rod not less than 5/8 inches in diameter and 8 ft. in length. One (1) #6 AWG solid bare copper conductor shall be used to connect the ground electrode to the grounding screw in the standard. The #6 copper conductor shall be continuous through the grounding screw in the standard and of sufficient length to reach a minimum of 1.5 ft. outside the standard through the handhole for connection to the grounding (equipment bonding) conductors. The ground electrode shall be connected to the ground rod using a ground rod clamp. Acceptable ground rod clamps are "Joslyn J8492AB" or "Blackburn JAB58H".

Conductors shall be stranded THWN copper of the gauge shown on the plans. Wire sizes shall be based on American Wire Gauge (AWG). The conductor diameter shall not be less than 98% of the specified AWG diameter. Provide sufficient conductors in each standard to permit bringing the fuses and connectors outside of the standard through the handhole (minimum 1.5 ft.)

Conductors shall be color coded as follows:

- Green - equipment grounding conductor;
- White - neutral for 120 volt systems;
- Gray - neutral for 277 volt systems;
- Black - the energized conductor for 120 volt systems and one of the energized conductors for 208 and 240 volt systems, and;
- Red - the other energized conductor for 208 and 240 volt systems
- Brown – the energized conductor for 277 volt systems.

The contractor shall furnish all labor, materials, tools, and equipment to install the streetlight conduit system using the horizontal direction drilling (boring) method. Work includes, but not limited to, proper installation, testing, restoration of underground utilities and environmental protection and restoration. All directional drilling operations shall be performed by a qualified directional drilling company who has at least three (3) years' experience involving work of a similar nature. The company must have installed a minimum of 25,000 linear feet of pipe using directional drilling operations or supply a list of project references, prior to job commencement. The contractor shall submit specifications on directional drilling equipment to be used to ensure that the equipment will be adequate to complete the project. Equipment list is to include but not be limited to: drilling rig, mud system, mud motors (if applicable), down-hole tools, guidance system, and rig safety systems. Include calibration records for guidance equipment. Submit any specifications for any drilling fluid additives that might be used.

The contractor shall expose all sewer laterals before boring operations commence.

Conduit size to be 1" HDPE. High Density Polyethylene (HDPE) conduits shall be smoothwall schedule 40, meeting NEMA TC7 and ANSI D1248 specifications. Color shall be gray. Conduits shall be equipped with SILICORE®

inner lining or approved equivalent system for ease of installing conductor. Conduits shall be continuous i.e. couplings or fuse joints are not permitted. Couplings are permitted immediately adjacent to streetlight foundations, junction boxes and/or power sources for connection of a PVC schedule 40 elbow to the HDPE conduit. Such coupling shall be of the compression type.

All materials are subject to approval by the City of Ukiah, Electric Utility Department prior to installation. Material submittals, for approval, shall be forwarded to the Ukiah Electric Utility Department.

13-07. Bonding and Grounding Bonding and grounding shall conform to Ukiah Electric Utility Department specification, 314 1007 and 314 1008.

13-08. Maintaining Traffic The Contractor shall notify local authorities of the Contractor's intent to begin work at least 5 days before work is begun. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make all arrangements relative to keeping the working area clear of parked vehicles.

Lane closures shall conform to the provisions in the section of these special provisions entitled "Traffic Control".

Payment – Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

13-09. Dust Control and Watering Dust control and watering shall conform to the provisions in Sections 10 "Dust Control" and 17 "Watering" of the California Standard Specifications and these Special Provisions.

The Contractor at their expense shall provide their own water for dust control and project construction.

Necessary precautions to prevent dust nuisance shall be taken during all phases of construction, on non-working days, and to final acceptance of the work.

Payment for dust control and watering shall be considered as included in the various items of work and no additional compensation will be allowed therefore.

13-10. Traffic Control Traffic control shall conform to Section 12 "Construction Area Traffic Control Devices" of the California Standard Specifications and these Special Provisions. Attention is particularly directed to the "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" published by Caltrans. Nothing in these Specifications is to be construed as to reduce the minimum standards set in said manual.

Traffic shall be maintained at all times as provided in these Special Provisions except as otherwise approved by the Engineer.

The Contractor will be required to keep all residents and businesses notified of the work schedule as it affects their access.

The Contractor shall maintain contact with the Ukiah Electric Utility Department dispatch office regarding start and completion of the following:

- Construction activity that may impede emergency vehicles, school buses, etc.
- Construction activity such as trenches or other excavation that prohibit access.
- Construction activity that removes a fire hydrant from service.

The Contractor shall provide the name and telephone number of a person directly responsible for the construction activity to the Ukiah Police and Fire Departments and Life Medical Paramedic Ambulance Service

The City will furnish "No Parking" signs which shall be posted by the Contractor.

The Contractor shall be responsible for supplying, installing and maintaining such fences, barriers, lights, signs and

flaggers as are necessary to give adequate warning to the public at all times that the road or street is under construction and of any dangerous conditions to be encountered as a result thereof.

All traffic control equipment shall be removed when it is no longer required.

Upon request, the Contractor shall submit to the Engineer a sketch showing the proposed signing and barricading to be used in the project.

All existing warning, regulatory, and information signs shall be maintained in a visible location during all phases of the construction by the Contractor.

If it becomes necessary for the City of Ukiah to replace or place additional barricades in order to provide adequate safety to the public, the Contractor will be charged \$1 per barricade per day or portion thereof plus the cost of placement and removal. The Contractor will also be charged for replacement of damaged City barricades. The Contractor shall furnish and place barricades within 3 working days. No removal charge will be made if the Contractor returns City barricades to the Municipal Service Center.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all work involved in furnishing and placing barricades, warning devices, and for flaggers as may be required by the Engineer shall be considered as included in the price paid for the various items of work, and no additional compensation will be allowed therefore.

13-11. Protection of Existing Facilities Protection of existing facilities shall conform to all the applicable provisions in Section 8-1.10 "Utility and Non-Highway Facilities" and Section 15 "Existing Highway Facilities" of the California Standard Specifications and these Special Provisions.

All known obstructions to the work are indicated on the plans. However, the City cannot guarantee the accuracy of this information. The Contractor will be held responsible for the maintenance and protection of or damage to existing facilities, structures, obstructions and all underground facilities shown on the Plans or brought to the Contractor's attention during the course of the work.

The Contractor shall notify owner agencies for locations of utilities or facilities prior to excavation.

The owning utility shall be immediately notified of any damage which is caused by the operations of the Contractor to any facility, utility or structure. At the owning utility's discretion, repairs shall be made by the Contractor at the owning utility's direction or by the utility, all to the satisfaction of the Engineer.

13-12. Removal Methods Removal of existing improvements shall conform to Section 15-2 "Miscellaneous Highway Facilities" of the California Standard Specifications, these Special Provisions and as shown on the Plans.

All portions of existing concrete to be removed shall be removed in a smooth, neat, vertical plane. Where expansion, contraction or construction joints are not present, the concrete shall be saw cut to a minimum depth of 1-1/2 inches. If an expansion, contraction or construction joint is within 3 feet of the concrete to be removed, the concrete shall be removed to that joint.

Prior to final paving, all portions of existing pavement to be removed shall be cut on a neat, straight line. Pavement removed outside the removal line shall be cut parallel to and at right angles to the removal line. The face of the cut shall be smooth and shall not overhang the removal area. Drop hammers are not allowed. Jackhammers may be used if the cuts are overlapped and meet the above criteria. Where edges of remaining pavement are raised by the removal method used, they shall be flattened with a mechanical tamper prior to setting frames or replacing pavement.

Where an excavation leaves less than 2 feet of pavement adjacent to the gutter, the remaining pavement shall be removed and replaced.

All removed material, unless otherwise specified, shall become the property of the Contractor and shall be disposed of outside of the right-of-way.

Payment for removal and disposal of existing improvements shall be in accordance with Section 15-2.07 "Payment" of the California Standard Specifications.

13-13. Vacuum Excavation All pothole work to expose existing utilities shall be done by vacuum excavation methods. The preferred method of excavation shall be by high pressure air. Use of water fluid for excavation shall only be by permission of the City Engineer. Maximum dimension of the pothole shall be 12 inches by 12 inches. All excavation material shall be removed and disposed of by the contractor. Backfill material shall be Class 2 aggregate base compacted to 90% relative compaction. Prior to paving, the pothole shall be cut to provide a clean vertical edge to pave against. The final dimension of the pothole prior to paving shall be 12 inches by 12 inches maximum. The asphalt concrete shall be a ½ inch mix having a depth of 4 inches.

All pothole work shall comply with the Traffic Control provisions of these specifications.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing the work involved in performing the pothole operation shall be considered as included in the price paid for the various items of work, and no additional compensation will be allowed therefore.

13-14. Pipe and Structure Excavation, Backfill and Compaction Excavation and backfill for pipe, manholes and miscellaneous structures shall conform to the provisions in Section 19.3 "Structure Excavation and Backfill" of the California Standard Specifications, and these Special Provisions.

Pavement and concrete removal shall conform to Section 13-11 "Removal Methods" of these Special Provisions.

All excavation shall be made to the lines and grades shown on the Plans. Trench edges shall be no closer than 1 foot to the toe of the gutter unless otherwise approved by the Engineer. Where mud, peat or any unstable or objectionable material is encountered at or within 6 inches of the bottom of any excavation, such material shall be removed to a depth of at least 12 inches below the established grade and the trench brought to grade by placing a suitable material thoroughly compacted in place, all as approved by the Engineer.

Trench width, bedding and backfill for pipe shall conform to "Pipe Bedding and Backfill Requirements", as shown on plans.

Ponding or jetting of backfill is not allowed unless specifically shown on the Plans.

Trench backfill shall attain a relative compaction of 90 percent around conduit duct bank and 95 percent within 30" of finish grade. Backfill compaction within the structural section shall be as shown on the Plans. Structural backfill around all structures and manholes shall attain a relative compaction of 92 percent. The Contractor shall be responsible for scheduling compaction testing per City requirements (required every 50 lineal feet of trench). The cost for compaction testing shall be included in the total bid cost.

Backfill in street areas shall be brought to subgrade and the existing surfacing shall be replaced with the structural section shown on the Plans.

Trench backfill shall be accomplished as soon as possible after the pipe has been installed.

The Contractor shall conduct the construction operations so that trench backfill at all intersections is sufficiently adequate to allow 2-way traffic in both directions during all phases of construction unless otherwise specified.

Payment for pipe and structure excavation and backfill shall be considered as included in the price paid for the various items of work requiring excavation and backfill and no additional compensation will be allowed therefore.

13-15. Excavation Safety Excavation Safety shall conform to the provisions in Sections 5-1.02A "Trench Excavation Safety Plans" and 7-1.01E "Trench Safety" of the California Standard Specifications and these Special Provisions.

In making excavations for the project, the Contractor shall be fully responsible for providing and installing adequate sheeting, shoring and bracing as may be necessary as a precaution against slides or cave-ins and to fully protect all existing improvements of any kind from damage.

The Contractor shall obtain a permit from the Division of Industrial Safety and shall submit a copy of the approved permit to the Engineer prior to the start of any excavation greater than 5 foot in depth. The cost of the permit shall be included in the total bid cost. If the shoring and bracing plan varies from the shoring system standards

established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer.

The criteria given by the California Department of Industrial Relations are MINIMA for the conditions shown thereon. In addition to shoring the excavation as specified, it shall be the Contractor's responsibility to provide any and all additional shoring required to support the sides of the excavation against the effects of loads which may exceed those derived by using the criteria set forth by said governing agency. The Contractor shall be solely responsible for any damages which may result from failure to provide adequate shoring to support the excavations under any or all of the conditions of loading which may exist or which may arise during the construction project.

The contract price paid per lump sum for excavation safety shall include full compensation for furnishing all labor, materials, permits and equipment and for doing all work involved as specified under these Special Provisions and no additional compensation will be allowed therefore.

13-16. Sprinklers and Landscaping All sprinkler systems, landscaping, sod or turf shall be reinstalled to its original condition.

13-17. Clean-Up Clean-up shall conform to the provisions in Section 22 "Finishing Roadway" of the California Standard Specifications and these Special Provisions.

Upon completion of the work, and prior to requesting final inspection, the work area shall be thoroughly cleaned of all rubbish, construction forms, stakes, excess material, and equipment, and all portions of the work shall be left in a neat and orderly condition. The final inspection will not be made until this has been accomplished.

Full compensation for clean-up shall be considered as included in the price paid for the various contract items of work requiring finishing, and no additional compensation will be allowed therefore.

13-18. Aggregate Base Aggregate base shall be Class 2 and shall conform to the provisions of Section 26 "Aggregate Bases" of the California Standard Specifications and these Special Provisions.

Aggregate grading shall be 3/4" maximum unless otherwise approved by the Engineer. The Contractor shall submit current gradation, R-value, sand equivalent, and durability index test results as requested by the Engineer.

Aggregate base shall not be placed until the subgrade has been approved by the Engineer. In lieu of the placement requirements specified in Section 26, aggregate base material shall be placed upon prepared subgrade in a uniform windrow or layer, and after placing, the material shall be graded, compacted and watered in accordance with the requirements of Section 26-1.05 "Compaction" of the California Standard Specifications and the construction plans. Motor graders may be used for the aforementioned grading.

Aggregate base shall be compacted as specified in the Standard Specifications to a relative compaction of 95 percent.

Finished grade shall be within 0.05 feet of plan grade.

The contract price paid per ton of aggregate base shall include full compensation for furnishing all labor, materials, tools and equipment and for doing all work involved in placing, compacting and watering aggregate base as shown on the plans and as specified in these Special Provisions, and no additional compensation will be allowed therefore.

13-19. Asphalt Concrete Asphalt concrete shall be 1/2-inch maximum, medium grade, Type A and shall conform to these Special Provisions and the following sections of the Standard Specifications:

- 39-1 General
- 39-2 Materials
- 39-3 Storing, Proportioning and Mixing Materials
- 39-4.01 Subgrade
- 39-4.02 Prime Coat and Paint Binder

Paving asphalt shall be PG64-16 conforming to the latest published provisions in Section 92, "Asphalts," of the California Standard Specifications. Asphalt Concrete pavement shall be placed at a minimum compacted thickness

as shown on the Plans. Asphalt Concrete pavement shall be placed in lifts; the surface lift shall not exceed a compacted thickness of two (2) inches, initial spreading of asphalt shall be at a mix temperature not less than 250 degrees F. Breakdown compaction shall be completed before the temperature of the mix drops below 200 degrees F. (See Caltrans Std. Spec Section 39-6.01).

Binder Coat (tack coat) shall be Type SS-1, conforming to provisions of the American Asphalt institute Specifications and California Standard Specifications, Section 94, "Asphaltic Emulsions." All articles apply except Article 94-1.07, "Measurement."

Measurement: Asphalt concrete will be measured by the ton as determined by the Public Weighmaster Certificates. Duplicate load slips shall be furnished to the Engineer by and at the sole expense of the Contractor. Where the Contractor has performed unauthorized grinding, the Contractor shall backfill with asphalt concrete to the original subgrade plane shown on the Plans at the Contractor's expense. The Engineer shall calculate the excess quantity of asphalt concrete necessary to backfill to the original subgrade plane and this quantity will be deducted from the total asphalt concrete tonnage installed."

13-20. Asphalt Concrete Trench Paving. Asphalt concrete and the placing thereof shall conform to the requirements of Section 39, "Asphalt Concrete," of the California Standard Specifications, and these Special Provisions.

Final asphalt concrete trench paving shall be 0.45' to 12" outside either side of the trench width.

Asphalts: Temporary paving on all trenches shall be hot mix asphalt concrete installed a minimum 2" thick **placed each day** over the work.

The amount of asphalt binder to be mixed with the aggregate will be specified by the Engineer at the time of paving. A different asphalt binder content may be specified for each lift and each location.

General Requirements: The Contractor shall provide compaction of backfill and base material as the job progresses, each day. Temporary paving will be placed over the work, each day, leaving not more than 25 feet unpaved. This temporary paving shall be removed for final trench paving. The balance of the trench shall be covered with skid resistant steel plates (with a coefficient of friction of 0.35 or greater per CTM342), capable of sustaining normal (H20) traffic loads without shifting or bouncing, and shall be secured per Caltrans requirements. Hot Mix asphalt concrete shall be placed and compacted around all edges of steel plates with a sufficient width and gradual slope in order to provide a smooth transition to existing pavement.

Finished asphalt trench paving shall be even, smooth riding and have an appearance that is compatible to the surrounding surface, unless proper written approval has been provided by the Engineer.

The Engineer may require additional paving beyond the minimum dimensions shown in STD. 220 (36" beyond the trench wall), or as shown on the plans, where records indicate that the existing pavement or structural section is as shown on the plans.

Payment: Full compensation for furnishing and installing temporary and permanent trench paving shall be considered as included in the prices paid for the pipe items and no additional allowance will be made therefor.

13-21. Curbs, Sidewalks and Miscellaneous Concrete Curb, gutter, sidewalk, driveways, alley approaches and any other miscellaneous concrete structures shall be constructed as shown on the plans, and applicable City of Ukiah Standard Plans, and shall conform to the provisions in Section 73 "Concrete Curbs and Sidewalks" of the California Standard Specifications and these Special Provisions.

a.) **Earthwork:** Earthwork shall conform to the plans and Section 13-12 of these Special Provisions.

The area between the right-of-way line and the back of sidewalk shall be graded to 1/4-inch per foot and sufficient compactive effort and moisture shall be applied to this area to prevent settlement. Voids shall be filled with topsoil, not sand. Water service or other boxes and facilities shall be adjusted to grade.

b.) **Curb, gutter, and sidewalk:** Curb, gutter and sidewalk shall be of monolithic construction. Construction joints shall be edged and shall conform to the proposed scoring pattern.

Expansion joint material shall be installed to the full depth of the concrete at locations shown on the plans and as designated by the Engineer.

Side inlet catch basin and drop inlet catch basin concrete may be placed against neat excavation of undisturbed earth.

Concrete retaining walls shall be formed with plywood and all exposed edges shall be edged. After the back form has been removed, the void shall be backfilled to grade with clean native top soil.

- c.) Commercial curb, gutter, and sidewalk: Commercial curb, gutter and sidewalk shall be of monolithic construction. Construction joints shall be edged and shall conform to the existing scoring pattern. Curb, gutter and sidewalk shall be constructed per City of Ukiah Standard Plan.

- d.) Concrete: Portland cement concrete shall be Class "B" conforming to Section 90 "Portland Cement Concrete" of the Standard Specifications with a minimum compressive strength of 2500 psi at 28 days.

All concrete used shall be mixed completely in a truck mixer, commonly known in the industry as "transit-mixed concrete".

- e.) Forms: Forming requirements shall conform to the provisions in Section 73-1.04 "Forms" of the California Standard Specifications. If clean neat lines can be cut, the Contractor may pour against undisturbed earth with prior approval by the Engineer. If any sloughing or caving of material occurs, both front and back forms may be required.

Forms shall be true to lines and grades as shown on the plans.

Forms previously used shall be thoroughly cleaned before re-use. Before concrete is placed within any form, all inside surfaces of the forms shall be thoroughly coated with an approved oil.

All forms shall be free of any foreign material previous to placing concrete.

- f.) Concrete Reinforcement: Mesh and reinforcing steel shall conform to the provisions in Section 52-1.02 "Materials" of the California Standard Specifications.

All reinforcing steel shall be accurately placed as shown on the plans.

All reinforcement shall be cleaned of dirt, rust, grease, loose scale and any other substance that may prevent concrete bonding. All reinforcement shall be securely positioned and supported so as to maintain the proper position during placement of concrete.

- g.) Concrete Placement: Concrete shall not be placed without approval of the Engineer. Placing concrete without notifying the Engineer may be reason for rejection of the work.

Prior to placing concrete, the subgrade and inside face of the forms shall be thoroughly wetted as the Engineer may direct.

Concrete shall not be deposited when it appears likely that the air temperature may fall below 40°F during the placing of concrete or within the following 24 hours, unless special approval has been received from the Engineer prior to placing of concrete. Concrete which, in the opinion of the Engineer, has been damaged by freezing shall be removed and replaced.

Monolithic curb, gutter and sidewalk or median curb and gutter may be placed with extrusion machinery. The machinery shall be approved by the Engineer prior to use.

The Contractor shall install bench mark monuments as shown on the plans. The City of Ukiah will furnish the bench mark monuments without cost to the Contractor.

If the plans do not call for sidewalk, side inlet catch basins shall be constructed with a 3-foot by 5-foot

section unless otherwise indicated on the plans.

- h.) Finishing: After steel troweling, the concrete surfaces shall be given a fine hair broom finish. Brooming on sidewalk shall be transverse to the length of curb.

All exposed concrete surfaces shall be finished unless otherwise directed by the Engineer.

Score marks and weakened plane joints shall be located as shown on the plans and as directed by the Engineer.

- i.) Cure: Concrete cure shall be accomplished by either the water, pigmented curing compound or waterproof membrane method and shall conform to the provisions in Section 90-7 "Curing Concrete" of the California Standard Specifications. White pigmented curing compound shall not be used on exposed surfaces.

- j.) Tolerances: Dimensional tolerances for concrete work are listed below. Work done outside of these tolerances will be rejected by the Engineer.

Curb, gutter, sidewalk thickness: Up to 1/4-inch below specified thickness.

Flow line: Puddles shall not exceed 1/4-inch in depth, 6 inches in width or 10 feet in length. Grinding in excess of 1/2-inch and the use of epoxy fillers are not acceptable.

Sidewalk crossfall: Total crossfall on 5-foot sidewalks shall be within 1/2-inch of design.

Catch basins: The opening shall be a full 8 inches across the face of the catch basin with the top properly aligned within 3 inches of the base.

- k.) Payment: Curb and gutter, sidewalk, street sign posts, driveways and mowstrips shall be paid for under the various contract items and shall include full compensation for furnishing all labor, materials, including the cast-iron frames and grates, adjusting facilities within the sidewalk to grade, grading and adjustments at the back of walk, removal of existing facilities, tools and equipment, and for doing all work involved in their construction as shown on the plans and as specified under these Special Provisions, and no additional compensation will be allowed therefore.

13-22. Soil and Groundwater Disposal.

13-22 (A) General: Bidder's attention is directed to the fact that the proposed project is located in an area that contains no known subsurface petroleum hydrocarbon contamination.

The contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the City immediately upon discovery. Conditions indicative of contamination may be either visual (staining in soil, sheen on water surface) or olfactory (petroleum hydrocarbon odors.)

Upon the discovery of suspected contaminated materials, the Contractor shall immediately provide 40-hour OSHA-HAZWOPER certified workers in the contaminated area. The Contractor shall also provide a field Site Safety Officer that is also an 8-hour OSHA-HAZWOPER Supervisor trained to directly oversee the contaminated materials removal and handling operation. All workers in this circumstance must have their initial and annual renewal refresher training, medical clearance and personal protection equipment in accordance with 8CCR Section 5192.

13-22 (B) Soil: None of the excavated material shall be disposed of on the work site. All material excavated from trenches in the project area shall be the property of the Contractor. Prior to disposal of any excess material from the work site, the Contractor shall submit to the Engineer written authorization for such disposal and entry permission signed by the approved disposal site. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and license, as may be required.

13-22 (C) Water: Groundwater may be encountered during the course of excavation. If it is encountered, the Contractor shall immediately notify the City. The Contractor shall remove all water which accumulates in the excavation during the progress of work until the pipe or other structures are installed and until backfilling has progressed to a sufficient height to anchor the work against possible flotation or leakage. At all times, the

Contractor shall have a minimum of 2 working pumps available for immediate use at all times.

Water accumulated in excavations shall be discharged to the sanitary sewer under the supervision of City staff. Said water shall be disposed of in a manner as to cause no injury to public or private property, or be a menace to public health. Sediment shall be removed from any water to be disposed of, prior to discharge, by placing the pump inlet hose into a sump filled with clean gravel, or a perforated bucket filled with clean gravel. The outlet of the pump shall have a filter sock installed to retain residual sediment.

If any odor, sheen or other visual discrepancy is noted during excavation or discharge, stop pumping and immediately notify the Engineer. Pumped groundwater will not be allowed into any watercourse or storm drain system.

Contractor shall be responsible for constructing, operating and maintaining all necessary features to complete the work including furnishing, installing and maintaining all pumping and other equipment required to dewater any trenches containing water as may be encountered during performance of the work. Dewatering plan for each occurrence shall be approved by the Engineer prior to implementation. At the permanent conclusion of dewatering operations, all dewatering equipment shall be removed from the job site.

Payment: Full compensation for disposal of all excavated material and trenchwater, including, but not limited to, transportation costs and soil disposal fees and providing all necessary equipment and labor (including back-up pumping equipment) shall be considered as included in the contract prices paid for various contract items of work and no additional compensation will be allowed therefor. The City will pay discharge fees for the necessary disposal of trenchwater.

13-23. Traffic Stripes and Pavement Markings Traffic stripes and pavement markings shall conform to the applicable provisions of Section 84, "Traffic Stripes and Pavement Markings," of the California Standard Specifications, City of Ukiah Standards, and these Special Provisions and shall be placed at the locations shown on the plans.

Stripes and pavement markings shall be thermoplastic.

Existing stripes and pavement markings which are damaged by the work shall be replaced. Replaced sections shall match existing sections. Patching is not acceptable in lieu of complete replacement.

Payment: **Traffic Stripes and Pavement Markings** shall be paid for at the contract lump sum price, which price shall include full compensation for furnishing all equipment, tools, and labor, and doing all the work involved, as herein specified, including

- removal of existing striping and markings,
- furnishing all paint and glass beads,
- thermoplastic pavement marking material,
- tape,
- eradication of existing and temporary traffic stripes,
- temporary traffic stripes and pavement markings,
- replacement of damaged stripes and markings,

and doing all the work involved as herein specified and no additional allowance will be made therefore.

13-24. Signal, Lighting and Electrical Systems All work shall meet the requirements of Section 86-1.02 "Regulations and Code" of the California Standard Specifications.

13-25. Maintaining Existing Systems The Contractor shall maintain existing signal and lighting systems in accordance with Section 86-1.05 "Maintaining Existing and Temporary Electrical Systems" and these Special Provisions.

Prior to disconnecting traffic loops, temporary traffic cameras are to be installed at the Gobbi St. and State St. intersection and the Gobbi St. and Orchard Ave. intersection for any approach that is affected by cut traffic loops to keep signal performance at the optimum operational level for the duration of the project. Upon completion, new traffic loops shall be installed following the Cal Trans standard for each cut location. Three locations are

anticipated.

13-26. Boring and Jacking. Installation of bore and jack facilities shall be constructed in accordance with the details shown on the plans and as specified in these Special Provisions.

Unless otherwise specified, the methods and equipment used in jacking casing shall be optional with the Contractor, provided that the proposed method is approved by the Engineer. Such approval, however, shall in no way relieve the Contractor of the responsibility for making a satisfactory installation meeting the criteria set forth herein. Only workers experienced in jacking operations shall be used in performing the work.

The Contractor shall confirm location of all existing utilities within and adjacent to the proposed location of the bored and jacked casing by potholing prior to excavating the boring/jacking and receiving pits. Where a utility goes through a boring or receiving pit it shall be adequately supported and protected. The Contractor shall be aware that underground utilities such as electrical, gas, sewer, and water lines may exist near the drill path.

Contractor shall have all materials and equipment on site prior to beginning bore and jack operations.

The drilling shall be performed only with equipment adequate for the length and diameter of the bore.

The leading section of casing shall be equipped with a jacking head securely anchored thereto to prevent any wobble or variation in alignment during the jacking operation.

Casing shall be jacked true to line and grade and the Contractor shall modify the jacking operation to correct any deviation.

The driving ends of the casing shall be properly protected against spalling and other damage, and intermediate joints shall be similarly protected by the installation of sufficient bearing shims to properly distribute the jacking stresses. Any section of the casing showing signs of failure shall be removed and replaced with a new section that is adequate to carry the loads imposed upon it.

Excavation of boring and receiving pits shall be the minimum size necessary to complete the work. The excavations for the boring or jacking operations shall be adequately shored to ensure against ground movement in the vicinity of the jack supports. Boring and receiving pits shall be kept dry at all times.

Excavation shall be made in excess of the outer dimensions of the casing being jacked unless approved the Engineer. Every effort shall be made to avoid any loss of earth outside the jacking head. Excavated material shall be removed from the casing as excavation progresses, and no accumulation of such material within the casing will be permitted.

Steel casing shall be in accordance with ASTM A53, Grade B or STTM A139, Grade B with minimum yield strength of 35,000 psi. The minimum casing inside diameter shall be at 26 and 12 inches, and the minimum casing wall thickness shall be 0.375 inch. The joints of sections of casing to be jacked shall be welded with a continuous circumferential weld. It shall be the Contractor's responsibility to provide stress transfer across the joints that are capable of resisting the jacking forces involved. Welding shall be performed by a certified welder with a least three years experience in continuous circumferential welds.

The electric conduits to be installed in the casing shall be PVC Sch 40 meeting NEMA TC-2, TC-3 and UL 651 (Conduit) and 514b (Fittings) specifications. Payment for the installation of conduits shall be included in the lump sum cost for Bore and Jack.

The ATT and Comcast conduits to be installed in the casing shall be PVC Sch 40 meeting NEMA TC-2, TC-3 and UL 651 (Conduit) and 514b (Fittings) specifications. Payment for the installation of conduits shall be included in the lump sum cost for Bore and Jack.

Contact grouting shall commence immediately once the casing is installed and the auger boring equipment has been removed from the tunnel. The Contractor shall inject the approved eight sack sand slurry grout mix through the 2-inch treaded steel grout ports in such a manner as to completely fill all voids outside the casing pipe resulting from the boring or jacking operation. The 2-inch ports shall be regularly spaced at 10 feet on center alternating at 30 degrees from plumb each side of the vertical centerline. Longitudinal spacing between the grout connections may be decreased to provide more frequent grouting, but in no case shall the spacing specified be exceeded.

Grout pressure shall be controlled a 5-psi so as to avoid deformation of the steel casing and avoid movement of the surrounding ground. In subsequent order, each port shall be connected and pumped to 5-psi or until grout is exposed in subsequent open port. If pressure exceeds 5-psi the pump hose will be moved to the next open port. Each group port shall be closed with a cast-iron threaded plug prior to moving on to the next grout port. This process shall be repeated until every grout port has been closed. Grout pressure shall be monitored and controlled by the pump operator who is positioned so that all gauges on the pump are clearly visible.

The electric conduits shall be band together with a ½" stainless steel band placed at 5 foot intervals. The electric conduit duct bank shall be slid into the case as one unit.

The annular space between the casing and the conduit duct bank shall be filled with sand. Sand for backfill in the annular space shall be clean and 100% shall pass through a No. 30 sieve. The Contractor shall furnish sand, equipment, hoses, valves, and fittings for filing the annular space between the casing and the electric duct bank. Sand shall be conveyed by air through a hose and deposited by air pressure in its final position. The sand shall be free of lumps to flow unimpeded sand to completely fill all voids. In general, sand backfill will be considered completed when no more sand can be forced into the annular space. The Contractor shall document the volume of sand backfill placed. The Contractor shall protect and preserve the interior surfaces of the steel casing from damage. The last 18" of the case shall be sealed with concrete pumped in from a 2" hole at the top of the case.

After jacking equipment and excavated materials from boring and jacking operations have been removed from the jacking pit, the Contractor shall remove all loose and disturbed materials below pipe grade to undisturbed earth. Backfill for boring pits and trench shall be Class 2 aggregate base ¾" maximum conforming to Section 26 "Aggregate Base," of the California Standard Specifications except for payment. No separate measurement or payment will be made for aggregate base used to backfill bore pits. Backfill for boring pits shall be compacted to not less than 90 percent relative compaction, except that when placed under roadbed, relative compaction shall not be less than 95 percent within three feet of finished grade, as determined by California Test 216 and 231. Trench paving of boring pits will be measured and paid for under contract item "Trench Paving".

The Contractor shall apply for an underground classification for the jack and bore operation from Department of Industrial Relations, Mining and Tunneling Unit, 2211 Park Towne Circle, Sacramento, CA 95825, Telephone: 916-574-2540.

The provisions in this section will not relieve the Contractor from his responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.09, "Public Safety," of the California Standard Specifications.

Measurement. Bore and Jack will be measured by lump sum.

Payment. Bore and jack will be measured and paid for at the contract lump sum price, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all work involved, including, as specified herein:

- Potholing,
- Excavation,
- Keeping the pits dry,
- Disposal of contaminated soil and groundwater in conformance with these Special Provisions,
- Shoring,
- Steel casing,
- Pipe welding,
- Fittings,
- Contact grouting,
- Concrete end seal,
- Backfilling the annular space with sand,
- Backfill,
- Compaction,
- Removing loose material from pits,
- Disposal,
- Necessary permits,

And any other work required for boring and jacking not specifically enumerated on the plans or in these specifications and no additional compensation will be allowed.

SECTION 14. EXCLUSIONS FROM GENERAL CONDITIONS

14-01. Provisions to be Excluded from General Conditions. The following designated provisions of the General Conditions are hereby determined to be inapplicable to the proposed work and, therefore, are hereby excluded from the terms of the Notice to Bidders, Proposal, Agreement and other contract documents as though entirely omitted from said General Conditions:

- (1) Section 6-02. Office at the Site
- (2) Section 7-03. Surveys

No other exclusions.

SECTION 15. AMENDMENTS TO GENERAL CONDITIONS

15-01. Sections of General Conditions to be Amended.

The following designated sections of the Special Provisions are hereby amended to read as follows:

No amendments.

BID SUBMITTAL CHECKLIST

The following is a checklist to assist you in your submission of your bid documents. Please make sure you include the following when submitting your bid documents to reduce the risk of having your bid rejected:

Did you include?...

- **Proposal** (Page)
 - Unit prices filled out clearly.
 - Extended prices filled out clearly and calculated correctly
 - Total bid amount filled out clearly and calculated correctly
 - Sign the proposal, and provide complete information
 - CLSB No. and expiration date
 - Department of Industrial Relations Public Works Contractor Registration Number
- **Fair Employment Practices Certification** (Page)
 - Filled out completely per instruction
- **Worker's Compensation Certificate** (Page)
 - Filled out completely per instruction
- **Certification of Non-Discrimination in Employment** (Page)
 - Filled out completely per instruction
- **List of Proposed Subcontractors** (Page)
 - Filled out completely per instruction
- **Statement of Experience** (Page)
- **Signature of Bidder** (Page)
 - Filled out completely per instruction
 - Authorized signature provided
- **Bidder's Bond** (Page)
 - Filled out completely per instruction
- **Non-Collusion Affidavit** (Page)
 - Filled out completely per instruction
 - Notarized
- **Addenda Issued**
 - Signed and Returned

**CITY OF UKIAH
MENDOCINO COUNTY, CALIFORNIA**

PROPOSAL

**FOR
GOBBI STREET UNDERGROUNDING PROJECT**

Specification No. 19-03

The undersigned, as bidder,
declares that he or she has examined thoroughly all of the contract documents herein contained, that this proposal is made without collusion with any other person, firm or corporation and that all laws and ordinances relating to the interest of public officers in this contract have been complied with in every respect.

AND he or she proposes and agrees, if this proposal is accepted,

- 1) that he or she will contract with the City of Ukiah, Mendocino County, California, in the form of the copy of the agreement herein contained
 - a) to provide all necessary machinery, tools, apparatus and other means of construction;
 - b) to furnish all materials;
 - c) to provide all superintendence, overhead expenses and all labor and expenses of whatever nature necessary to complete the job in conformity with the specifications and drawings and other contract provisions herein or reasonably implied hereby or as necessary to complete the work in the manner and within the time named herein and according to the requirements and to the reasonable satisfaction of the City Engineer;
 - d) to pay all charges of freight transportation and hauling;
- 2) that he or she indemnifies the City against any loss or damage arising from any act of the undersigned as Contractor; and
- 3) that he or she will accept as full payment therefor the following sums:

BIDDING SCHEDULE

In the case of any discrepancy between the unit price and the total set forth for the item, the unit price shall prevail; provided, however, that if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any reason, or is omitted, or in the case of lump sum items, is not the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the unit price;
2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

The Total Base Bid shall be the sum of the items in the "Total" column. In case of discrepancy between the sum of the items in the "Total" column and the amount entered as Total Base Bid, the sum of the "Total" column items shall prevail. The bid comparison will be based on the sum of the items in the "total" column for each bidder.

The Unit prices for the various Construction Items below include all costs associated with the General Conditions, Special Provisions, Requirements of the Construction Contract, and represent the total, complete, in-place cost for each specific Construction Item in accordance with the Construction Documents, including all elements, work components, accessories, and connections, shown in applicable details or required to yield a complete, sound and functional component or system appropriate for its intended function, whether or not such is specifically described or listed in any description of measurement or payment. The total amount of the Construction items below shall represent the total and complete cost of the fully functional Project. All work not specifically listed below be required to complete the work of the various construction items and the cost of such shall be considered as included throughout the various unit prices indicated.

Lowest bid will be based on the lowest Base Bid.

NAME OF BIDDER:

SPEC #:

19-03

PROJECT NAME:

GOBBI STREET UNDERGROUNDING PROJECT

ITEM #	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	TOTAL
1	Excavate, trench, backfill and compaction (12" x 36" trench)	LF	1592	\$ _____	\$ _____
2	Excavate, trench, backfill and compaction (18" x 36" trench)	LF	95	\$ _____	\$ _____
3	Excavate, trench, backfill and compaction (18" x 48" street)	LF	1207	\$ _____	\$ _____
4	Excavate, trench, backfill and compaction (24" x 48" trench)	LF	20	\$ _____	\$ _____
5	Excavate, trench, backfill and compaction (24" x 59" trench)	LF	2227	\$ _____	\$ _____
6	Excavate, trench, backfill and compaction (24" x 75" to 80" trench)	LF	85	\$ _____	\$ _____
7	Excavate, trench, backfill and compaction (30" x 48" trench)	LF	64	\$ _____	\$ _____
8	Excavate, trench, backfill and compaction (30" x 59" trench)	LF	32	\$ _____	\$ _____
9	Excavate, trench, backfill and compaction (30" x 61" to 89" trench)	LF	987	\$ _____	\$ _____
10	Remove and replace asphalt concrete (12" trench)	SF	1412	\$ _____	\$ _____
11	Remove and replace asphalt concrete (18" trench)	SF	1962	\$ _____	\$ _____
12	Remove and replace asphalt concrete (24" trench)	SF	2965	\$ _____	\$ _____
13	Remove and replace asphalt concrete (30" trench)	SF	2607	\$ _____	\$ _____
14	1" PVC Sch 40 Conduit (Comcast) including installation	FT	997	\$ _____	\$ _____
15	2" PVC Sch 40 Conduit (Comcast) including installation	FT	10,944	\$ _____	\$ _____
16	3" PVC Sch 40 Conduit (Comcast) including installation	FT	35	\$ _____	\$ _____
17	2" PVC Sch 40 Conduit (AT&T) including installation	FT	1084	\$ _____	\$ _____

18	4" PVC Sch 40 Conduit (AT&T) including installation	FT	16,098	\$ _____	\$ _____
19	2" PVC Sch 40 Conduit (Electric) including installation	FT	808	\$ _____	\$ _____
20	3" PVC Sch 40 Conduit (Electric) including installation	FT	1614	\$ _____	\$ _____
21	4" PVC Sch 40 Conduit (Electric) including installation	FT	4158	\$ _____	\$ _____
22	6" PVC Sch 40 Conduit (Electric) including installation	FT	3226	\$ _____	\$ _____
23	Sidewalk removal and replacement for installation of electric, cable & AT&T vaults and boxes	SF	675	\$ _____	\$ _____
24	Curb and gutter removal and replacement for installation of electric, cable & AT&T vaults and boxes	LF	15	\$ _____	\$ _____
25	Excavate, backfill, compaction and install cable service vault (B48)	EA	12	\$ _____	\$ _____
26	Excavate, backfill, compaction and install cable service vault (N36)	EA	8	\$ _____	\$ _____
27	Excavate, backfill, compaction and install cable service vault (N30)	EA	12	\$ _____	\$ _____
28	Excavate, backfill, compaction and install AT&T service BOX (24 X 36 X 30 AT)	EA	25	\$ _____	\$ _____
29	Excavate, backfill, compaction and install AT&T service BOX (30 X 60 X 48 AT)	EA	4	\$ _____	\$ _____
30	Excavate, backfill, compaction and install Pedestal Box Pad (City to Provide)	EA	6	\$ _____	\$ _____
31	Excavate, backfill, compaction and install Concrete Vault (City to Provide Vault 48)	EA	2	\$ _____	\$ _____
32	Excavate, backfill, compaction and install Pedestal Box Pad (City to Provide)	EA	3	\$ _____	\$ _____
33	Excavate, backfill, compaction and install Transformer Box Pad (City to Provide)	EA	2	\$ _____	\$ _____
34	Excavate, backfill, compaction and install Padmount Switch Box Pad (City to Provide)	EA	1	\$ _____	\$ _____
35	Excavate, backfill, compaction and install Secondary Service Box (City to Provide)	EA	19	\$ _____	\$ _____
36	Driveway, sidewalk, AC removal and replacement behind right-of-way along Leslie and Marshall Streets (residential and commercial property)	SF	815	\$ _____	\$ _____
37	Landscape removal and replacement on Gobbi, Marshall, Leslie Streets and Orchard Avenue	LS	1	\$ _____	\$ _____

38	Lane striping	FT	1400	\$ _____	\$ _____
39	Traffic Loop Repair	LS	2	\$ _____	\$ _____
40	1" HDPE conduit including installation	FT	2115	\$ _____	\$ _____
41	Streetlight foundations including sidewalk removal and replacement and streetlight standard and luminaire installation	EA	22	\$ _____	\$ _____
42	Install streetlight junction boxes and make electric connections.	EA	23	\$ _____	\$ _____
43	#8 AWG copper conductor including installation	FT	6750	\$ _____	\$ _____
44	#12 AWG conductor including installation	FT	5000	\$ _____	\$ _____
45	Bore and jack 12" steel casing (Electric) including installation	LF	14	\$ _____	\$ _____
46	Bore and jack 16" steel casing (AT&T and Comcast) including installation	LF	14	\$ _____	\$ _____
TOTAL BID ==>>					\$ _____

We, the undersigned, acknowledge that the City Council has reserved the right to reject any or all bids and to determine which proposal is, in its opinion, the lowest responsive bid from a responsible bidder and that which it deems in the best interest of the City to accept. We, the undersigned, further agree, if this proposal shall be accepted, to sign the agreement and to furnish the required bonds with satisfactory surety, or sureties, within fifteen (15) calendar days after written notice that the contract is ready for signature; and, if the undersigned shall fail to contract, as aforesaid, it shall be understood that he or she has abandoned the contract and that, therefore, this proposal shall be null and void and the proposal guaranty accompanying this proposal, or the amount of said guaranty, shall be forfeited to and become the property of the City. Otherwise, the proposal guaranty accompanying this proposal shall be returned to the undersigned.

Witness our hands this day of _____, 20____.

Licensed in accordance with an act providing for the registration of California Contractors License No. _____, expiration date _____.

THE CONTRACTOR'S LICENSE NUMBER AND EXPIRATION DATE STATED HEREIN ARE MADE UNDER PENALTY OF PERJURY.

Department of Industrial Relations Public Works Contractor Registration Number: _____

Signature of bidder or bidders, with business name, address, phone number and fax number:

Notice: In the case of a corporation, give below the addresses of the principal office thereof and names and addresses of the President, Secretary, Treasurer.

FAIR EMPLOYMENT PRACTICES CERTIFICATION

TO: _____

The undersigned, in submitting a bid for performing the following work by Contract, hereby certifies that he or she has or will meet the standards of affirmative compliance with the Fair Employment Practices requirements of the Special Provisions contained herein.

GOBBI STREET UNDERGROUNDING PROJECT

(Signature of Bidder)

Business Mailing Address:

Business Location:

(The bidder shall execute the certification of this page prior to submitting his or her proposal.)

WORKER'S COMPENSATION CERTIFICATE

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Worker's Compensation or undertake self-insurance in accordance with the provisions of that code and I will comply with such provisions before commencing the performance of the work of this contract.

Witness my hand this _____ day of _____, 200_____

Signature of Bidder, with Business Address:

CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT

The bidder represents that he or she has/has not, participated in a previous contract or subcontract subject to either the equal opportunity clause herein or the clause contained in Section 301 of Executive Order 10925; that he or she has/has not, filed all required compliance reports; and that representations indicating submission of required compliance prior to subcontract awards.

Signature and address of Bidder:

_____ Date _____

(This certification shall be executed by the bidder in accordance with Section 60-1.6 of the Regulations of the President's Committee on Equal Employment Opportunity for implementing Executive Orders 10925 and 11114.)

LIST OF PROPOSED SUBCONTRACTORS

In compliance with the provisions of Sections 4100-4108 of the California Public Contract Code and any amendments thereof, each bidder shall set forth (a) the name and location of the place of business of each subcontractor who will perform work or labor or render service in or about the construction site or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications in an amount in excess of one-half of 1 percent of the total bid and (b) the California Contractor License Number for each subcontractor, and (c) the portion of the work to be done by each subcontractor. (See General Conditions Section 1-09.) Include with the name of each sub-contractor their Department of Industrial Relations Public Works Contractor Registration Number.

SUBCONTRACTOR NAME	SUBCONTRACTOR LICENSE NUMBER	SUBCONTRACTOR DIR REGISTRATION NUMBER	SUBCONTRACTOR BUSINESS ADDRESS	DESCRIPTION OF WORK

The bidder is required to state below what work of similar magnitude or character he or she has done and to give references that will enable the City Council to judge of his or her experience, skill and business standing and his or her ability to conduct work as completely and rapidly as required under the terms of the contract.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SIGNATURE(S) OF BIDDER

Accompanying this proposal is _____
(insert the words "cash (\$)", "cashier's check" or "bidder's bond", as the case may be) in an amount equal to at least 10 percent of the bid.

The names of all persons interested in the foregoing proposal as principals are as follows:

IMPORTANT NOTICE: If bidder or other interested person is a corporation, provide the legal name of corporation and also the names of the president, secretary, treasurer and manager thereof. If a co-partnership, provide the true name of firm and also the names of all individual co-partners composing the firm. If bidder or other interested person is an individual, provide the first and last names in full.

Licensed in accordance with an act providing for the registration of Contractors:

License No. _____, License Expiration Date _____.

Signature(s) of Bidder: _____

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if bidder is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts in behalf of the co-partnership; and if bidder is an individual, his or her signature shall be placed above. If a member of a partnership, a Power of Attorney must be on file with the Department prior to opening bids or submitted with the bid; otherwise, the bid will be disregarded as irregular and unauthorized.

Business address: _____

Place of residence: _____

Dated: _____

CITY OF UKIAH
Mendocino County, California

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS,

That we, _____

_____, as PRINCIPAL and

_____, as SURETY,

are held and firmly bound unto the City of Ukiah in the penal sum of 10 PERCENT OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the City of Ukiah, as the case may be, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the City Clerk to which said bid was submitted, we bind ourselves, our heirs, executors, administrators and successors jointly and severally, firmly by these presents. In no case shall the liability of the surety hereunder exceed the sum of \$ _____

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above mentioned bid to the City of Ukiah, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at the Office of the City Clerk, Ukiah Civic Center, Ukiah, California, on <<DATE OF BID OPENING>> for GOBBI STREET UNDERGROUNDING PROJECT, SPECIFICATION 19-03.

NOW, THEREFORE, If the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him or her for signatures, enters into a written contract, in the prescribed form, in accordance with the bid and files two bonds with the City of Ukiah, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____, A.D. 20____.

_____(Seal)

_____(Seal)

_____(Seal)

Principal

_____(Seal)

_____(Seal)

_____(Seal)

Surety

Address: _____

NON-COLLUSION AFFIDAVIT

Note: Bidder shall execute the affidavit on this page prior to submitting with his or her bid.

To City Council, City of Ukiah:

The undersigned in submitting a bid for performing SPEC. 19-03, GOBBI STREET UNDERGROUNDING PROJECT by contract, being duly sworn, deposes and says:

that he or she has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract.

Signature(s) of Bidder

Business Address: _____

Place of Residence: _____

NOTARIZATION

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public in and for the County of _____, State of California.

My Commission Expires _____, 20 ____.

CITY OF UKIAH
Mendocino County, California

AGREEMENT

FOR

GOBBI STREET UNDERGROUNDING PROJECT

Specification No. 19-03

THIS AGREEMENT, made this _____ day of _____, 20____, by and between the City of Ukiah, Mendocino County, California, hereinafter called the City and _____ hereinafter called the Contractor,

WITNESSETH:

WHEREAS, the City has caused to be prepared in accordance with law, specifications, drawings and other contract documents for the work herein described and shown and has approved and adopted these contract documents, specifications and drawings and has caused to be published in the manner and for the time required by law a notice to bidders inviting sealed proposals for doing the work in accordance with the terms of this contract and

WHEREAS, the Contractor, in response to the notice to bidders, has submitted to the City a sealed proposal accompanied by a proposal guaranty in an amount of not less than 10 percent of the bid price for the construction of the proposed work in accordance with the terms of this contract and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined and canvassed the proposals submitted and as a result has determined and declared the Contractor to be the lowest and best regular responsible bidder for the work and for the sums named in the proposal,

NOW, THEREFORE, THIS AGREEMENT WITNESSETH:

Article 1. Work to be Done and Contract Days Allowed.

That the Contractor shall provide all necessary machinery, tools, apparatus and other means of construction; shall furnish all materials, superintendence, overhead, expenses, all labor and expenses of whatever nature necessary for completion of the work in conformity with the Special Provisions and other contract documents hereto attached and according to such instructions as may be given by the Engineer. The Contractor shall complete the work within one-hundred (100) calendar days. Contract days shall be counted starting with the 10th day following receipt of notice that the contract has been executed by the City. Contractor, at his or her option, may begin work prior to start of counting contract days, however, in no event shall the Contractor start work without giving notification to the Engineer at least 72 hours prior to the start of work, without obtaining an encroachment permit from the City, or without having submitted certificates of insurance that have been accepted and approved by the Engineer

Article II. Contract Prices.

That the City shall pay the Contractor the prices stated in the proposal submitted by the Contractor, for complete performance of the contract by the Contractor. The Contractor hereby agrees to accept the prices as full compensation for all material and appliances necessary to the work, for all labor and use of tools and other implements necessary to execute the work contemplated in this contract; for all loss or damage arising out of the nature of the work or from the action of the elements, or from any unforeseen obstructions or difficulties which may be encountered in the prosecution of the work; for all risks of every description connected therewith; for all expenses of the work, as herein specified; for all liability and other insurance, for all overhead and other expenses incident to the work; all according to the Contract Drawings, the Special Provisions, the Details, the instructions and the requirements of the City.

Article III. Labor Discrimination.

Attention is directed to Section 1735 of the Labor Code, which reads as follows:

"No discrimination shall be made in the employment of persons upon public works because of the race, color, national origin or ancestry, or religion of such persons and every contractor for public works violating this section is subject to all the penalties imposed for a violation of this chapter."

In connection with the performance of work under this contract, the Contractor agrees as follows:

- (a) The Contractor will not willfully discriminate against any employee or an applicant for employment because of race, color, religion, ancestry, or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, ancestry, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the awarding authority setting forth the provisions of this Fair Employment Practice section.
- (b) The Contractor will send to each labor union or representative of workers with which he or she has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the awarding authority, advising the said labor union or worker's representative of the Contractor's commitments under this section, to employees and applicants for employment.
- (c) The Contractor will permit access to his or her records of employment, employment advertisements, application forms and other pertinent data and records by the Fair Employment Practices Commission, City of Ukiah or any other appropriate agency of the State of California designated by the awarding authority, for the purposes of investigation to ascertain compliance with the Fair Employment Practices section of this contract.
- (d) A finding of willful violation of the Fair Employment Practices section of this Contract or of the Fair Employment Practices Act shall be regarded by the awarding authority as a basis for determining the Contractor to be not a "responsible bidder" as to future contracts for which such Contractor may submit bids, for revoking the Contractor's pre-qualification rating, if any and for refusing to establish, reestablish or renew a pre-qualification rating for the Contractor.

The City of Ukiah shall deem a finding of willful receipt of written notice from the Fair Employment Practices Act to have occurred upon that it has investigated and determined that the Contractor has violated the Fair Employment Practices Act and has issued an order under Labor Code Section 1426 or obtained an injunction under Labor Code Section 1429.

Upon receipt of such written notice from the Fair Employment Practices Commission, the City shall notify the Contractor that unless he or she demonstrates to the satisfaction of the awarding authority within a stated period that the violation has been corrected, his or her pre-qualification rating will be revoked at the expiration of such period.

- (e) The Contractor agrees that should the City determine that the Contractor has not complied with the Fair Employment Practices section of this Contract, then pursuant to Labor Code Section 1735 and 1775 the Contractor shall, as a penalty to the City, forfeit for each calendar day or portion thereof, for each person who was denied employment as a result of such non-compliance, the penalties provided in the Labor Code for violation of prevailing wage rates. Such monies may be recovered from the Contractor. The City may deduct any such damages from any monies due the Contractor.
- (f) Nothing contained in this Fair Employment Practices section shall be construed in any manner of fashion so as to prevent the City or the State of California from pursuing any other remedies that may be available at law.
- (g) Prior to awarding the Contract, the Contractor shall certify to the awarding authority that he or she has or will meet the following standards for affirmative compliance, which shall be evaluated in each case by the awarding authority:
 - (1) The Contractor shall provide evidence, as required by the City that he or she has notified all supervisors, foremen and other personnel officers in writing of the content of the anti-discrimination clause and their responsibilities under it.
 - (2) The Contractor shall provide evidence, as required by the City, that he or she has notified all sources of employees' referrals (including unions, employment agencies, advertisements, Department of Employment) of the content of the anti-discrimination clause.
 - (3) The Contractor shall file a basic compliance report, as required by the City. Willfully false statements made in such reports shall be punishable as provided by law. The compliance report shall also spell out the sources of the work force and who has the responsibility for determining whom to hire, or whether or not to hire.
 - (4) Personally, or through his or her representatives, the Contractor shall, through negotiations with the unions with whom he or she has agreements, attempt to develop an agreement which will:
 - a. Spell out responsibilities for nondiscrimination in hiring, referral, upgrading and training.
 - b. Otherwise implement an affirmative anti-discrimination program in terms of the unions' specific areas of skill and geography to the end that qualified minority workers will be available and given and equal opportunity for employment.
 - (5) The Contractor shall notify the City of opposition to the anti-discrimination clause by individuals, firms or organizations during the period of its pre-qualification.
- (h) The Contractor will include the provisions of the foregoing paragraphs 1 through 5 in every first tier subcontract so that such provisions will be binding upon each such subcontractor.
- (i) The "Fair Employment Practices Certification" must be completed and signed prior to the time of submitting the bid.

Article IV. Parts of the Contract.

That the complete contract consists of the following documents, all of which shall be considered a part of this agreement.

1. Notice to Bidders
2. Wage Rates
3. General Conditions
4. Technical Specifications
5. Proposal
6. Fair Employment Practices Certification
7. Agreement
8. Contract Bonds
9. Contract Drawings and Construction Details
10. Standard Drawings
11. Indemnification Agreement

IN WITNESS WHEREOF, this contract being executed in duplicate and the parties having caused their names to be signed by authority of their duly authorized office this ____ day of _____, 20____.

CITY OF UKIAH, MENDOCINO COUNTY, CALIFORNIA

By: _____
CITY MANAGER, CITY OF UKIAH

Attest: _____
CITY CLERK, CITY OF UKIAH

By: _____
CONTRACTOR

Attest: _____

Title: _____

The foregoing contract is approved as to form and legality this ____ day of _____, 20 ____.

CITY ATTORNEY, CITY OF UKIAH

INDEMNIFICATION AGREEMENT

This Indemnification Agreement is made and entered in Ukiah, California, on _____, 20____, by and between the City of Ukiah (Ukiah) and _____ (Contractor).

Contractor is

_____ for Ukiah.

As a condition of issuing the work order, attached hereto, Ukiah requires assurance that Contractor will protect Ukiah from damage or damage claims which arise from its performance of the work.

Accordingly, Contractor agrees as follows:

1. **Indemnification.** Contractor shall indemnify and hold harmless Ukiah and its officers, agents, and employees from and against any claim, loss, or damage, including the legal and other costs of defending against any claim of damage or loss which arises out of the Contractor's negligent or wrongful performance under the work order attached hereto, except for claims, losses, or damages resulting from the sole and exclusive negligence or other wrongful conduct of Ukiah or its officers, agents and employees.

CONTRACTOR

BY: _____

TITLE: _____

CITY OF UKIAH
Mendocino County, California

FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS,

That we the undersigned, _____

_____,
AS PRINCIPAL, and

_____,
AS SURETY,

are held firmly bound unto **THE CITY OF UKIAH**, hereinafter called the "City", in the penal sum of

_____ dollars (\$ _____)
for the payment of which sum we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally.

WHEREAS, the Principal has entered into a certain Contract with the City, dated _____, 20_____,
a copy of which is hereto attached and made a part hereof,

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall in all respects fully perform the Contract and all duly authorized modifications thereof, during its original term and any extensions thereof that may be granted and during any guaranty period for which the Contract provides, and if the Principal shall fully satisfy all claims, arising out of the prosecution of the work under the Contract and shall fully indemnify the City for all expenses which it may incur by reason of such claims, including its attorney's fees and court costs, and if the Principal shall make full payment to all persons supplying labor, services, materials, or equipment in the prosecution of the work under the Contract, in default of which such persons shall have a direct right of action hereupon; and if the Principal shall pay or cause to be paid all sales and use taxes payable as a result of the performance of the Contract as well as payment of gasoline and special motor fuels taxes in the performance of the Contract and all motor vehicle fees required for commercial motor vehicles used in connection with the performance of the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect. No modification of the Contract or extension of the term thereof, nor any forbearance on the part of the City shall in any way release the Principal or the Surety from liability hereunder. Notice to the Surety of any such modification, extension, or forbearance is hereby waived.

IN WITNESS WHEREOF, the aforesaid Principal and Surety have executed this instrument and affixed their seals hereto, this _____ day of _____, 20_____.

In the presence of:

WITNESS:

_____(SEAL)
(Individual Principal)

(Business Address)

(City/State/Zip Code)

WITNESS:

_____(SEAL)
(Corporate Principal)

(Business Address)

(City/State/Zip Code)

ATTEST:

_____(Corporate Principal) Affix
Corporate Seal

(Business Address)

(City/State/Zip Code)

ATTEST:

_____(Corporate Surety) Affix
Corporate Seal

(Business Address)

(City/State/Zip Code)

The rate of premium on this bond is \$_____ per thousand.

The total amount of premium charges is \$_____..

(The above is to be filled in by Surety Company). (Power of Attorney of person signing for Surety Company must be attached).

(CERTIFICATE AS TO CORPORATE PRINCIPAL)

I, _____, certify that I am the _____
Secretary of the corporation named as Principal in the foregoing bond; that
_____, who signed the said bond on behalf of the Principal, was then
_____ of said corporation; that I know his signature, and that his
signature thereto is genuine; and that said bond was duly signed, sealed, and attested to for and in behalf of said
corporation by authority of its governing body.

_____ Affix Corporate Seal

CITY OF UKIAH
Mendocino County, California

MATERIAL AND LABOR BOND

KNOW ALL MEN BY THESE PRESENTS,

That we the undersigned, _____

_____, **AS PRINCIPAL**, and

_____, **AS SURETY**,

are held firmly bound unto **THE CITY OF UKIAH**, hereinafter called the "City" in the penal sum of

_____ dollars (\$_____)

for the payment of which sum we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally.

WHEREAS, the Principal has entered into a certain Contract with the City, dated _____, 20____, a copy of which is hereto attached and made a part hereof,

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall in all respects fully perform the Contract and all duly authorized modifications thereof, during its original term and any extensions thereof that may be granted and during any guaranty period for which the Contract provides, and if the Principal shall fully satisfy all claims, arising out of the prosecution of the work under the Contract and shall fully indemnify the City for all expenses which it may incur by reason of such claims, including its attorney's fees and court costs, and if the Principal shall make full payment to all persons supplying labor, services, materials, or equipment in the prosecution of the work under the Contract, in default of which such persons shall have a direct right of action hereupon; and if the Principal shall pay or cause to be paid all sales and use taxes payable as a result of the performance of the Contract as well as payment of gasoline and special motor fuels taxes in the performance of the Contract and all motor vehicle fees required for commercial motor vehicles used in connection with the performance of the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect. No modification of the Contract or extension of the term thereof, nor any forbearance on the part of the City shall in any way release the Principal or the Surety from liability hereunder. Notice to the Surety of any such modification, extension, or forbearance is hereby waived.

IN WITNESS WHEREOF, the aforesaid Principal and Surety have executed this instrument and affixed their seals hereto, this _____ day of _____, 20_____.

In the presence of:

WITNESS:

_____(SEAL)
(Individual Principal)

(Business Address)

(City/State/Zip Code)

WITNESS:

_____(SEAL)
(Corporate Principal)

(Business Address)

(City/State/Zip Code)

ATTEST:

_____(Corporate Principal) Affix
Corporate Seal

(Business Address)

(City/State/Zip Code)

ATTEST:

_____(Corporate Surety) Affix
Corporate Seal

(Business Address)

(City/State/Zip Code)

The rate of premium on this bond is \$_____ per thousand.

The total amount of premium charges is \$_____..

(The above is to be filled in by Surety Company). (Power of Attorney of person signing for Surety Company must be attached).

(CERTIFICATE AS TO CORPORATE PRINCIPAL)

I, _____, certify that I am the _____
Secretary of the corporation named as Principal in the foregoing bond; that
_____, who signed the said bond on behalf of the Principal, was then
_____ of said corporation; that I know his signature, and that his
signature thereto is genuine; and that said bond was duly signed, sealed, and attested to for and in behalf of said
corporation by authority of its governing body.

_____ Affix Corporate Seal

DIRECTIONS FOR PREPARATION OF PERFORMANCE AND MATERIAL AND LABOR BOND

1. Individual sureties, partnerships, or corporations not in the surety business will not be acceptable.
2. The name of the Principal shall be shown exactly as it appears in the Contract.
3. The penal sum shall not be less than required by the Specifications.
4. If the Principals are partners or joint venturers, each member shall execute the bond as an individual and state his place of residence.
5. If the Principal is a corporation, the bond shall be executed under its corporate seal. If the corporation has no corporate seal, it shall so state and affix a scroll or adhesive seal following the corporate name.
6. The official character and authority of the person(s) executing the bond for the Principal, if a corporation, shall be certified by the Secretary or Assistant Secretary thereof under the corporate seal, or copies attached to such records of the corporation as will evidence the official character and authority of the officer signing, duly certified by the Secretary or Assistant Secretary, under the corporate seal, to be true copies.
7. The current power-of-attorney of the person signing for the surety company must be attached to the bond.
8. The date of the bond must not be prior to the date of the Contract.
9. The following information must be placed on the bond by the surety company:
 - a. The rate of premium in dollars per thousand; and
 - b. The total dollar amount of premium charged.
10. The signature of a witness shall appear in the appropriate place attending to the signature of each party of the bond.
11. Type or print the name underneath each signature appearing on the bond.
12. An executed copy of the bond must be attached to each copy of the Contract (original counterpart) intended for signing.

CITY OF UKIAH
Mendocino County, California

DEFECTIVE MATERIAL AND WORKMANSHIP (MAINTENANCE) BOND

KNOW ALL MEN BY THESE PRESENTS,

That we, _____,
_____, as **PRINCIPAL**
and _____,
_____, as **SURETY**,
are held and firmly bound unto the **City of Ukiah** as Obligee, in the penal sum of

_____, (\$ _____),
(5 PERCENT OF THE FINAL CONTRACT AMOUNT)

to which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the said Principal entered into a Contract with the City of Ukiah
dated _____
for _____

WHEREAS, said Contract has been completed, and was approved on the _____ day of _____,
_____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall guarantee that the work will be free of any defective materials or workmanship which become apparent during the period of one (1) year following completion of the Contract, then this obligation shall be void, otherwise to remain in full force and effect, provided however, any additional warranty or guarantee whether expressed or implied is extended by the Principal or Manufacturer only, and the surety assumes no liability for such a guarantee.

Signed, sealed, and dated this _____ day of _____, 20____.

_____(Seal)

BY: _____(Seal)

_____(Seal)

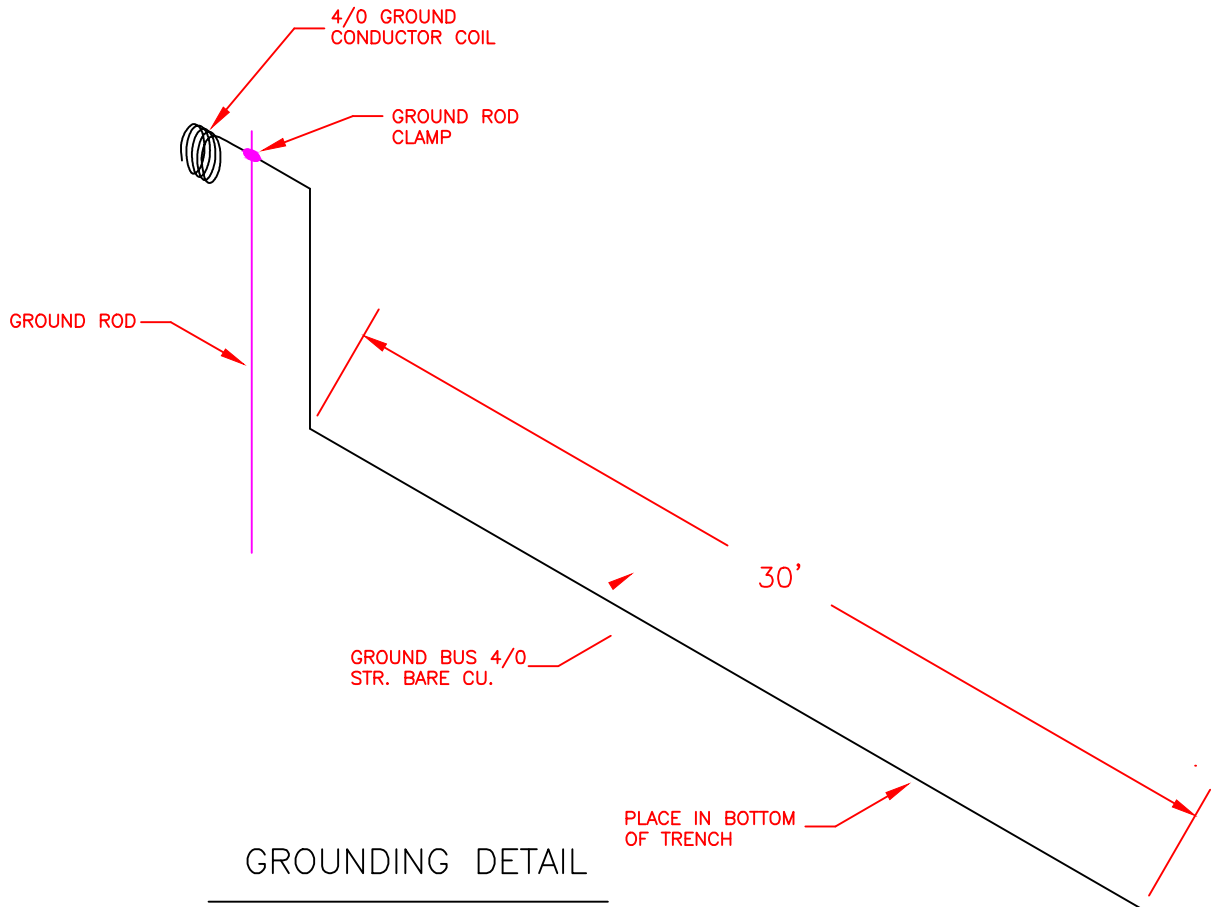
Principal

_____(Seal)

BY: _____(Seal)

_____(Seal)

Surety



NOTE:

1. A COIL OF GROUND CONDUCTOR SHALL BE LEFT BEYOND THE GROUND ROD CLAMP ATTACHMENT. THE LENGTH OF GROUND CONDUCTOR NEEDED AT EACH TYPE OF EQUIPMENT LOCATION IS AS FOLLOWS:

MODULE ENCLOSURE	— 6 ft.
TRANSFORMER	— 6 ft.
VAULT	— 16 ft.
SWITCH	— 18 ft.
2. WHERE GROUND BUS IS TO BE INSTALLED AT PRIMARY VAULT LOCATIONS, THE GROUND ROD SHALL BE DRIVEN OUTSIDE OF THE PRIMARY VAULT. THE COIL OF GROUND CONDUCTOR SHALL BE PLACED INSIDE THE VAULT THROUGH A SEALED OPENING IN THE VAULT (SIDE).
3. THE GROUND ROD SHALL BE GALVANIZED STEEL OR COPPER CLAD STEEL NOT LESS THAN 5/8" IN DIAMETER AND 8 ft. IN LENGTH.
4. A GROUND ROD CLAMP SHALL BE USED TO CONNECT THE GROUND CONDUCTOR TO THE GROUND ROD. THE GROUND ROD CLAMP SHALL BE A 3/4", #8— 1/0 STR COPPER CLAMP, JOSLYN CAT. NO. J8493AB OR APPROVED EQUAL.

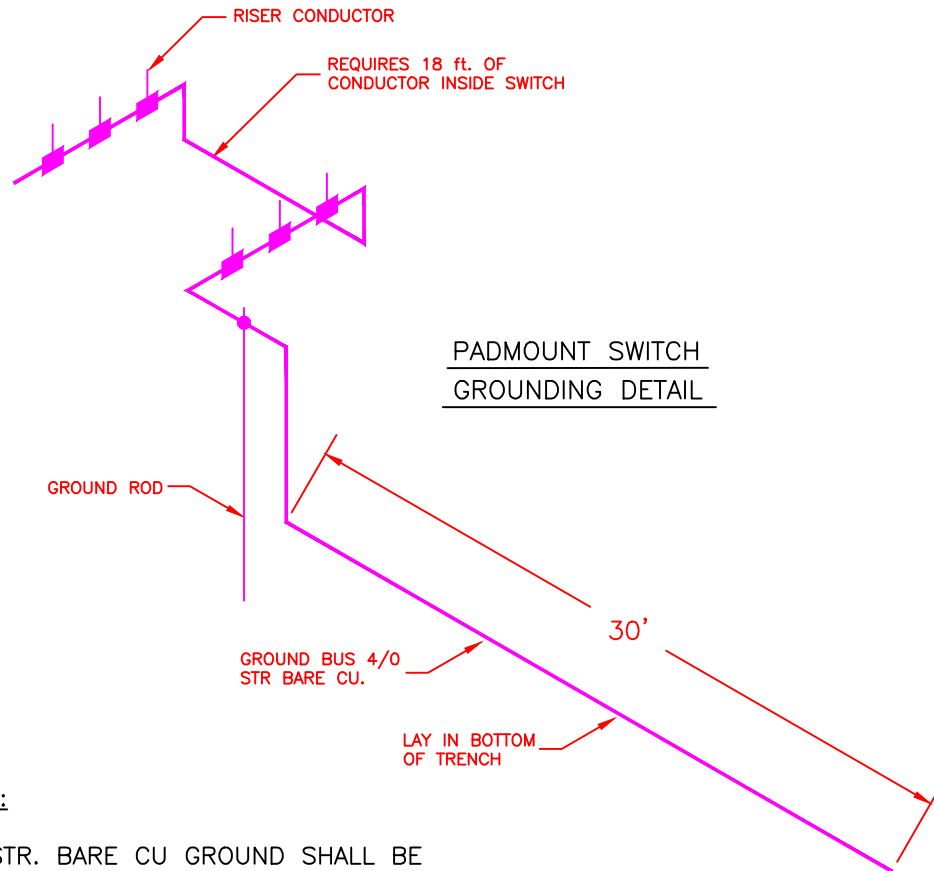
Drawing name: C:\Users\sbozzoli\appdata\local\temp\AcPublish_4200\Equipment Grounding 314 1008.dwg Plotted: Dec 10,2012 - 9:23am

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD

PADMOUNT EQUIPMENT GROUNDING

30APR12	AMS	AMS			SHEET 1 OF 1	GR314 1008
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	

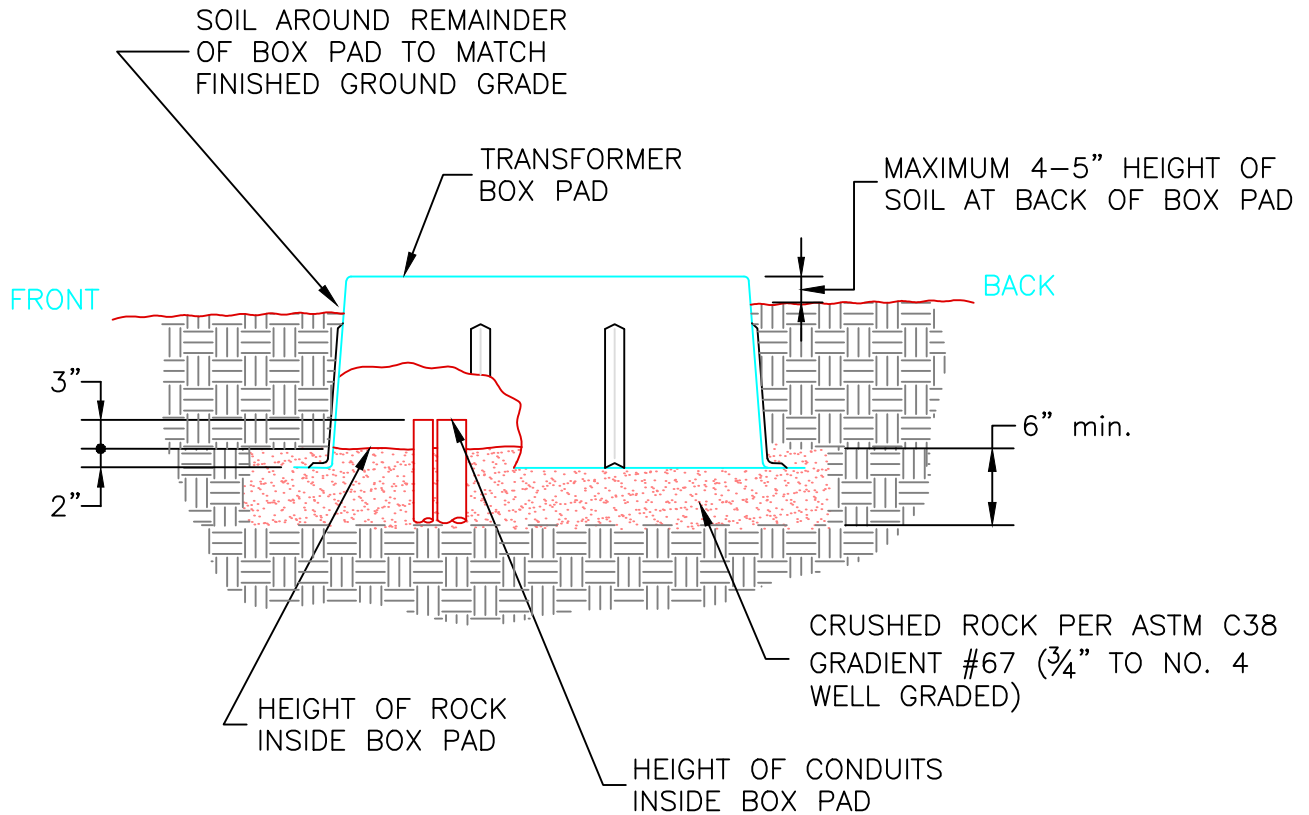


NOTES:

1. 4/0 STR. BARE CU GROUND SHALL BE ONE CONTINUOUS PIECE.
2. GROUND BUS SHALL BE INSTALLED AT THE BOTTOM OF THE TRENCH.
3. LAY 4/0 STR CU GROUND BUS IN BOTTOM OF VAULT PERIMETER AS SHOWN, SEE SHEET 1.
4. RISER CONDUCTOR SIZE TO BE:
 - a. 4/0 STR BARE CU FOR PRIMARY CABLE LARGER THAN 2/0.
 - b. #2 STR BARE CU FOR PRIMARY CABLE 2/0 AND SMALLER.
5. 4/0 STR BARE CU RISER CONDUCTOR TO BE TAPPED WITH #2 STR BARE CU TO GROUND THE 600 AMP MODULES.
6. GROUND BUS AND GROUND ROD INSTALLED AT TRANSFORMER SITES TO RISE IN THE SECONDARY PULL SECTION.
7. GROUND BUS AND GROUND ROD INSTALLED AT SWITCH SITES SHALL RISE IN THE PRIMARY PULL SECTION AT ONE SIDE OF THE SWITCH AND THEN THE GROUND BUS SHALL CONTINUE TO THE PRIMARY PULL SECTION AT THE OPPOSITE SIDE OF THE SWITCH.

Drawing name: C:\Documents and Settings\AI Smatsky\local settings\temp\AcPublish_7340\Equipment Grounding 314 1007-2.dwg Plotted: Feb 16,2011 - 2:18pm

CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT				CONSTRUCTION STANDARD VAULT AND PADMOUNT EQUIPMENT GROUNDING			
04JAN11	AMS	AMS		SHEET 2 OF 2	314 1007		
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION		

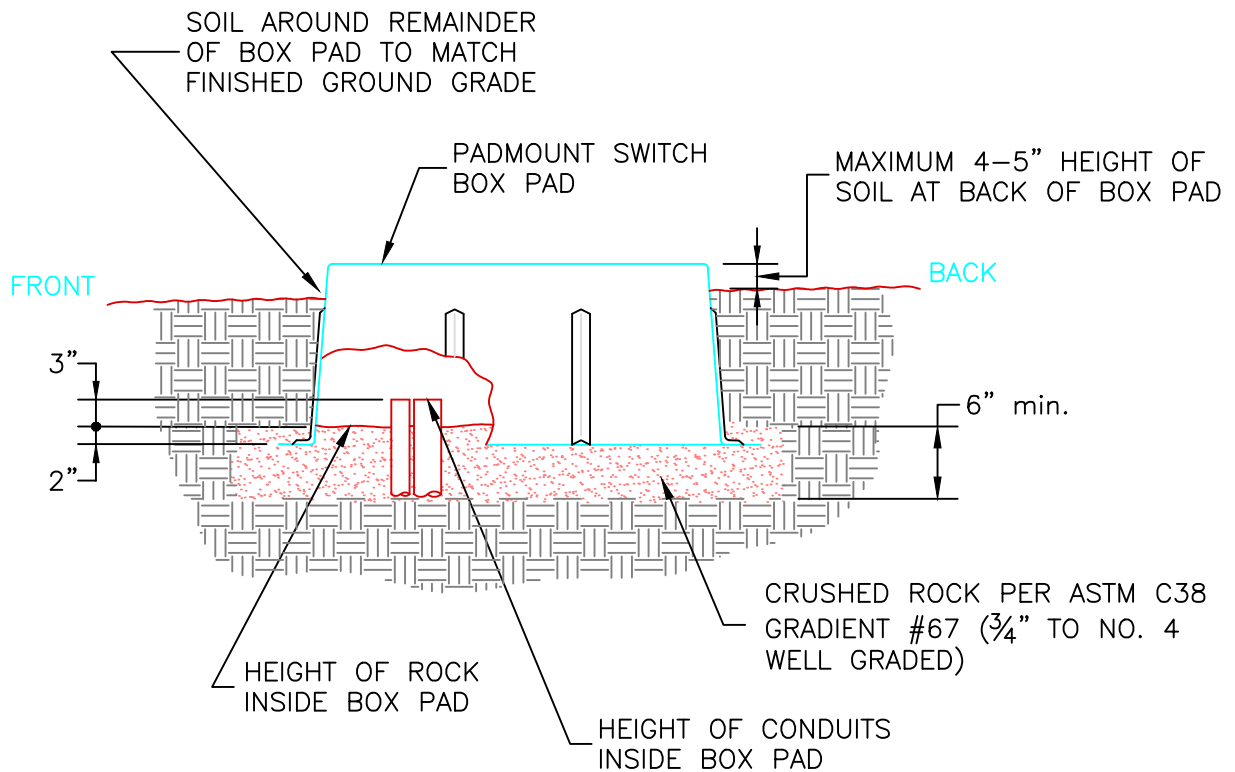


NOTES:

1. TRANSFORMER BOX PAD SHALL BE LEVEL.
2. TRANSFORMER SITE TO BE COMPACTED TO 90% COMPACTION (HYDRO-HAMMER IS NOT TO BE USED AROUND BOX PAD).
3. GROUND CONDUCTOR PER UEUD SPEC. 314 1008.

Drawing name: C:\Users\A\pappdata\local\temp\AcPublish_31412\Transformer box pad and conduit detail 317 2425-4.dwg Plotted: Mar 05,2019 - 1:04pm

No.				REVISIONS	DATE	BY	CK'D	APP'D
CITY OF UKIAH				CONSTRUCTION STANDARD				
				FIBERGLASS TRANSFORMER BOX PAD CONDUIT AND BOX PAD INSTALLATION DETAIL				
21OCT10	AMS	AMS	<i>Ams</i>	SHEET 4 OF 5		317 2425		
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION			

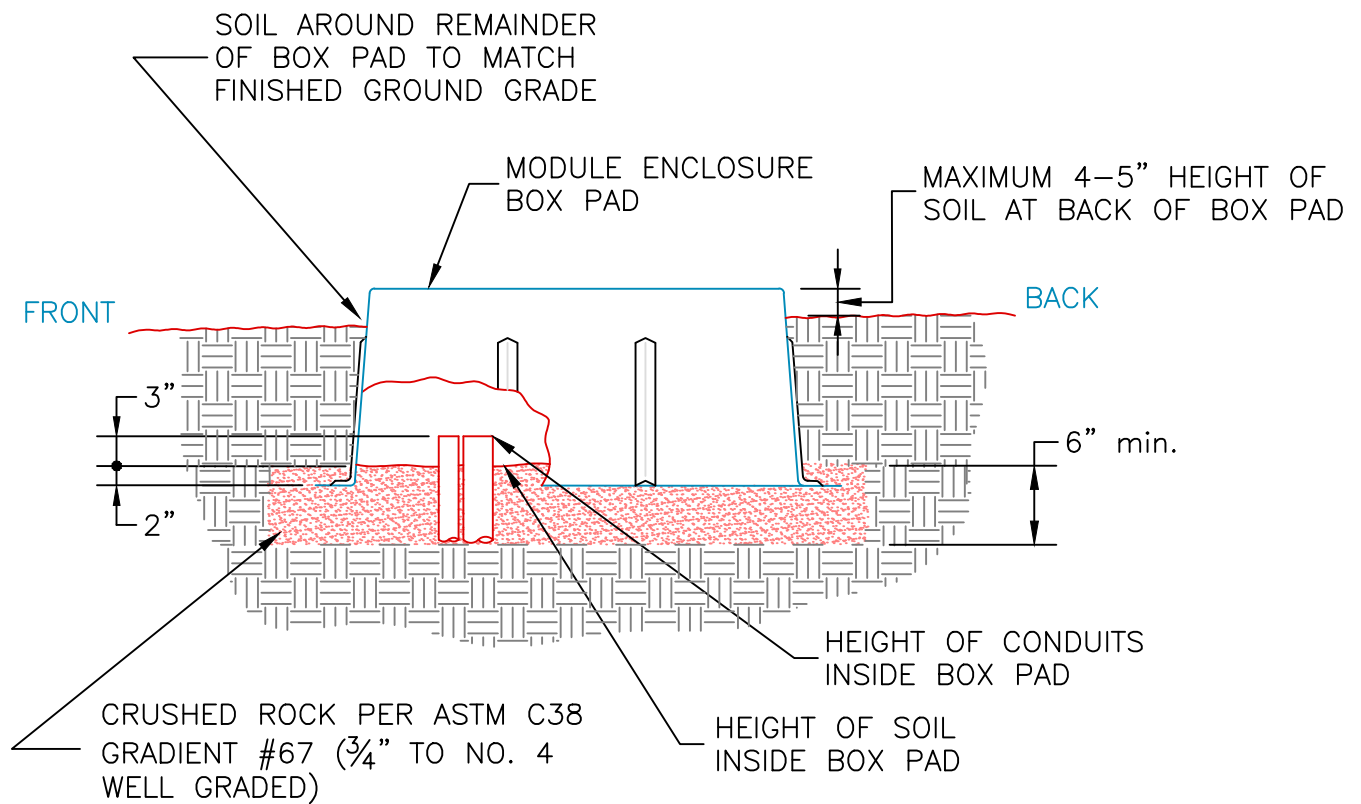


NOTES:

1. PADMOUNT SWITCH BOX PAD SHALL BE LEVEL.
2. PADMOUNT SWITCH SITE TO BE COMPACTED TO 90% COMPACTION (HYDRO-HAMMER IS NOT TO BE USED AROUND BOX PAD).

Drawing name: C:\Documents and Settings\AI Smatsky\local settings\temp\AcPublish_7340\Padmount Switch Box Pad Location Detail 317 2426-4.dwg Plotted: Feb 16,2011 - 2:20pm

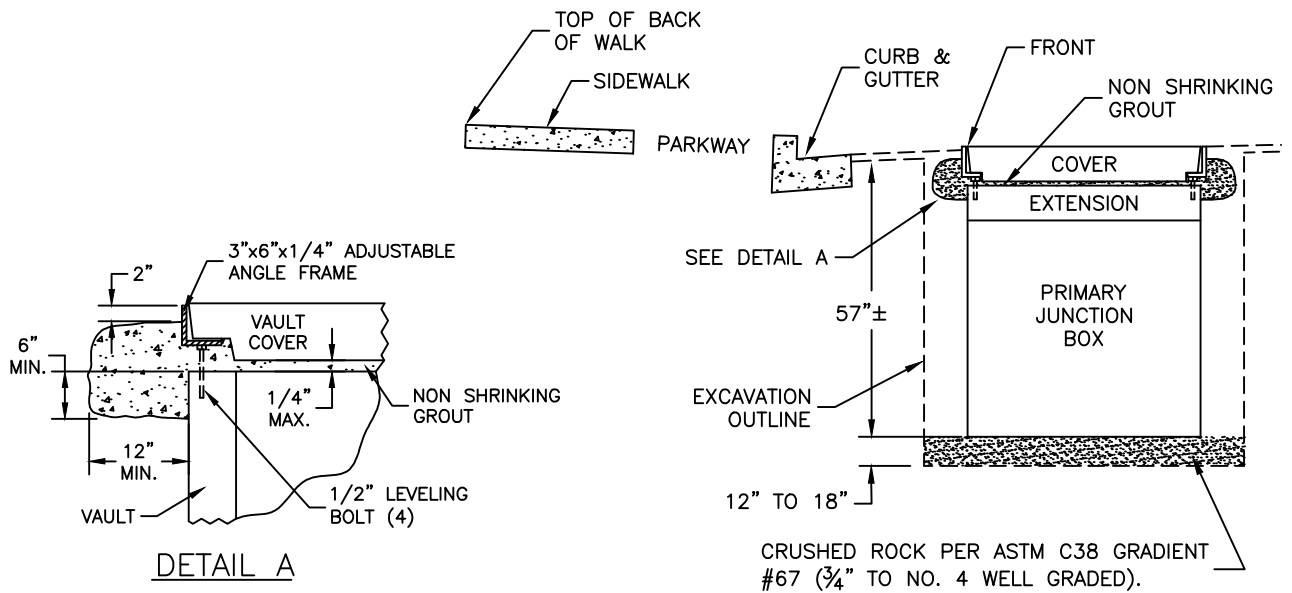
No.				REVISIONS	DATE	BY	CK'D	APP'D
CITY OF UKIAH				CONSTRUCTION STANDARD				
ELECTRIC UTILITY DEPARTMENT				PADMOUNT SWITCH BOX PAD CONDUIT AND BOX PAD INSTALLATION DETAIL				
29DEC10	AMS	AMS			SHEET 4 OF 5	317 2426		
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION			



NOTES:

1. MODULE ENCLOSURE BOX PAD SHALL BE LEVEL.
2. MODULE ENCLOSURE BOX PAD SITE TO BE COMPACTED TO 90% COMPACTION (HYDRO-HAMMER IS NOT TO BE USED AROUND BOX PAD).

No.				REVISIONS	DATE	BY	CK'D APP'D
CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT				CONSTRUCTION STANDARD			
				MODULE ENCLOSURE BOX PAD			
				CONDUIT AND BOX PAD INSTALLATION DETAIL			
4AUG12	AMS	AMS			SHEET 1 OF 1	317 2431	
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION		



GROUT NOTES:

1. ADJUST ANGLE IRON FRAME TO PROPER GRADE WITH ADJUSTMENT BOLTS (4) LOCATED IN CORNERS OF FRAME AND IN SUCH WAY THAT CONCRETE LID IS FIRMLY SEATED IN THE FRAME THROUGHOUT, I.E. NO ROCKING OF COVER.
2. FILL VOID BETWEEN ADJUSTED FRAME AND VAULT WITH NON SHRINKING GROUT PER DETAIL A. CONCRETE APRON SHALL BE INSTALLED COMPLETELY AROUND THE ENTIRE VAULT.
3. CONCRETE SHALL BE READY-MIXED (TRANSIT-MIXED CONCRETE) AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.

GENERAL NOTES:

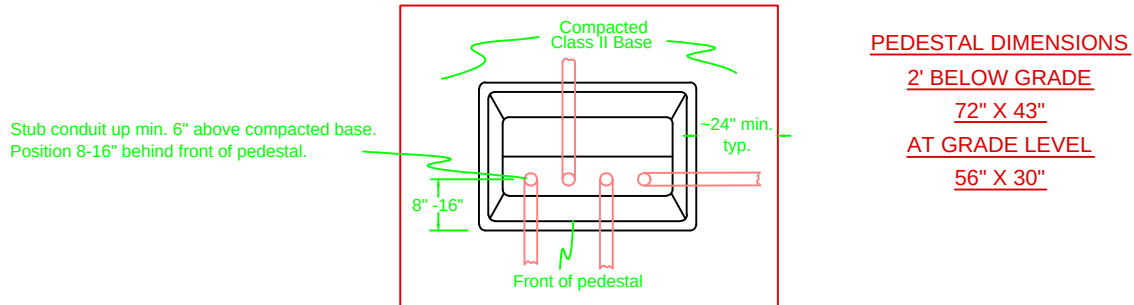
1. PRIMARY JUNCTION BOX, EXTENSION AND COVER SHALL BE PER CITY OF UKIAH SPECIFICATION.
2. PRIMARY JUNCTION BOX GRADE, FROM FRONT TO BACK, SHALL BE NO MORE THAT 1/4" ABOVE ADJACENT PAVEMENT.
3. BOTTOM OF PRIMARY JUNCTION BOX EXCAVATION SHALL BE COMPACTED TO 90% COMPACTION PRIOR TO INSTALLATION OF DRAIN ROCK AND BOX.
4. HYDRO HAMMER IS NOT TO BE USED AROUND VAULT OR SUBSTRUCTURES.
5. ASPHALTIC PRIMARY JUNCTION BOX SEALANT TO BE INSTALLED BETWEEN THE EXTENSION RING AND THE JUNCTION BOX.
6. INSTALL GROUND IN JUNCTION BOX PER 314 1007. GROUND WIRE TAIL IN VAULT SHALL BE A MINIMUM OF 16 ft. LONG.

Drawing name: C:\Users\A\appdata\local\temp\AcPublish_22668\504 Vault H2O Cover Install Detail -317 2527.dwg Plotted: Mar 29,2018 - 9:35am

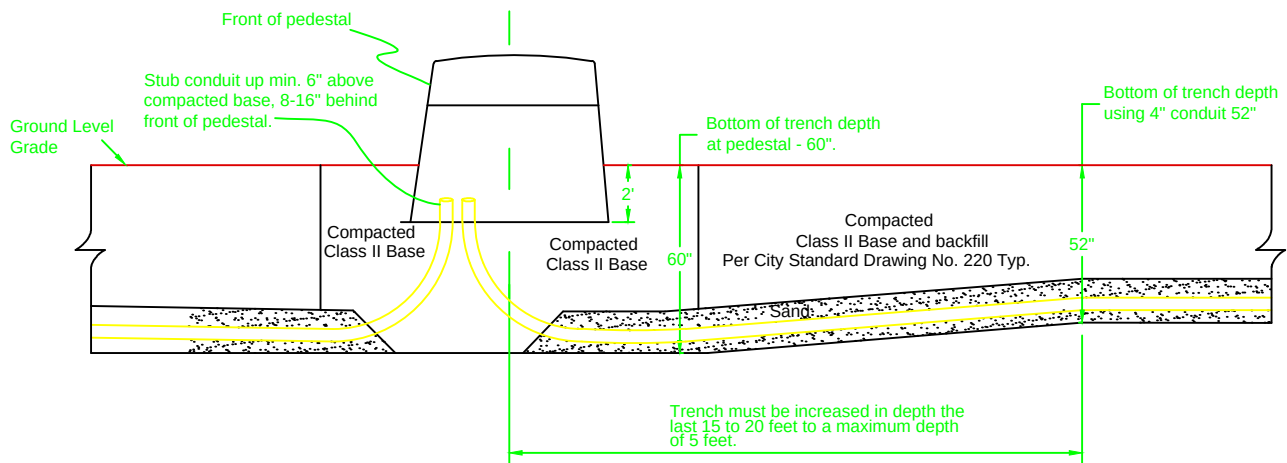
No.				REVISIONS				DATE	BY	CK'D	APP'D
CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT				CONSTRUCTION STANDARD PRIMARY JUNCTION BOX WITH H2O COVER INSTALLATION DETAIL							
				317 2527							
21OCT17	AMS	AMS		SHEET 1 OF 1							
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL				REVISION			

TYPICAL DEAD FRONT JUNCTION PEDESTAL INSTALLATION

PLAN VIEW



END PROFILE VIEW



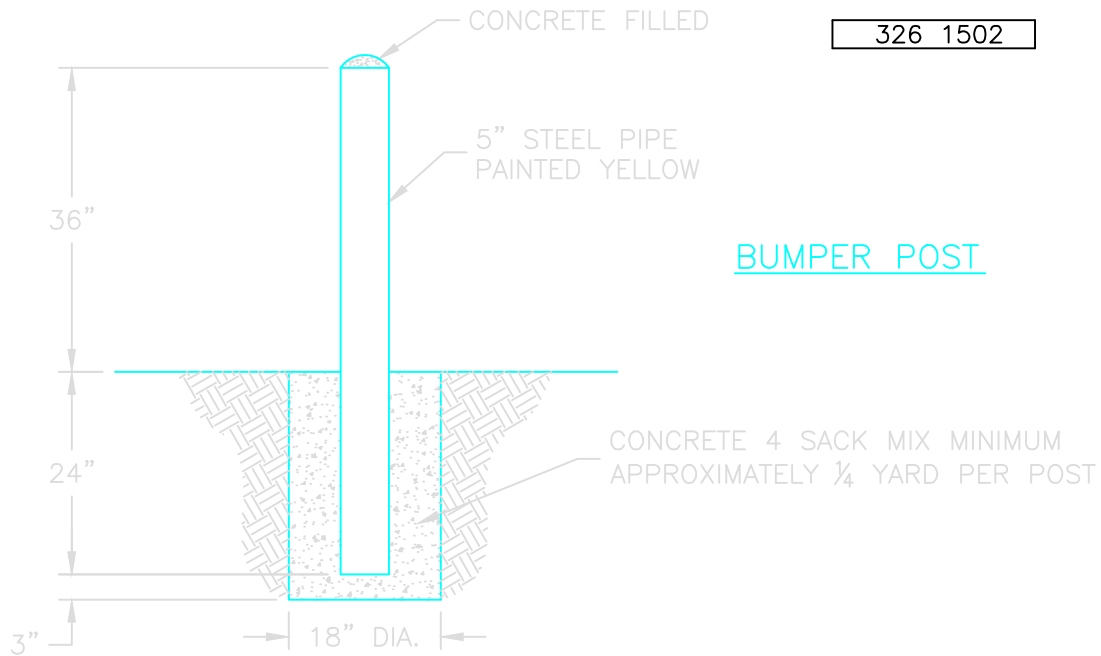
No.	REVISIONS	DATE	BY	CKD	APPD
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CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

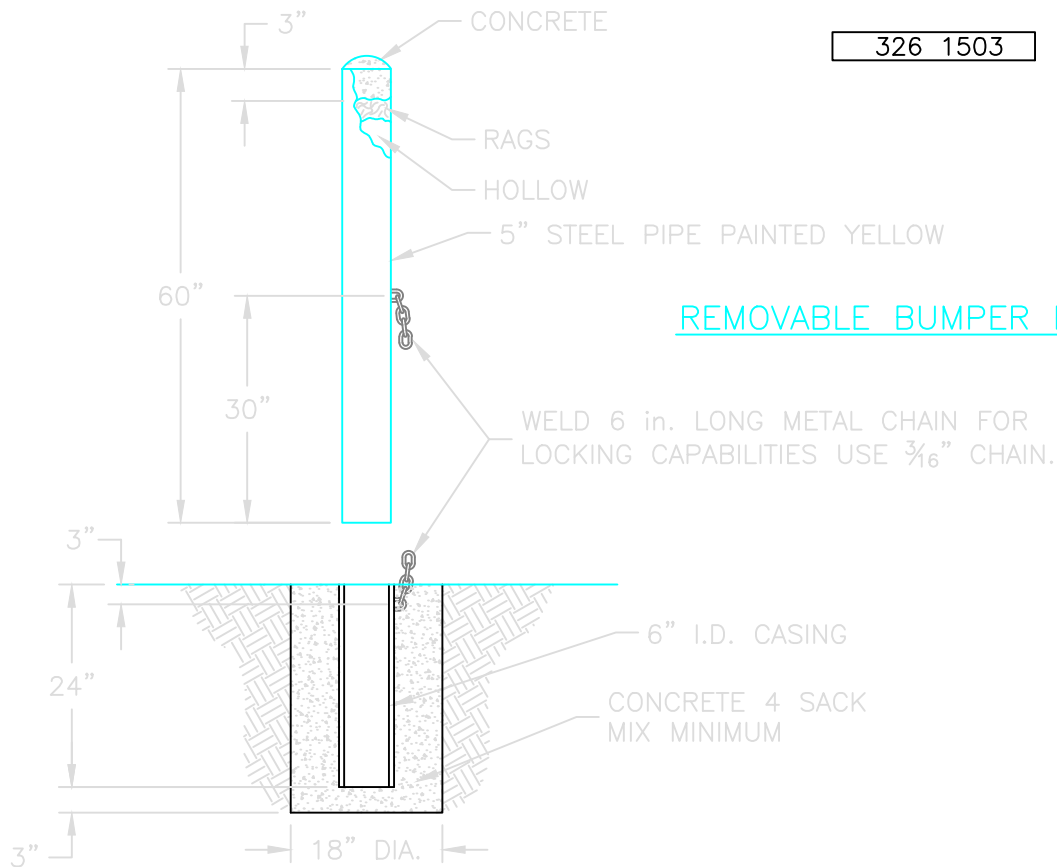
ENGINEERING STANDARD
PEDESTAL INSTALLATION

13JAN11	PA	PA			SHEET 1 OF 1
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION

317 3001



BUMPER POST



REMOVABLE BUMPER POST

Drawing name: C:\Users\ANDocuments\AutoCAD Files\City of Ukiah\Ukiah OH UG Eng Specs\Underground Spec\Bumper Post Spec 3261502-3.dwg Plotted: Oct 21, 2014 - 10:07am

No.	REVISIONS	DATE	BY	CK'D	APP'D
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CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD

BUMPER POST DETAILS

18MAR11	RT	AMS			SHEET 1 OF 1
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION

LEGEND:

SEE SPECIFICATIONS FOR ACCEPTABLE MATERIALS.

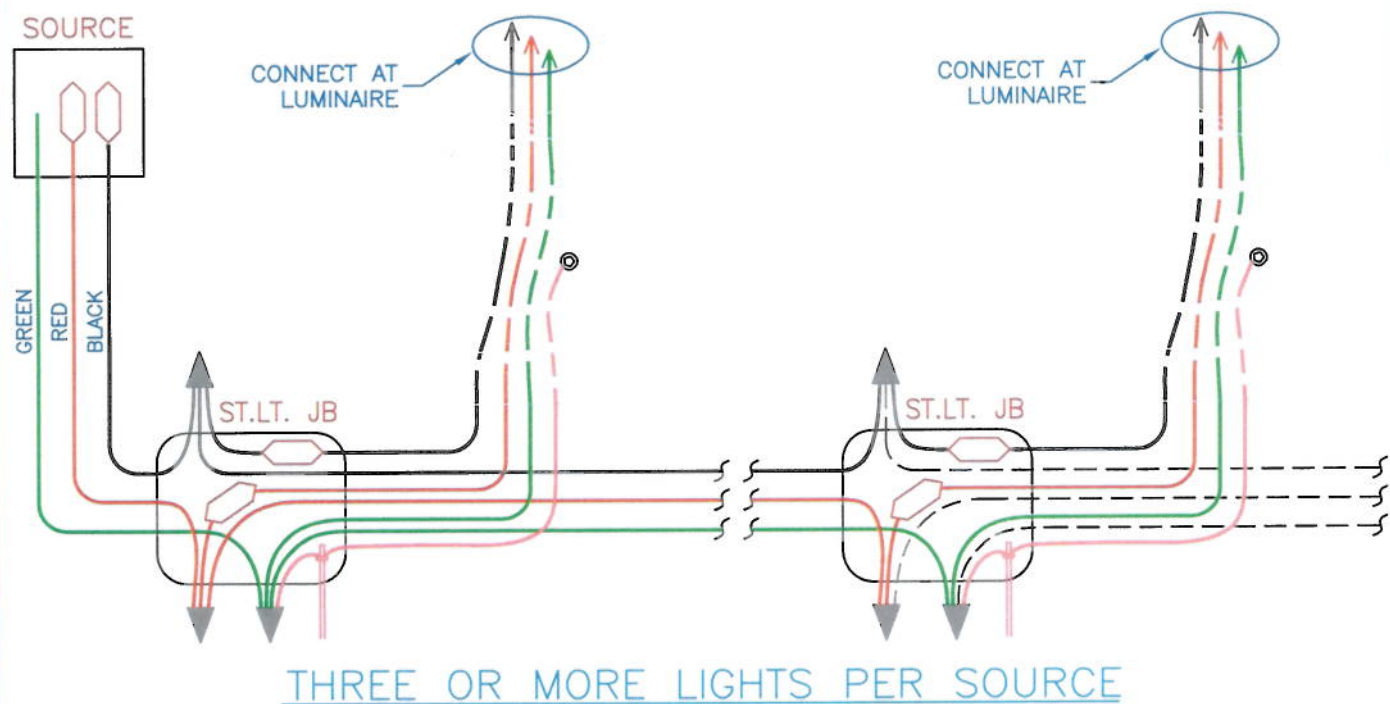
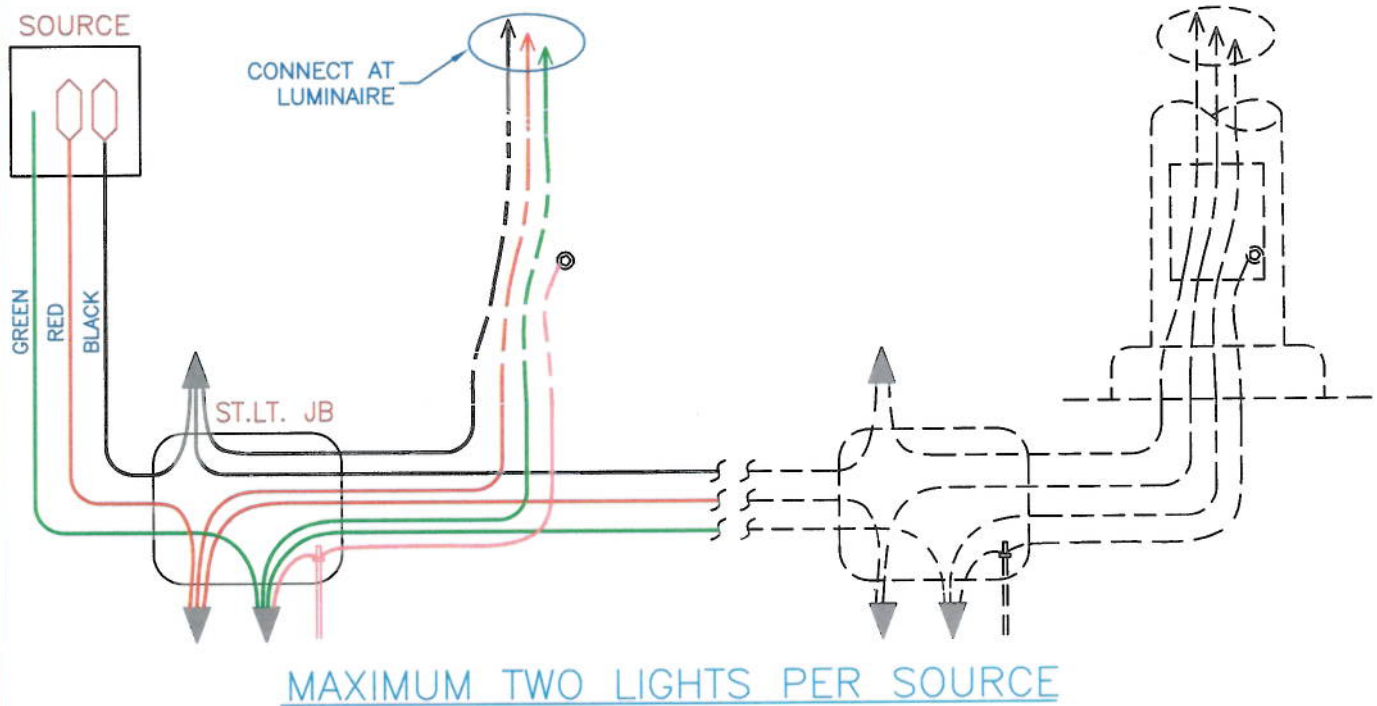
	GROUND ELECTRODE
	CONDUCTOR CONNECTOR
	IN-LINE FUSE WITH INSULATING BOOTS
	SOURCE
	STREETLIGHT JB
	STREETLIGHT
	FUSE

NOTES:

1. FUSES SHALL BE MIDGET FAST ACTING.
2. FUSE SIZE SHALL BE PER THE FUSING TABLE OR AS SHOWN ON THE JOB SPECIFIC DRAWINGS.
3. PROTECTION AT THE SOURCE GENERALLY WILL BE FUSE(S) UNLESS OTHERWISE NOTED ON THE JOB SPECIFIC DRAWINGS. A CIRCUIT BREAKER, WITH APPROPRIATE ENCLOSURE, MAY BE UTILIZED IN-LIEU OF FUSES.

Drawing name: C:\Users\sbozzoli\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\6HCK1Q3W\Streetlight Spec 503 0101 sheet 1 thru 6.dwg Plotted: Nov 20, 2014 10:11am

1											
No.		REVISIONS				DATE		BY		CK'D APP'D	
CITY OF UKIAH						CONSTRUCTION STANDARD					
ELECTRIC UTILITY DEPARTMENT						STREETLIGHT WIRING					
						LEGEND					
06NOV14		RT		AMS		SHEET 1 OF 6		503 0101			
DATE		DRAWN		DESIGNED		APPROVAL		REVISION			



Drawing name: C:\Users\sbozzoli\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\6HCK1Q3W\Streetlight Spec 503 0101 sheet 1 thru 6.dwg Plotted on: Nov. 20, 2014 10:12am

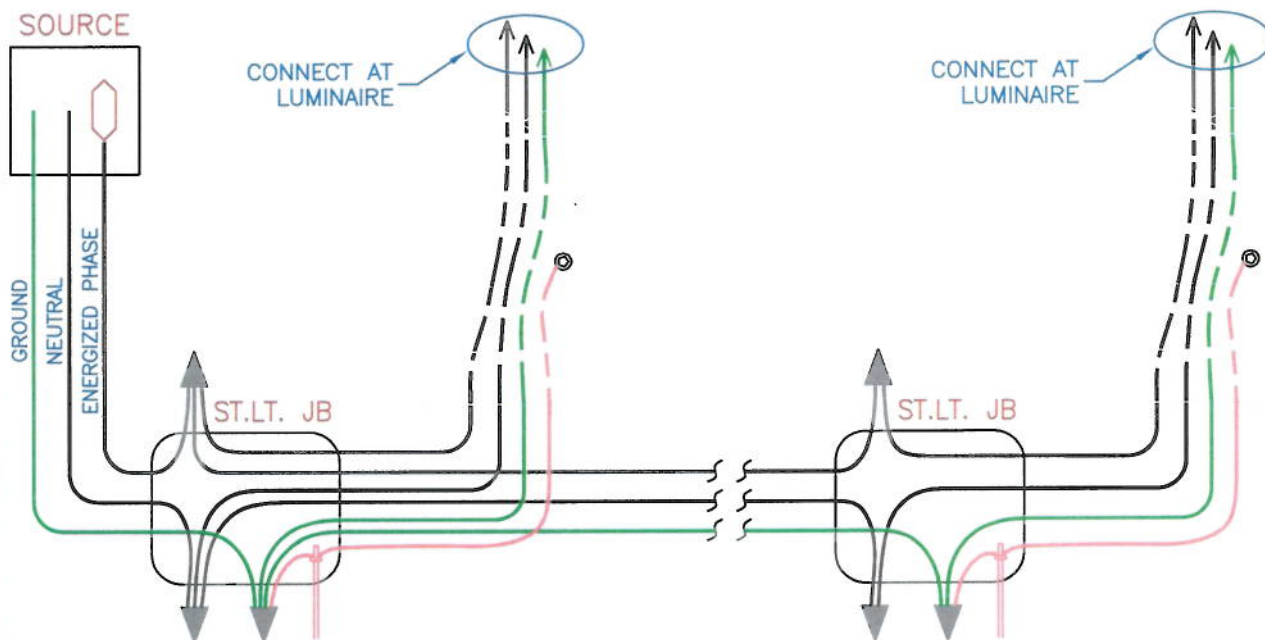
No.	REVISIONS	DATE	BY	CK'D	APP'D
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CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

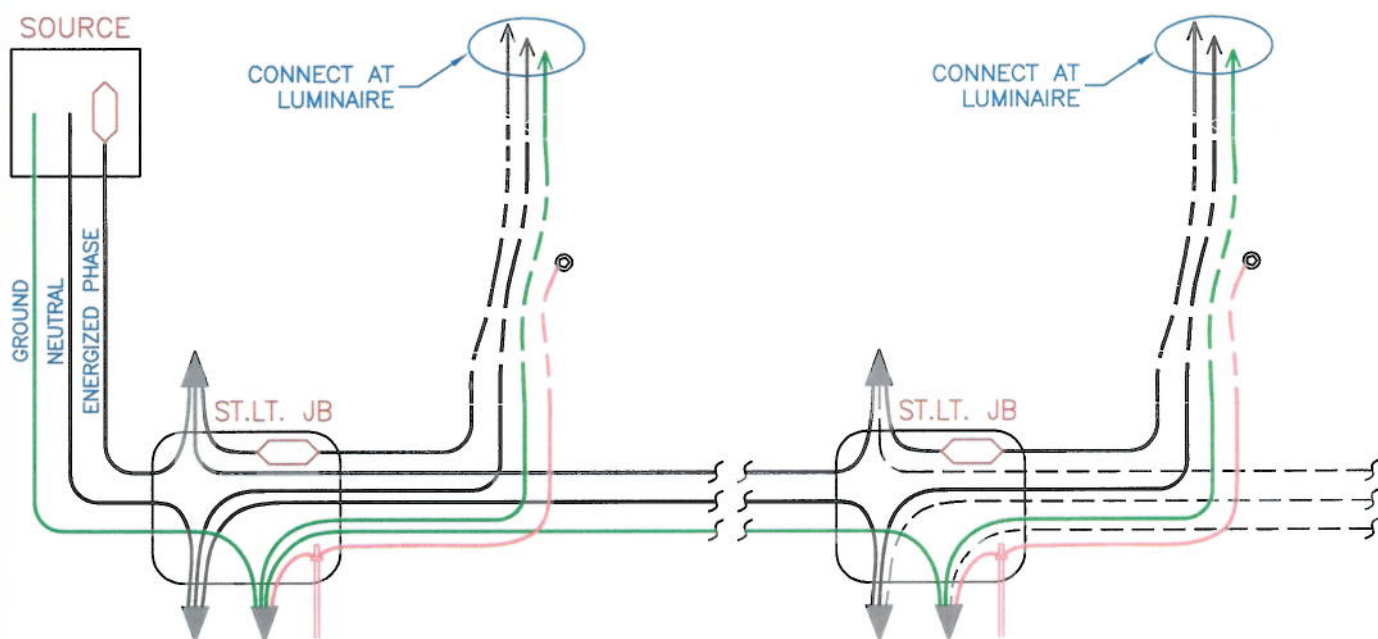
CONSTRUCTION STANDARD
STREETLIGHT WIRING
DIAGRAM
208 OR 240 VOLT SYSTEM

06NOV14	RT	AMS			SHEET 3 OF 6
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION

503 0101



TWO LIGHTS PER SOURCE



THREE OR MORE LIGHTS PER SOURCE

VOLTAGE	ENERGIZED PHASE	NEUTRAL	GROUND
120V	BLACK	WHITE	GREEN
277V	BROWN	GRAY	GREEN

Drawing name: C:\Users\sbozzoli\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\6HCK1Q3W\Streetlight Spec 503 0101 sheet 1 thru 6.dwg Plotted on: Nov. 20, 2013 10:11am

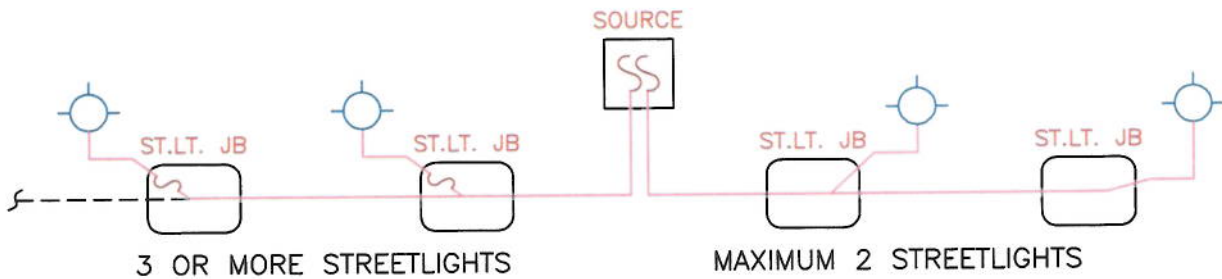
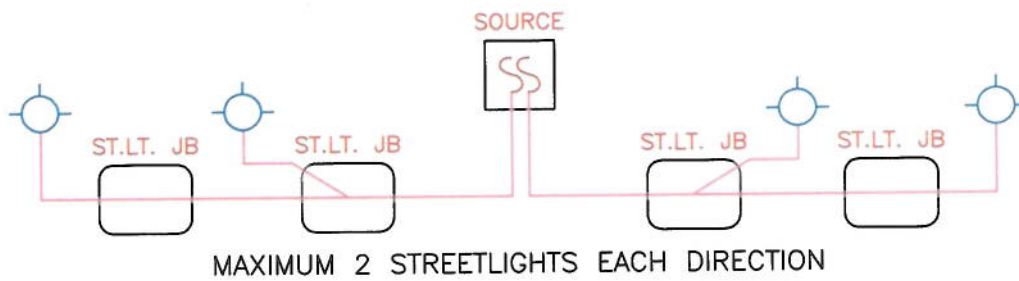
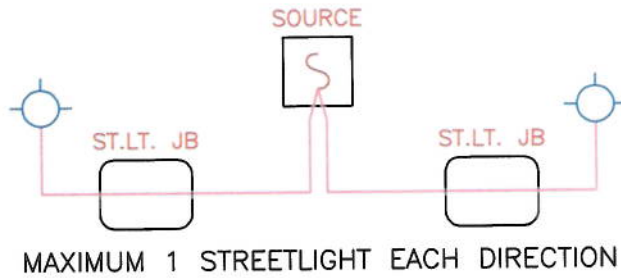
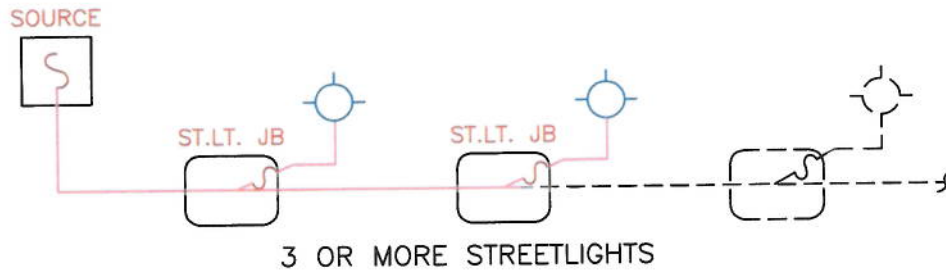
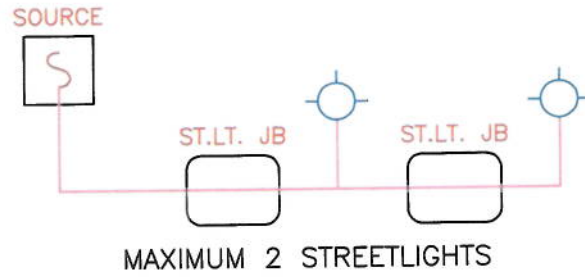
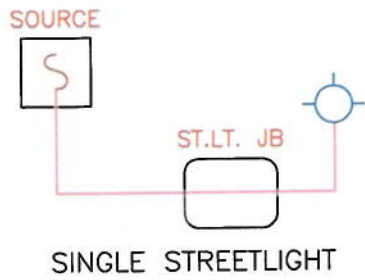
No.	REVISIONS	DATE	BY	CK'D	APP'D
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CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD
STREETLIGHT WIRING
DIAGRAM
120 OR 277 VOLT SYSTEM

06NOV14	RT	AMS			SHEET 2 OF 6
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION

503 0101



Drawing name: C:\Users\sbozzoli\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\6HCK1Q3W\Streetlight Spec 503 0101 sheet 1 thru 6.dwg Plotted on: Nov. 20, 2014 - 10:12am

No.	REVISIONS	DATE	BY	CK'D	APP'D
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CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD
STREETLIGHT WIRING
SINGLE LINE DIAGRAM

06NOV14	RT	AMS			SHEET 4 OF 6	503 0101
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	Page 190 of 964

STREETLIGHT FUSING TABLE

LAMP SIZE (WATTS)	NUMBER OF STREETLIGHTS AND OPERATING CURRENT PER STREETLIGHT	OPERATING VOLTS			
		120	208	240	277
70	SINGLE STREETLIGHT	3	3	3	3
	TWO STREETLIGHTS	5	3	3	3
	OPERATING AMPERE	0.95	0.55	0.48	0.41
100	SINGLE STREETLIGHT	3	3	3	3
	TWO STREETLIGHTS	5	3	3	3
	OPERATING AMPERE	1.22	0.70	0.61	0.53
150	SINGLE STREETLIGHT	5	3	3	3
	TWO STREETLIGHTS	7.5	5	5	5
	OPERATING AMPERE	1.80	1.04	0.90	0.77
250	SINGLE STREETLIGHT	7.5	5	3	3
	TWO STREETLIGHTS	15	7.5	7.5	5
	OPERATING AMPERE	2.70	1.56	1.35	1.17
106	SINGLE STREETLIGHT	3	3	3	3
	TWO STREETLIGHTS	3	3	3	3
	OPERATING AMPERE	.88	.51	.44	.38

ACCEPTABLE FUSE SIZES: 3, 5, 7.5, 10, 15, 20 AND 30 AMPERE.

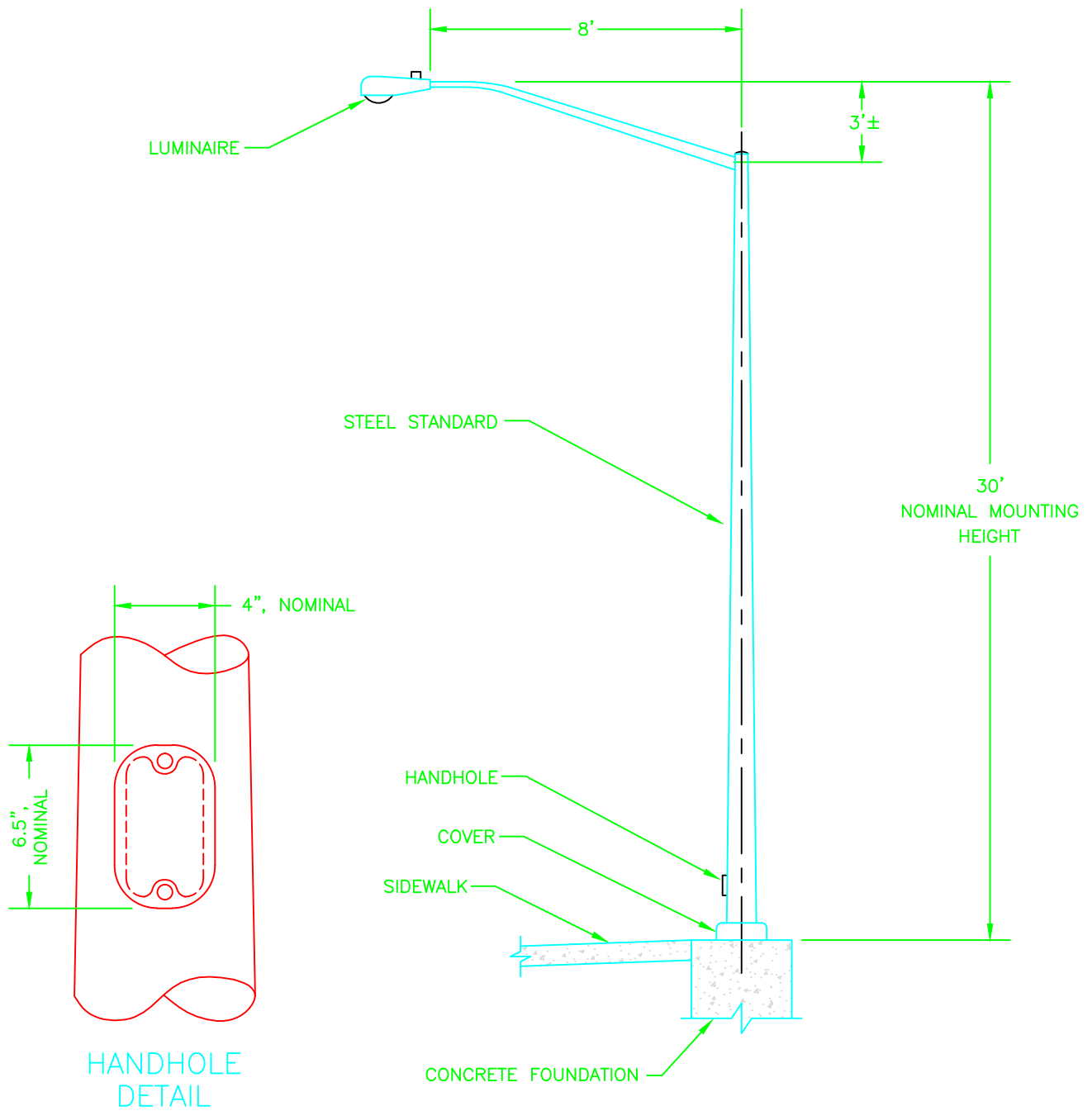
TO CALCULATE THE FUSE SIZE TO SUPPLY 3 OR MORE LIGHTS IN THE SAME STRING,
USE THE FOLLOWING FORMULA:

$$S = 2 * N * A$$

WHERE: S = FUSE SIZE (ROUND UP TO NEAREST SIZE)
N = NUMBER OF LIGHTS IN THE STRING
A = OPERATING AMPERES PER LIGHT FROM THE TABLE ABOVE

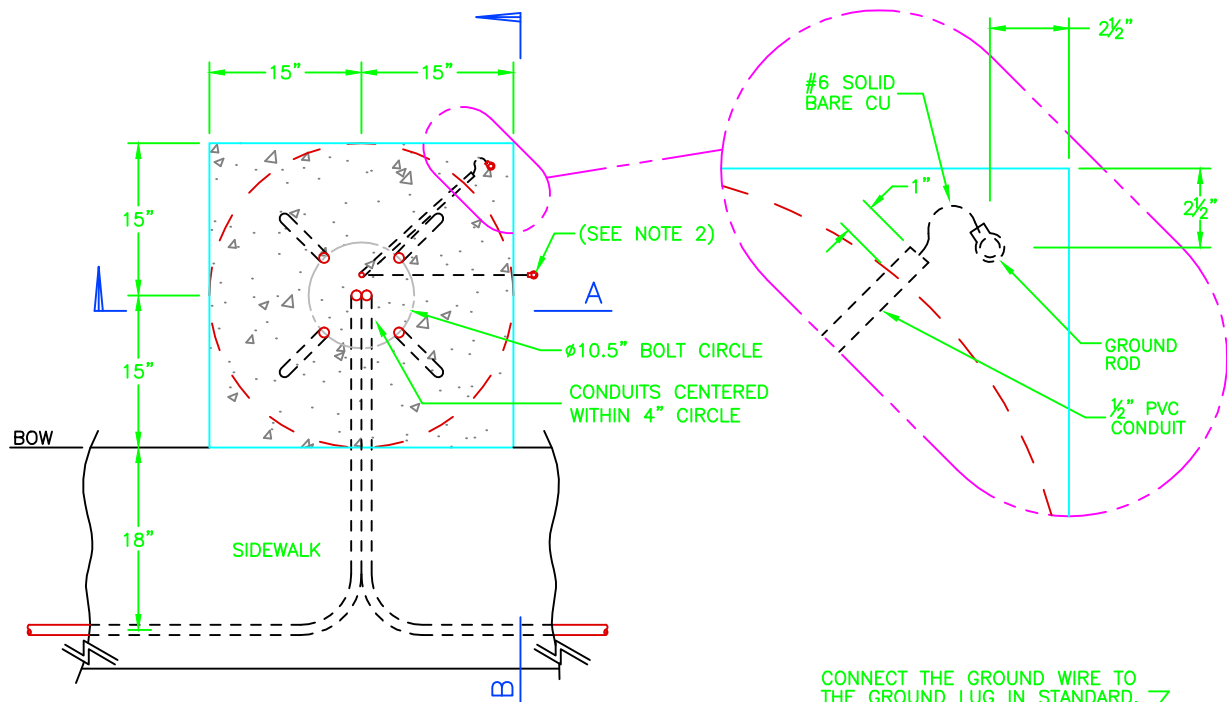
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CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT				CONSTRUCTION STANDARD STREETLIGHT WIRING FUSING TABLE			
06NOV14	RT	AMS			SHEET 6 OF 6	503 0101	
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	Page 191 of 964	

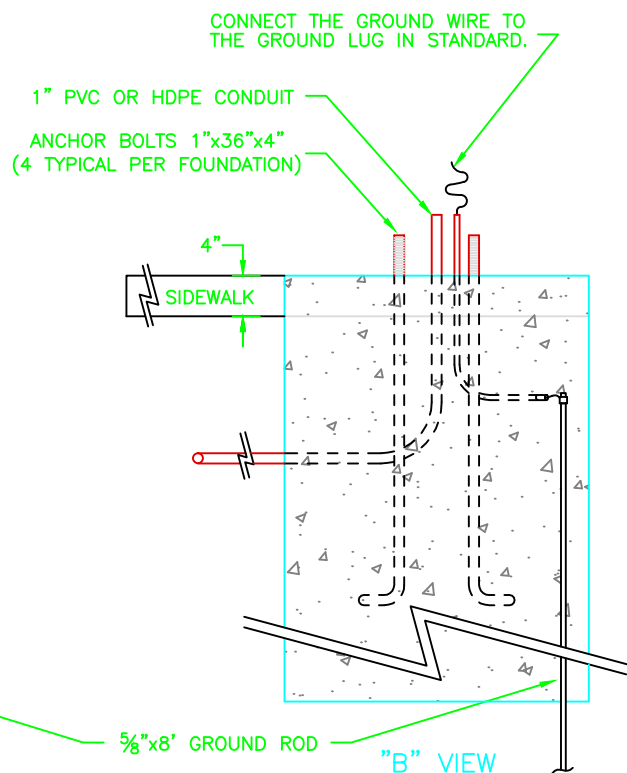
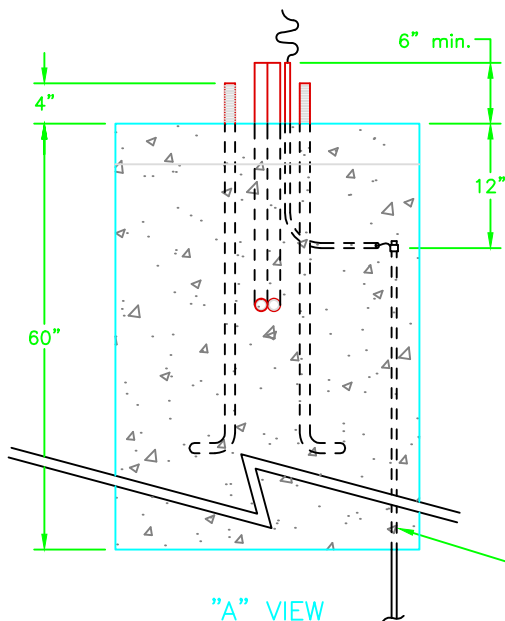


Drawing name: C:\Users\ANDocuments\AutoCAD Files\City of Ukiah\Ukiah OH UG Eng Specs\Streetlights\504 0201-1 St Light Spec BOW.dwg Plotted: Mar 03,2019 - 12:11pm

No.				REVISIONS	DATE	BY	CK'D	APP'D
CITY OF UKIAH				CONSTRUCTION STANDARD				
ELECTRIC UTILITY DEPARTMENT				30' STEEL STREETLIGHT				
03FEB19	RT	<i>Ams</i>	<i>Ams</i>	SHEET 1 OF 3		504 0201		
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION			



TOP VIEW



NOTES:

1. 25.5 CUBIC FEET OF CONCRETE REQUIRED.
2. ALTERNATE GROUND ROD LOCATION. SIDE OF FOUNDATION OPPOSITE THE PROPERTY LINE.

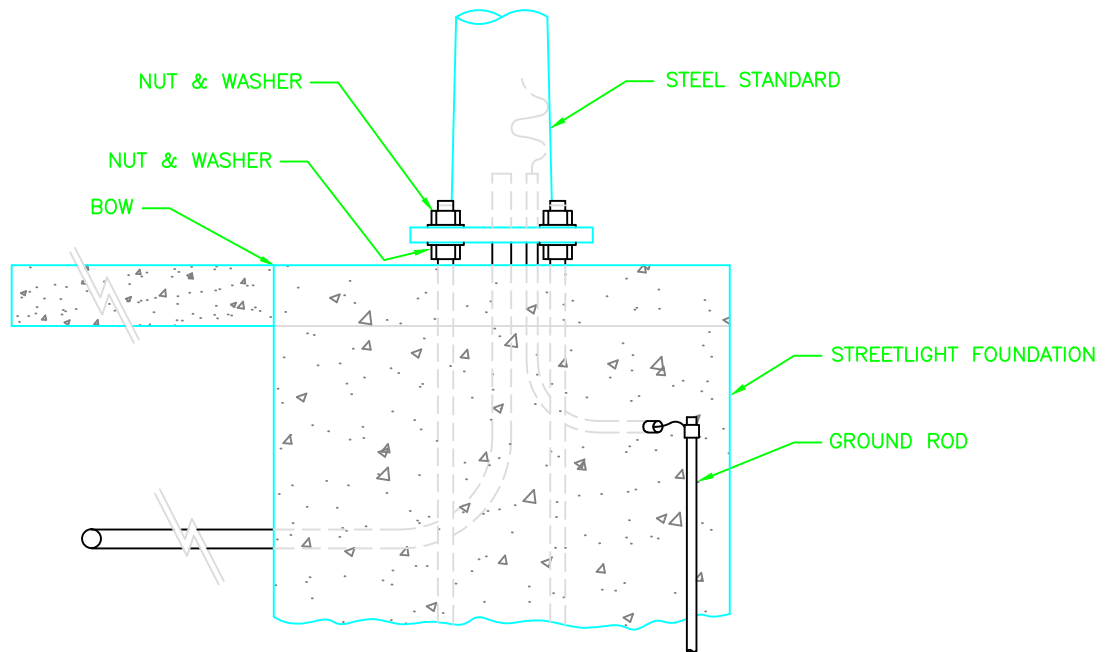
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No.	REVISIONS	DATE	BY	CK'D	APP'D

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD
30' STEEL STREETLIGHT
FOUNDATION DETAIL

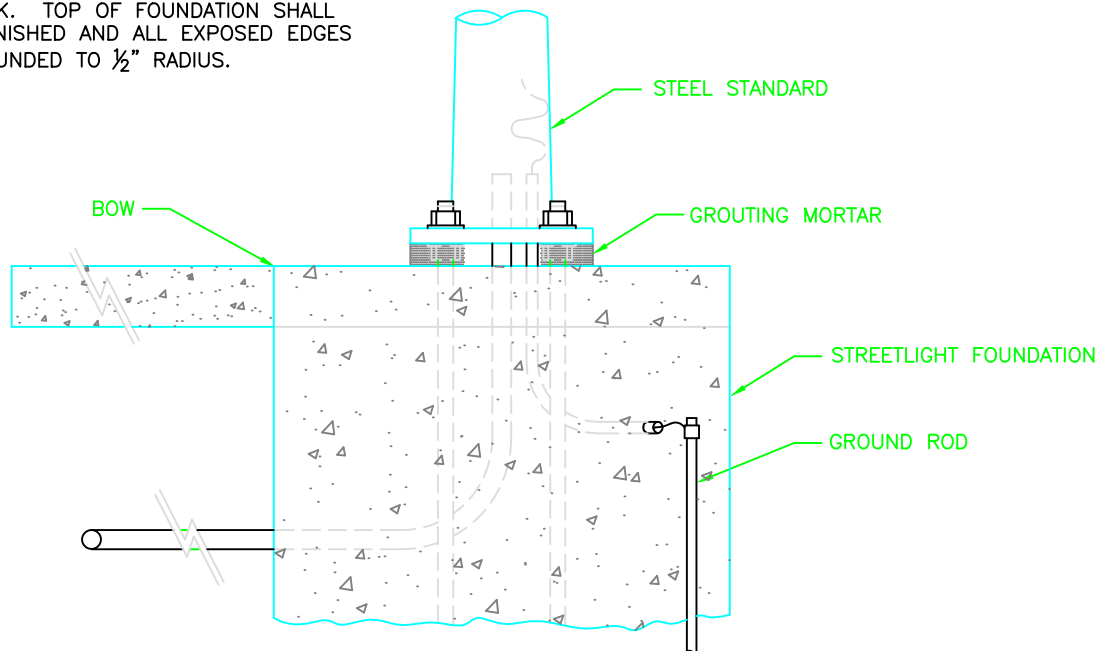
03FEB19	RT	Ams	Ams	SHEET 2 OF 3	504 0201
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION



LEVELING DETAIL

NOTE:

FOUNDATION TO BE LEVEL AND FLUSH WITH BACK OF WALK. TOP OF FOUNDATION SHALL BE BROOM FINISHED AND ALL EXPOSED EDGES SHALL BE ROUNDED TO 1/2" RADIUS.



GROUTING DETAIL

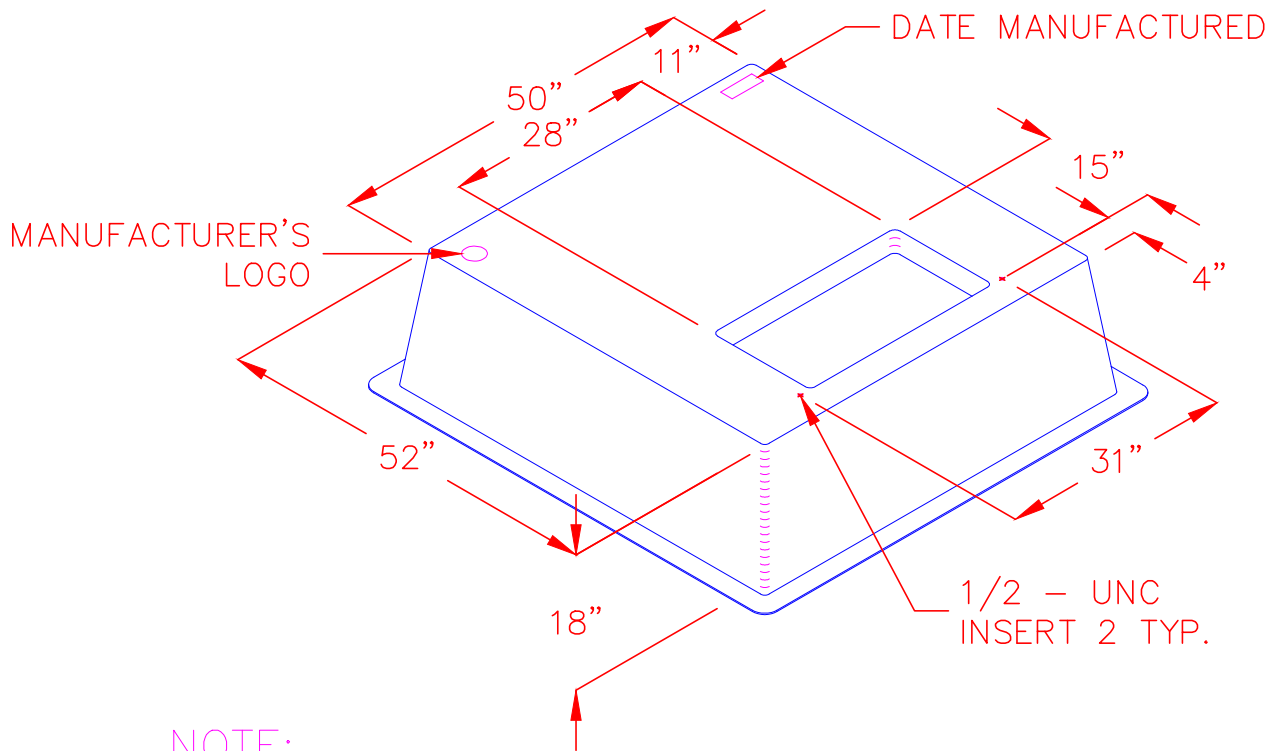
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No.	REVISIONS	DATE	BY	CK'D	APP'D
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CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD
30' STEEL STREETLIGHT
STANDARD INSTALLATION DETAIL

03NOV19	RT	<i>Ams</i>	<i>Ams</i>		SHEET 3 OF 3	504 0201
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	



NOTE:

1. MANUFACTURER REFERENCE: JENSEN PRECAST NO 50X52X18 CODE M360002

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD

TRANSFORMER BOX PAD

02JULY12

AMS

AMS

DATE

DRAWN

DESIGNED

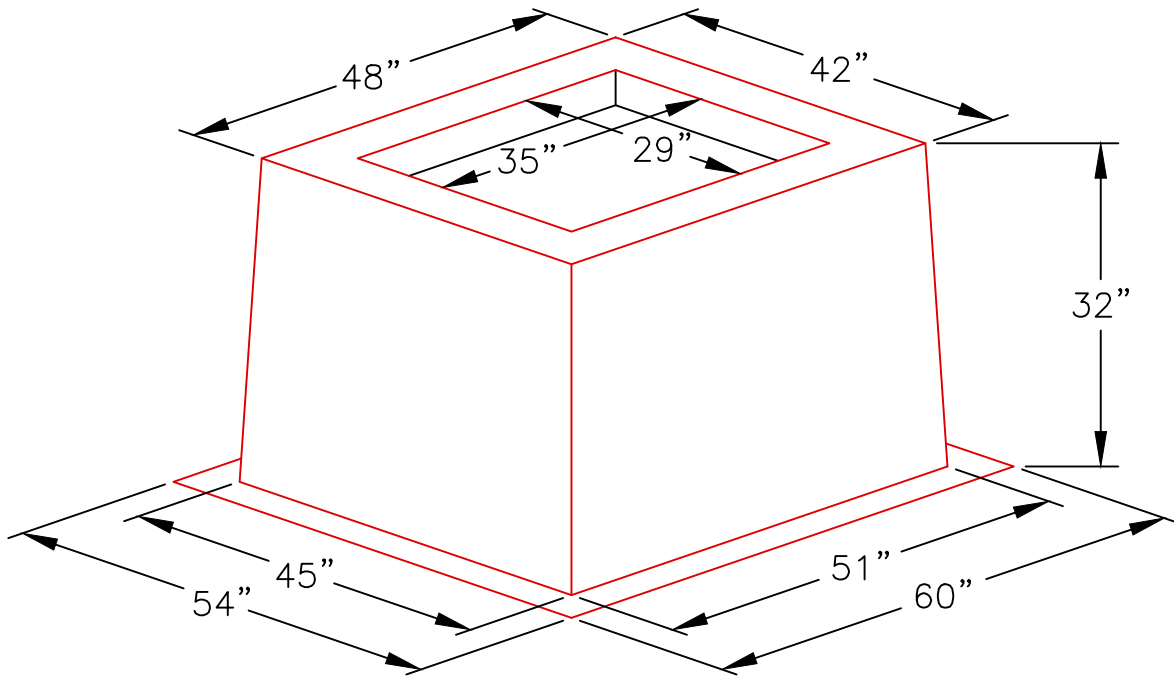
CHECKED

APPROVAL

SHEET 1 OF 1

REVISION

922 5402



NOTE:
1. MANUFACTURER REFERENCE: PROGLASS, INC. NO. TX484232 FOR MALTON ENCLOSURE.

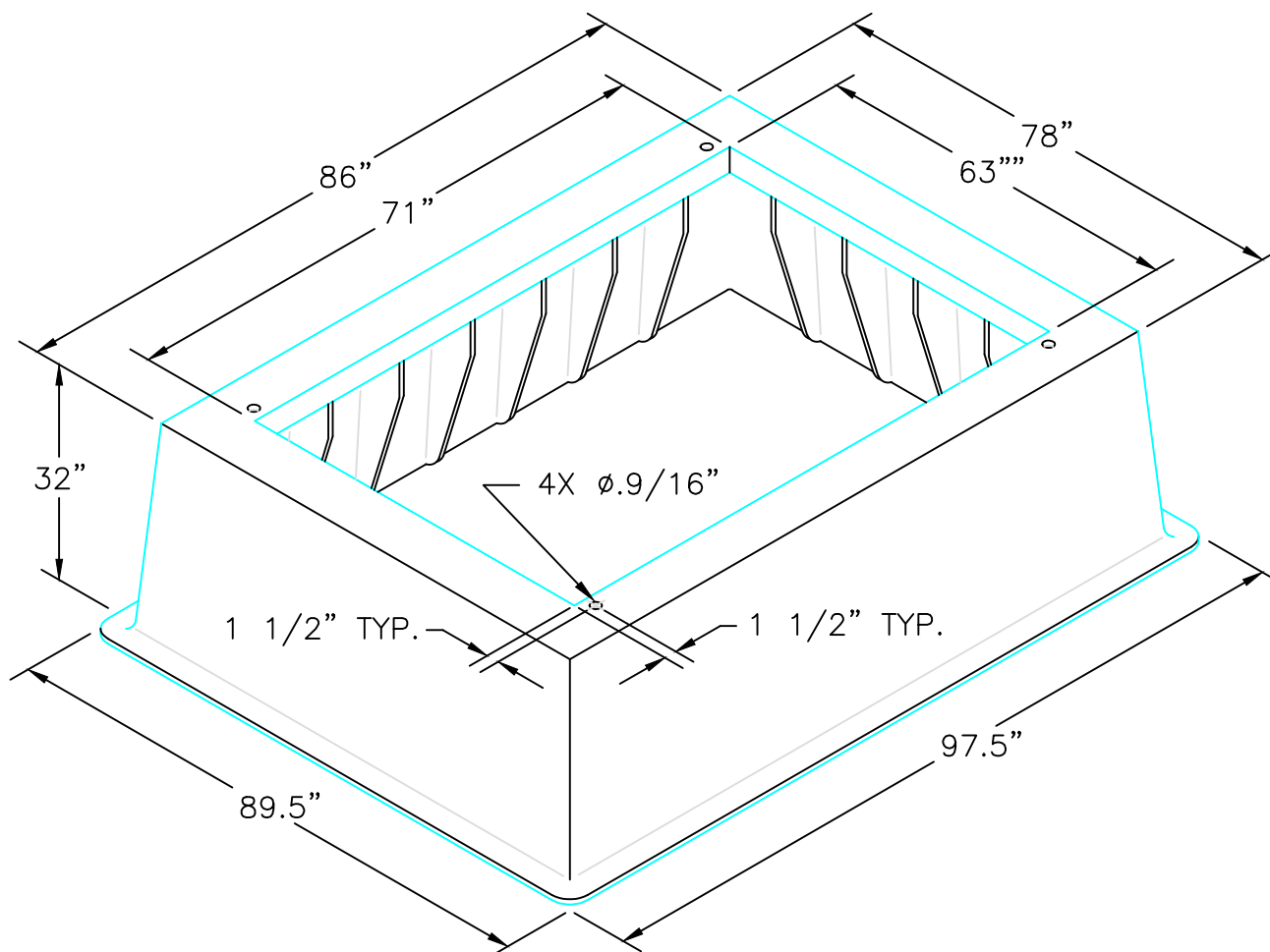
M:\DATA\CAD\STANDARD\SPEC\0922\5405.DWG

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD

MODULE ENCLOSURE BOX PAD

7JULY12	AMS	AMS			SHEET 1 OF 1	PD922 5405
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	



NOTES:

1. PAD SHALL HAVE A MINIMUM LOAD RATING OF 4000 LB.
2. MANUFACTURER REFERENCE: PROGLASS, INC. NO. SG867832

M:\DATA\CAD\STANDARD\SPEC\0922\5406.DWG

CITY OF UKIAH

ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD

PADMOUNTED SWITCH BOX PAD

29DEC10

AMS

AMS

SHEET 1 OF 1

922 5406

DATE

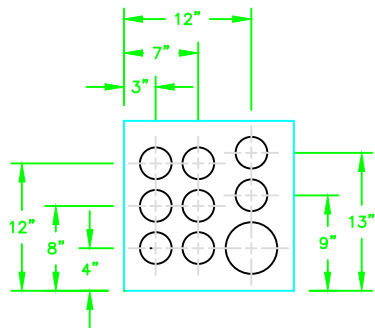
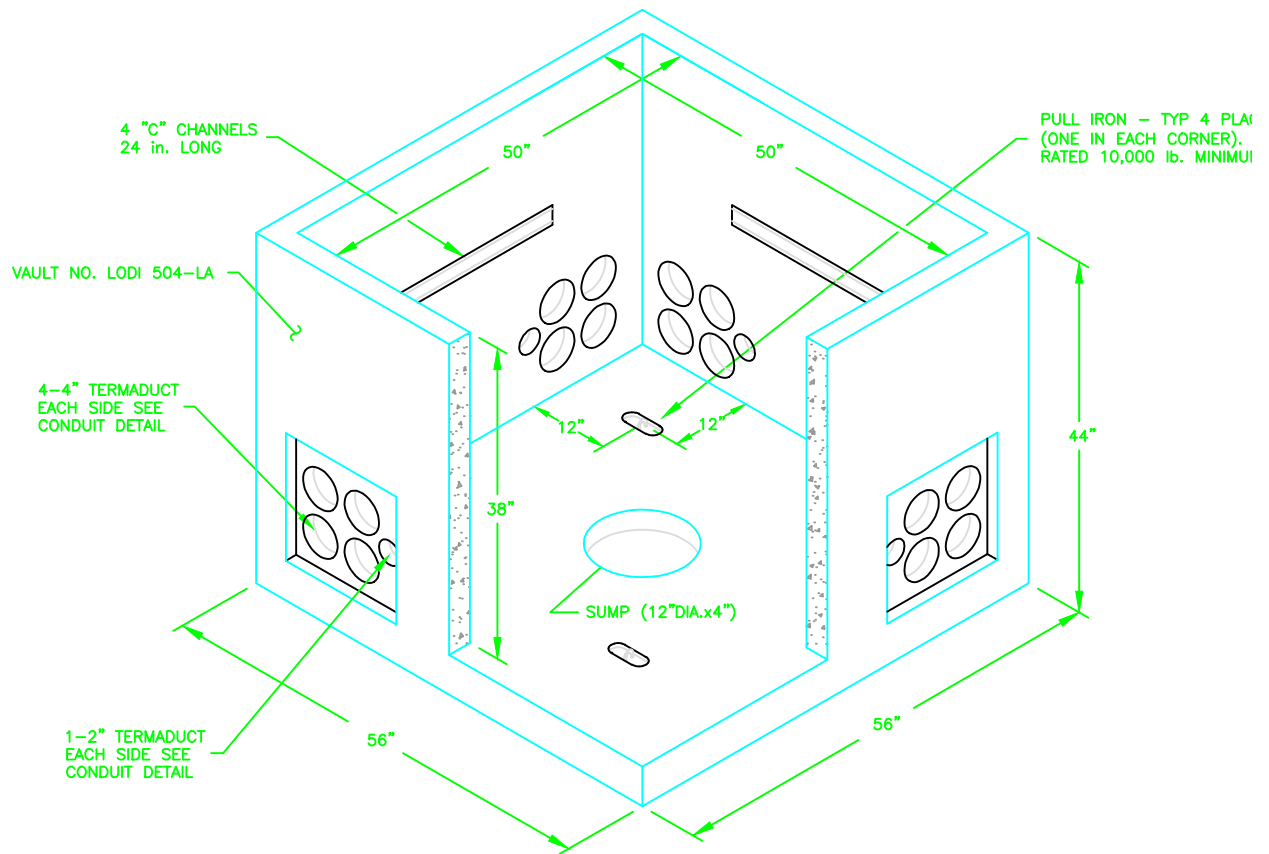
DRAWN

DESIGNED

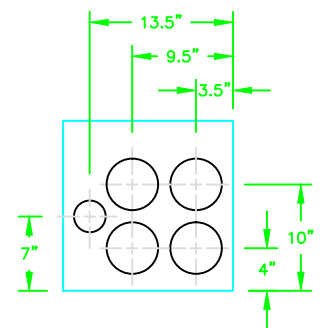
CHECKED

APPROVAL

REVISION



ALTERNATE CONDUIT DETAIL
8-2" AND 1-4"



STANDARD CONDUIT DETAIL
1-2" AND 4-4"

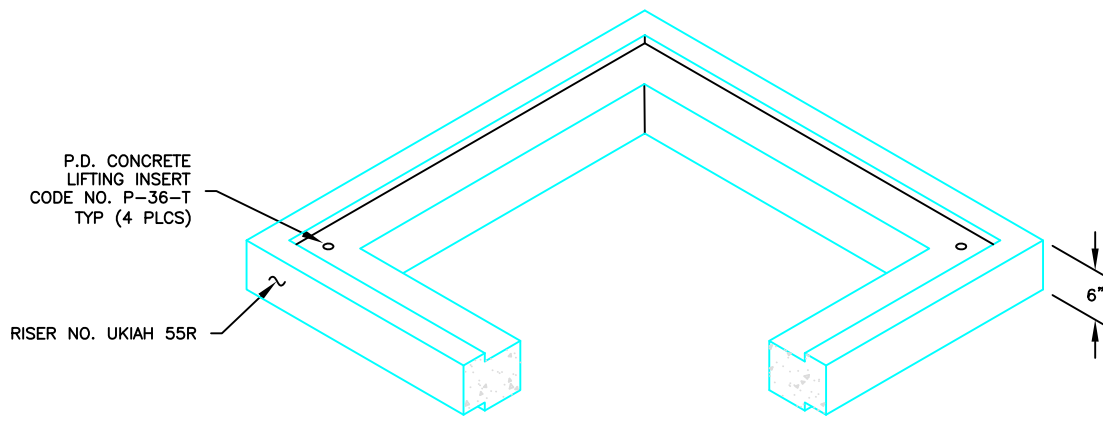
No.	REVISIONS	DATE	BY	CKD

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD

PRIMARY VAULT
UKIAH 504-LA

28DEC10	AMS	AMS			SHEET 2 OF 2	922 5679
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	

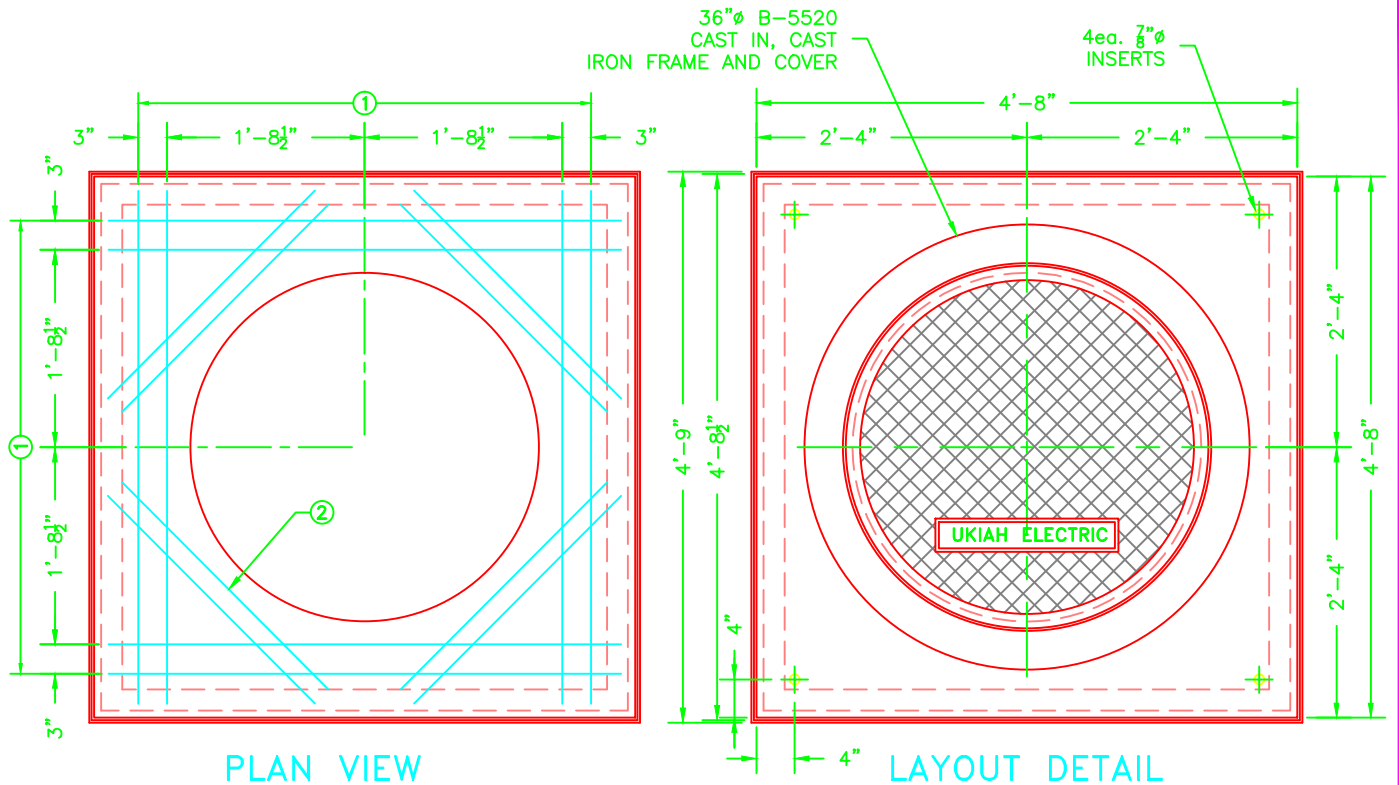


Drawing name: C:\Documents and Settings\AI Smatsky\AutoCAD Files\City of Ukiah\Ukiah OH UG Eng Specs\Engineering Standards\Underground\UKIAH 504LA ex ring 922 5680.dwg Plotted: Mar 24,2011 - 12:44pm

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

CONSTRUCTION STANDARD
PRIMARY VAULT – ACCESSORY RING
UKIAH 504–LA

21OCT10	RF	AMS			SHEET 1 OF 1	922 5680 Page 199 of 964
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	



GENERAL NOTES:

1. CONCRETE: $f'_c = 5,500$ psi ULTIMATE COMPRESSIVE STRENGTH IN 28 DAYS.
2. REINFORCEMENT: A. REBAR: ASTM A706, GRADE 60
B. STRENGTH $F_y = 60,000$ psi.
3. ALL CONCRETE JOINTS TO BE SEALED USING APPROVED JOINT SEALANT UNLESS OTHERWISE NOTED.
4. STRUCTURE DESIGNED FOR TRAFFIC H-20 LOADING PER ASTM C-857. (16,000 lb. WHEEL LOAD)
5. COVER TO BE AN A-1454 BOLT DOWN, MARKED "UKIAH ELECTRIC" WITH "PENTAHEAD" SECURITY BOLT. (TYPICAL) (3)

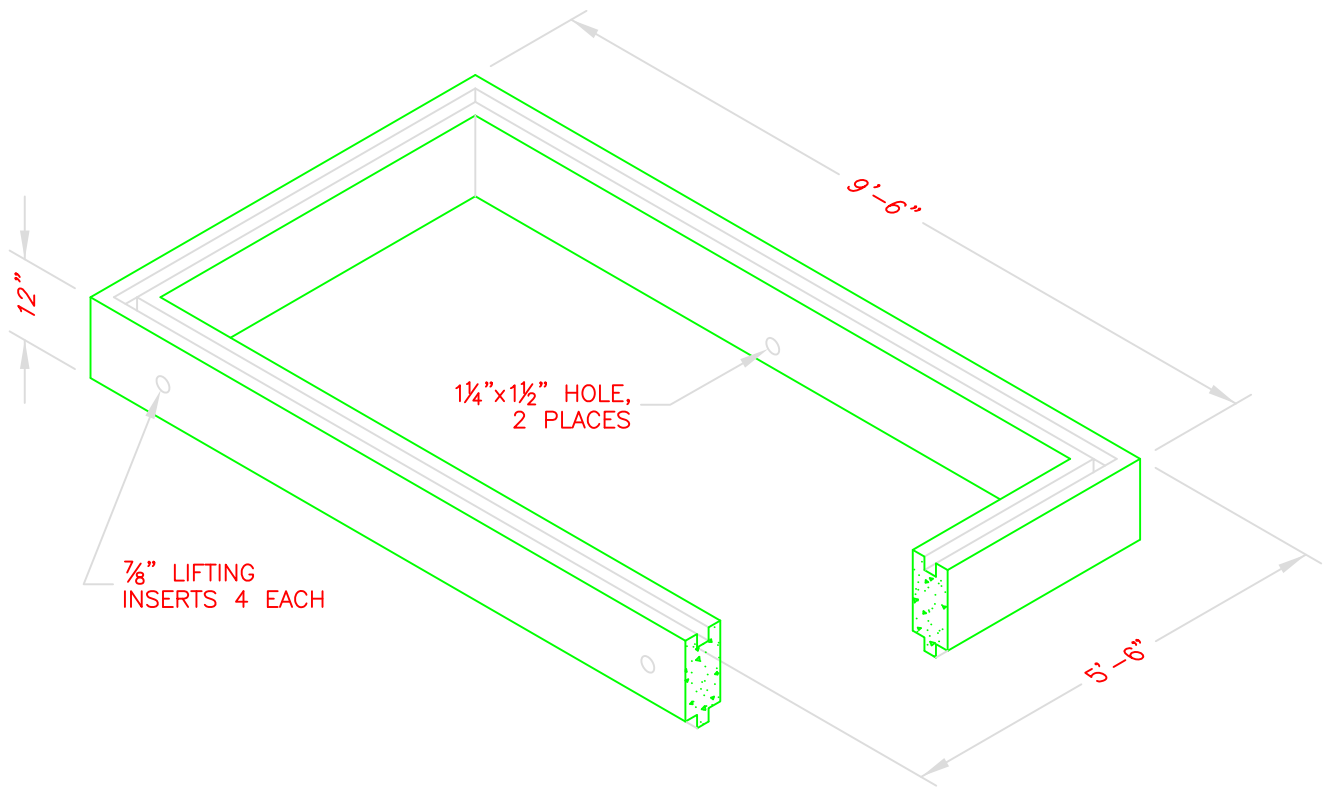
UNIT WEIGHT: 1.300#
(WITHOUT COVER)

		A		B		C			
		17		20					
②	8	5	2'-6"	STR					21#
①	8	6	4'-5"	STR					53#
MARK	QTY	SIZE	LENGTH	TYPE	A	B	C		WEIGHT

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD
PRIMARY VAULT – FULL TRAFFIC
UKIAH – 504

1/11/11	RT	AMS			SHEET 1 OF 1	922 5683
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	



Drawing name: C:\Documents and Settings\AI Smatsky\AutoCAD Files\City of Ukiah\Ukiah OH UG Eng Specs\Engineering Standards\Underground\UKIAH 48 Ex Ring 922 5701.dwg Plotted: Mar 03,2011 - 3:42pm

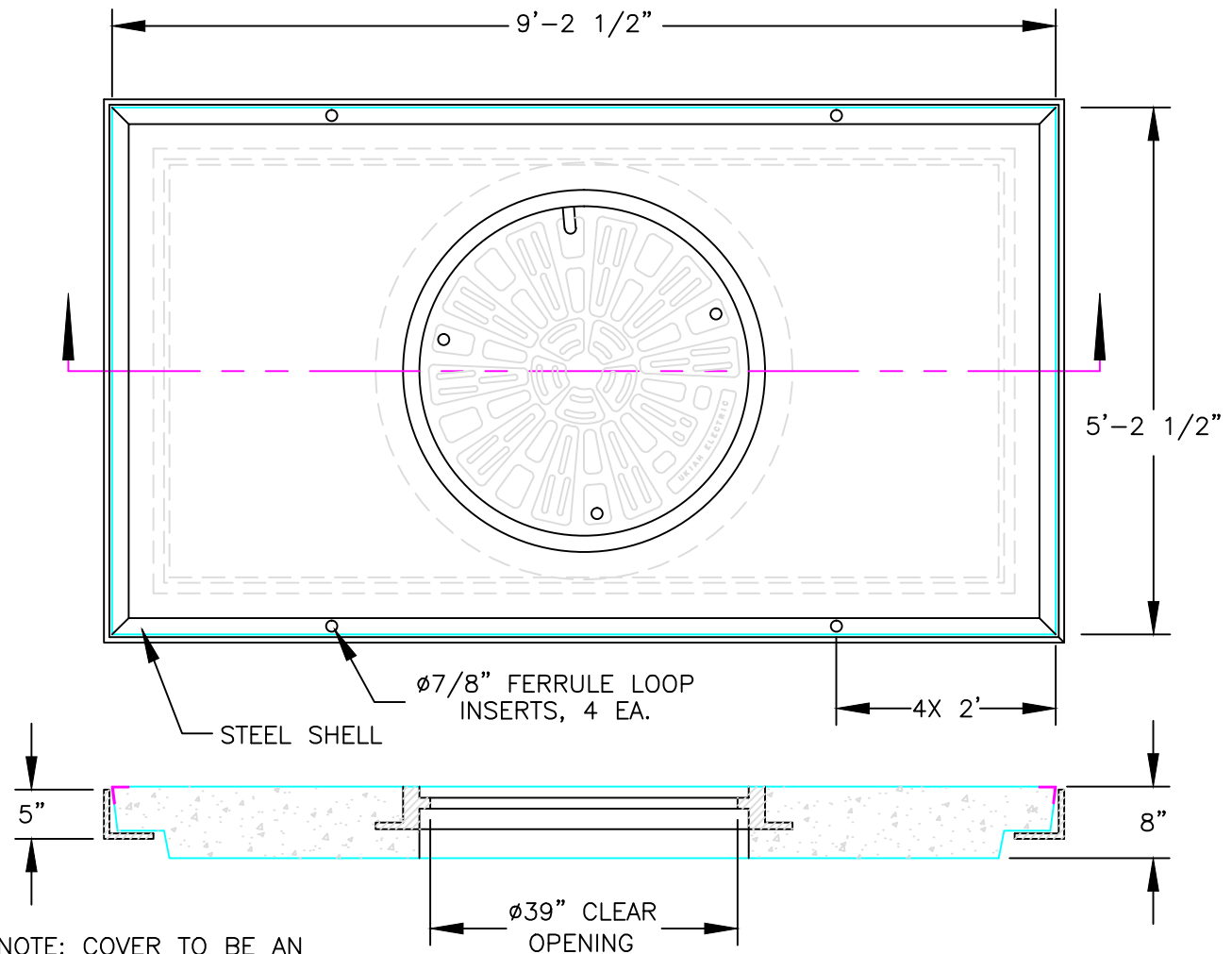
No.	REVISIONS	DATE	BY	CK'D	APP'D

CITY OF UKIAH
ELECTRIC UTILITY DEPARTMENT

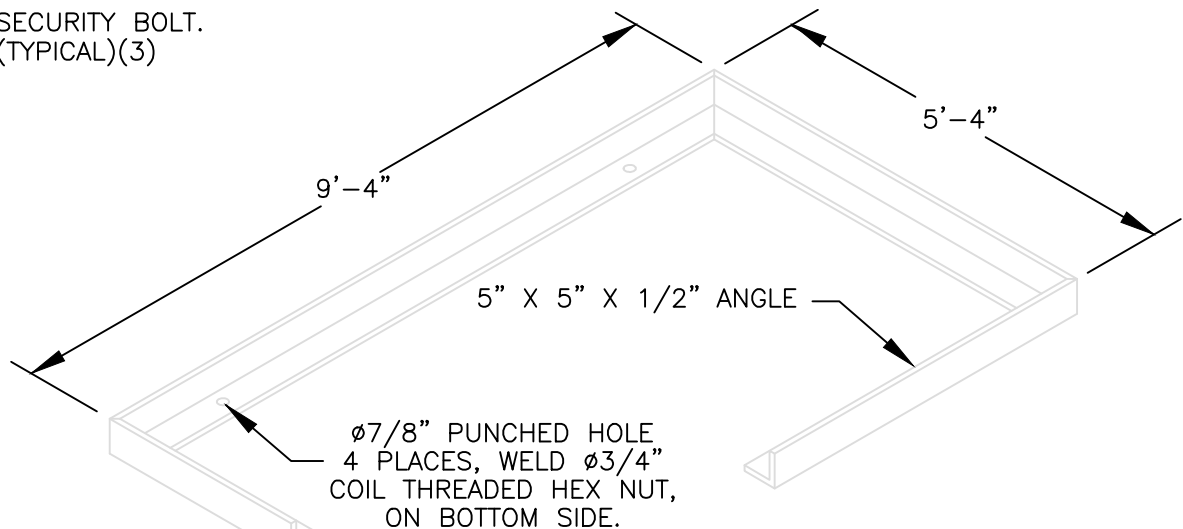
CONSTRUCTION STANDARD

12" EXTENSION RING – FULL TRAFFIC
UKIAH – 48

02OCT10	RF	AMS			SHEET 1 OF 1	922 5701
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	Page 201 of 964



NOTE: COVER TO BE AN A-1454 BOLT DOWN, MARKED "UKIAH ELECTRIC" WITH "PENTAHEAD" SECURITY BOLT. (TYPICAL)(3)



Drawing name: C:\Documents and Settings\AI Smatsky\Autocad Files\City of Ukiah\Ukiah OH UG Eng Specs\Engineering Standards\Underground\UKIAH 48 H-20 Cover 922 5703.dwg Plotted on: Feb 01, 2011 - 4:40pm

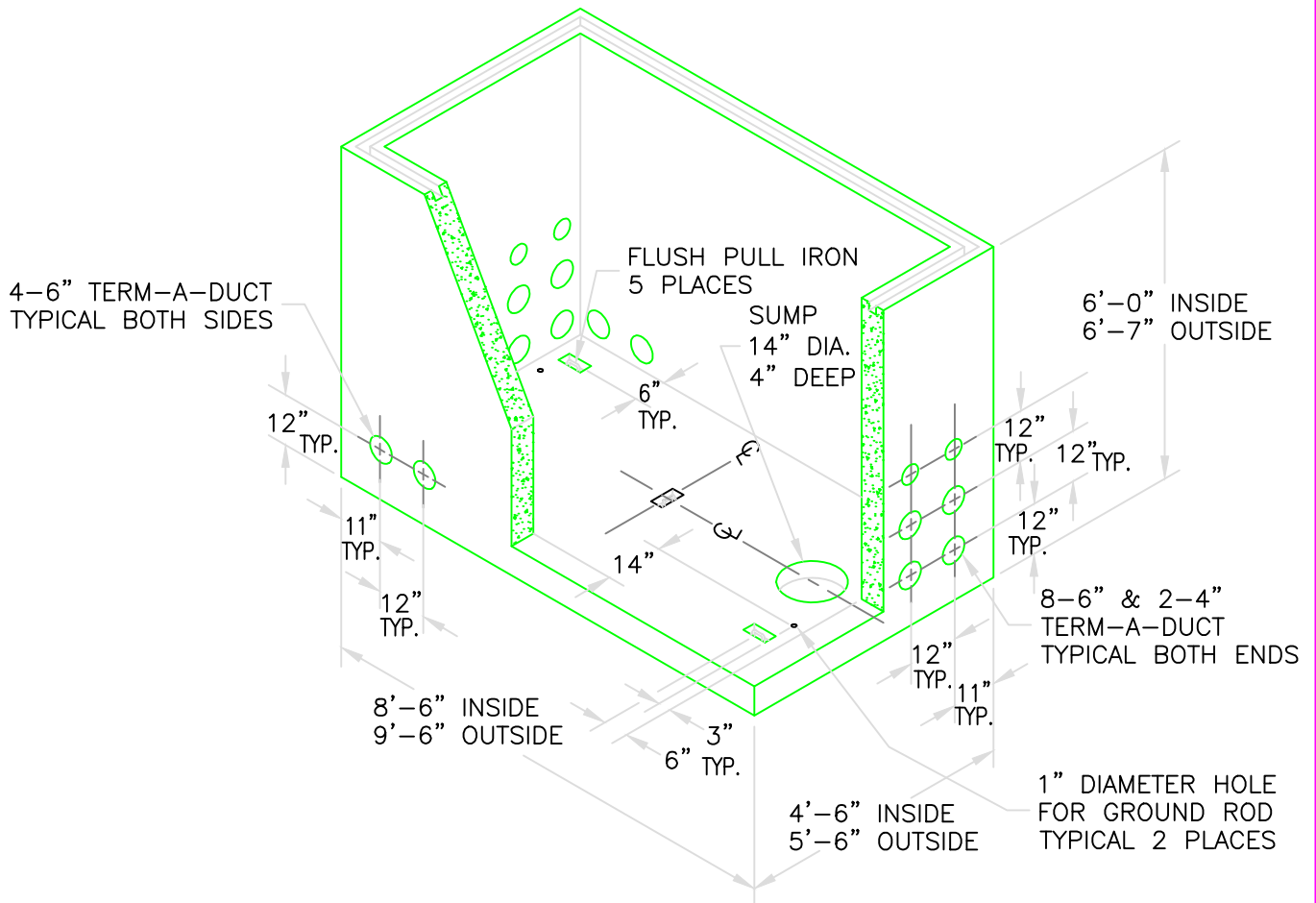
CITY OF UKIAH

ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD

CONCRETE COVER – HEAVY FULL TRAFFIC
UKIAH – 48

28DEC10	AMS	AMS			SHEET 1 OF 1	922 5703
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	



NOTE:

PULL IRON TO BE RATED
10,000 LBS. MIN.

Drawing name: C:\Documents and Settings\AI Smatsky\local settings\temp\AcPublish_10248\UKIAH 48 922 5764.dwg Plotted on: Feb 01, 2011 - 1:02pm

CITY OF UKIAH

ELECTRIC UTILITY DEPARTMENT

ENGINEERING STANDARD

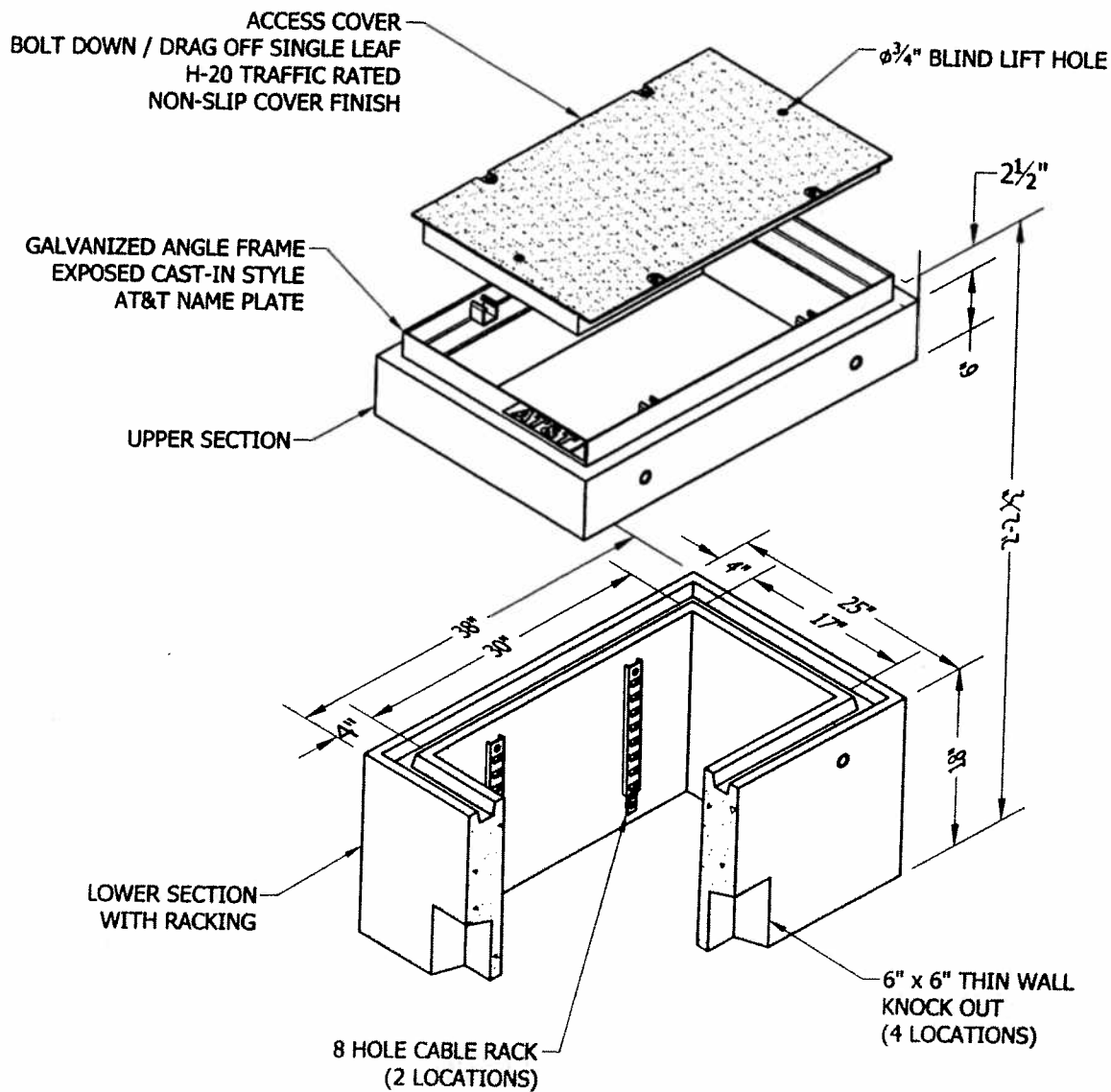
PRIMARY VAULT — FULL TRAFFIC
UKIAH — 48

28DEC10	AMS	AMS			SHEET 1 OF 1	922 5764
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION	

MATERIAL LIST

AT&T PID: 301179750

PART NUM	DESCRIPTION	WEIGHT (LBS)
P8173018AT	17"x30"x18" LOWER SECTION - AT&T	642
CA1730C06AT	17"x30"x6" UPPER SECTION	279
	BOLTDOWN / DRAG OFF ALL GRIP STEEL COVER- AT&T	83



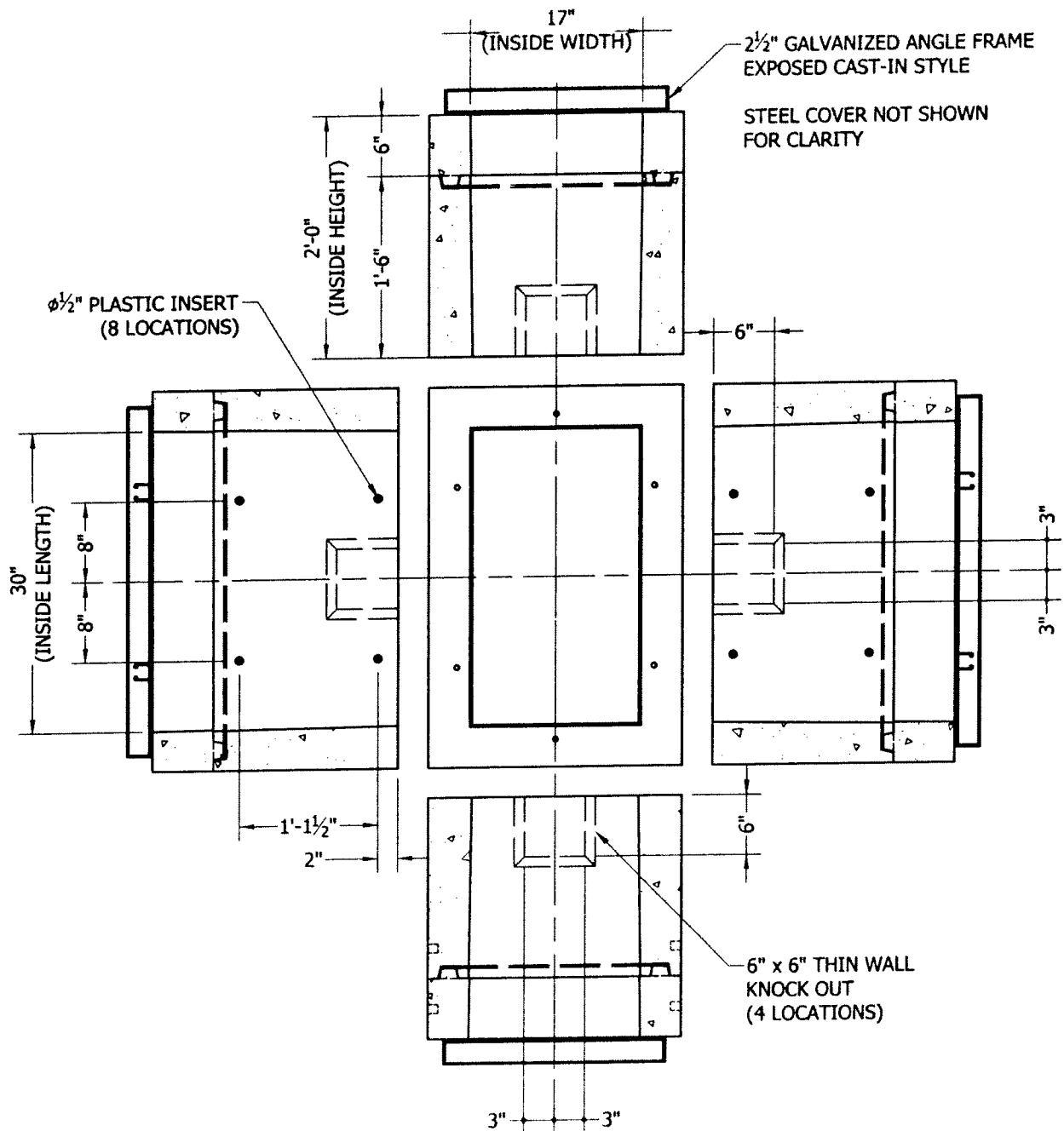
CUSTOMER SERVICE
Order and Delivery assistance
800 843-9569

JENSEN
PRECAST

JENSENPRECAST.COM

17"x30"x24"
AT&T SPLICE BOX
TRAFFIC RATED DRAG OFF
NON-SLIP COVER

ISSUE DATE: 07/11/2012
AGENCY SERIES:
PART #: K173024AT



**INSIDE FOLD OUT
DETAILED VIEW**

CUSTOMER SERVICE
Order and Delivery assistance
800 843-9569

JENSEN
PRECAST

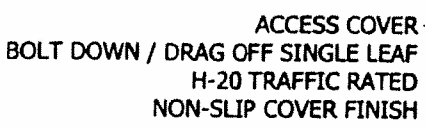
JENSENPRECAST.COM

17"x30"x24"
AT&T SPLICE BOX
TRAFFIC RATED DRAG OFF
NON-SLIP COVER

ISSUE DATE: 07/11/2012
AGENCY SERIES:
PART #: K173024AT

MATERIAL LIST		
PART NUM	DESCRIPTION	WEIGHT (LBS)
PB2436AT	2'-0" x 3'-0" x 24" LOWER SECTION - AT&T	1021
CA2436C06AT	2'-0" x 3'-0" x 6" UPPER SECTION - AT&T	343
	BOLT DOWN / DRAG OFF NON-SLIP STEEL COVER - TRAFFIC	160

AT&T PID: 301179768



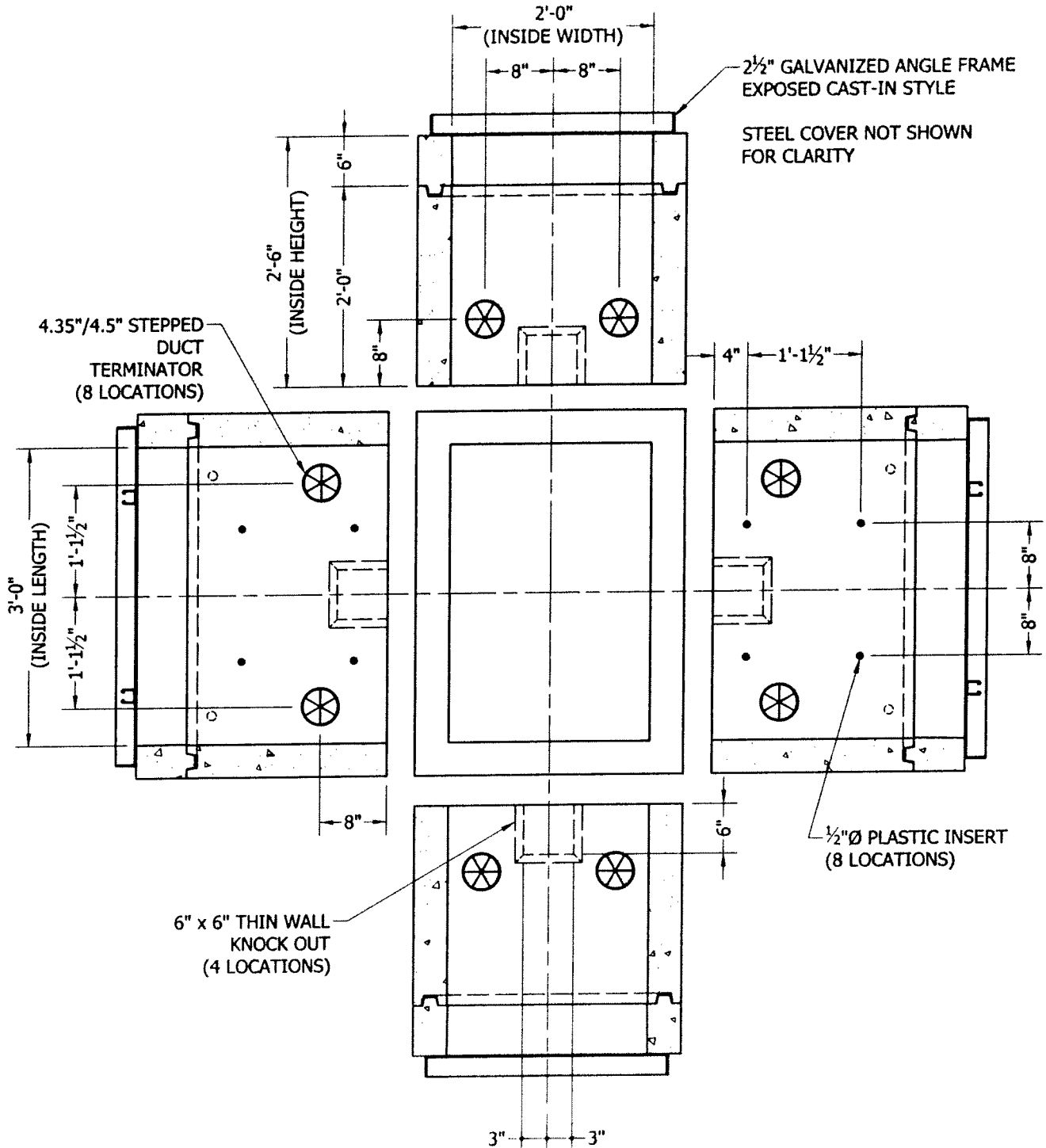
UPPER SECTION-

4.35"/4.5" STEPPED
DUCT TERMINATOR
(8 LOCATIONS)

6" x 6" THIN WALL
KNOCK OUT
(4 LOCATIONS)

JENSEN
PRECAST

K243630AT



INSIDE FOLD OUT
DETAILED VIEW

CUSTOMER SERVICE
Order and Delivery assistance
800 843-9569

JENSEN
PRECAST

JENSENPRECAST.COM

2'-0"x3'-0"x2'-6"
AT&T SPLICE BOX
TRAFFIC RATED DRAG OFF
NON-SLIP COVER

ISSUE DATE: 07/11/2012
AGENCY SERIES:
PART #: K243630AT

MATERIAL LIST

AT&T PID: 000600072

PART NUM	DESCRIPTION	WEIGHT (LBS)
PB35AT48	3'-0" x 5'-0" x 4'-0" BASE WITH RACKING - AT&T	5214
CA35ATINS	TORSION HINGED NON-SLIP STEEL COVER - TRAFFIC RATED	445

ACCESS COVER
TORSION HINGED DOUBLE LEAF
H-20 TRAFFIC RATED (NON IMPACT)
NON-SLIP COVER FINISH
ADJUSTABLE SKIRTED STYLE FRAME
AT&T NAME PLATE

BASE SECTION
WITH RACKING

4.35"/4.5" STEPPED
DUCT TERMINATOR
(16 LOCATIONS)

Ø7/8" PULL IRON
STRESS RELIEVED,
GALVANIZED
(4 LOCATIONS)

18 HOLE CABLE RACK
(4 LOCATIONS)

Ø12" x 2" SUMP

CUSTOMER SERVICE
Order and Delivery assistance
800 843-9569

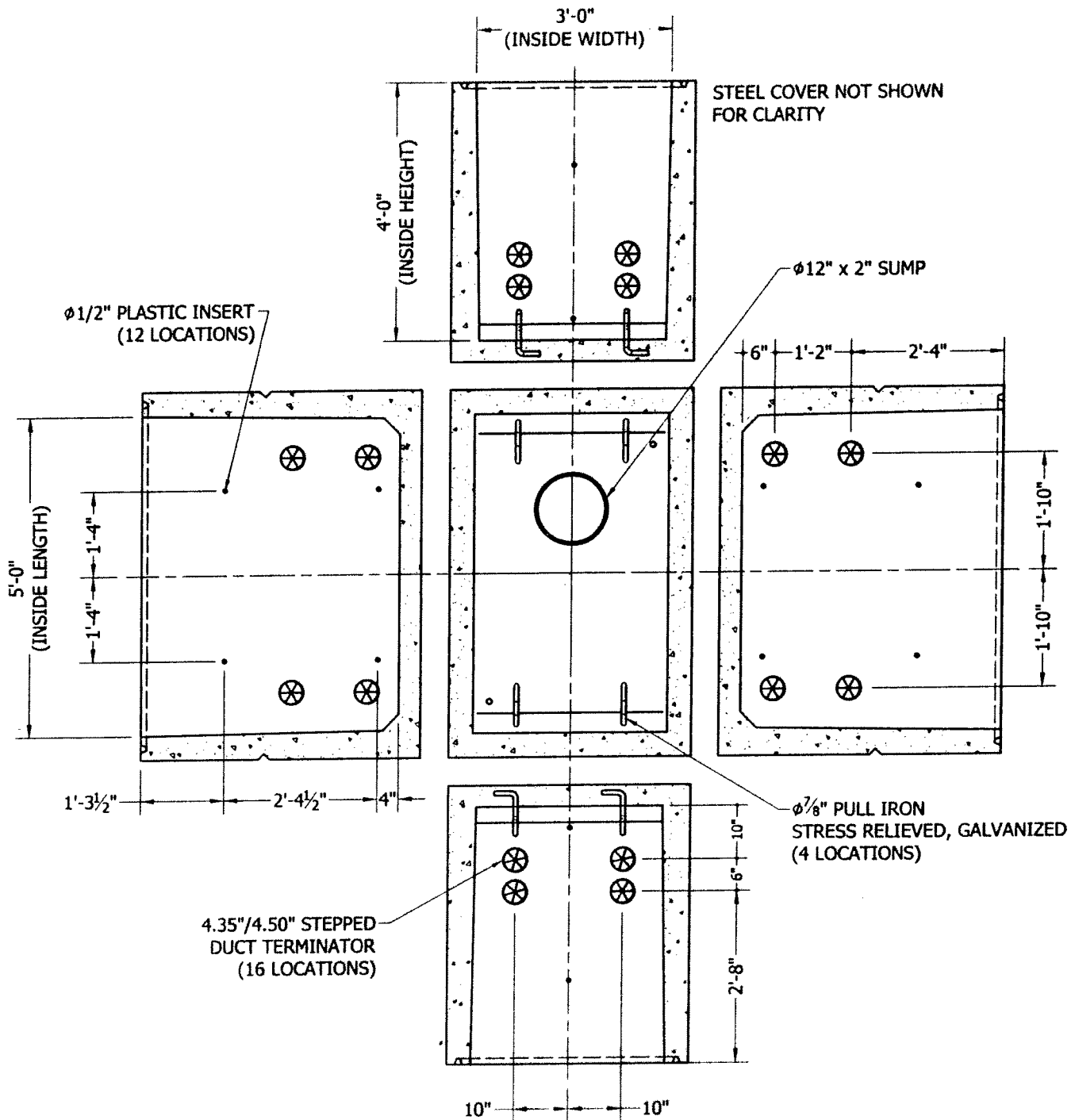
JENSEN
PRECAST

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3'-0"x5'-0"x4'-0"
AT&T SUB-SURFACE ENCLOSURE
TRAFFIC RATED HINGED
NON-SLIP COVER

ISSUE DATE: 07/11/2012
AGENCY SERIES: PTS-3660
PART #: K35T48AT

K35T48AT SH11 C.DWG



**INSIDE FOLD OUT
DETAILED VIEW**

CUSTOMER SERVICE
Order and Delivery assistance
800 843-9569

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3'-0" x 5'-0" x 4'-0"
AT&T SUB-SURFACE ENCLOSURE
TRAFFIC RATED HINGED
NON-SLIP COVER

ISSUE DATE: 07/11/2012
AGENCY SERIES: PTS-3660
PART #: K35T48AT

MATERIAL LIST

PART NUM	DESCRIPTION	WEIGHT (LBS)
PB466AT	4'-0" x 6'-6" x 4'-0" BASE WITH RACKING - AT&T	9823
CA466ATINS	TORSION HINGED NON-SLIP STEEL COVER - TRAFFIC RATED	710

AT&T PID: 000600304

ACCESS COVER
TORSION HINGED DOUBLE LEAF
H-20 TRAFFIC RATED (NON IMPACT)
NON-SLIP COVER FINISH
ADJUSTABLE SKIRTED STYLE FRAME
AT&T NAME PLATE

22 HOLE CABLE RACK
(8 LOCATIONS)

BASE SECTION
WITH RACKING

4.35"/4.5" STEPPED
DUCT
TERMINATOR
(20 LOCATIONS)

Ø7/8" PULL IRON
STRESS RELIEVED, GALVANIZED
(4 LOCATIONS)

12"Ø x 4" SUMP

12½" x 24" TERMINATOR PAN
(8 LOCATIONS)

CUSTOMER SERVICE
Order and Delivery assistance
800 843-9569

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4'-0"x6'-6"x4'-0"
AT&T SUB-SURFACE ENCLOSURE
TRAFFIC RATED HINGED
NON-SLIP COVER

ISSUE DATE: 07/11/2012
AGENCY SERIES: PTS-4878
PART #: K466DTATT

Page 211 of 964



AT&T

Specifications

Trenching

Conduit

Boxes

A Guide for California Residential Property Owners in a Municipal Underground District

This guide consists of AT&T California specifications and diagrams for trenching and underground support structure and other make ready work performed by property owners and their agents as required by AT&T for conversion of its aerial communication facilities on residential private property. Any deviation from the specifications provided in this document must be approved by the local AT&T Engineer.

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General Information on Underground Districts.....	3
General Construction Requirements	3
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Conduit.....	5
Pull Boxes	6
Pull Box Diagram.....	7
Bonding and Grounding	8

General Information on Underground Districts

Your local municipality has passed an ordinance in your neighborhood for the conversion of aerial communication and power facilities to underground facilities. The area to be converted from aerial to underground facilities is referred to as the “District”.

AT&T’s California Public Utility Commission Tariff Schedule A2 defines responsibilities for both the property owner and AT&T to convert the communication facilities on private property as described below.

The property owner is responsible for the trenching and underground supporting structure (conduit and pull boxes) between the public way and the building on your private property.

AT&T is responsible for converting the existing aerial service wire or cable to underground using the supporting structure provided by the property owner.

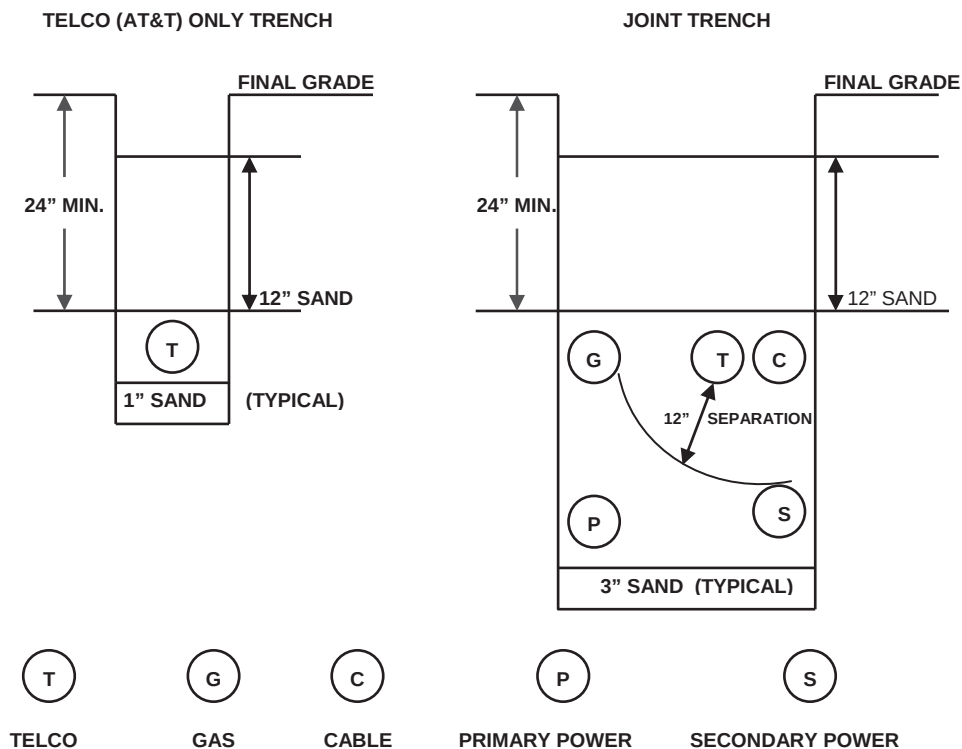
The trench work on the private property must be completed prior to the start of construction scheduled for your neighborhood street.

General Construction Requirements

- 4. Construct trench and place substructures according to AT&T plans and specifications.**
- 5. Request and get authorization for any design change from the AT&T engineer or AT&T inspector prior to implementing the change.**
- 6. Call [insert phone no.] for questions or information regarding the requirements in this Guide.**
- 7. All trenching and conduit work must be completed on your private property before the scheduled date for conversion of facilities on your neighborhood street.**

Trenching

1. The trench route from the telephone box on your house to the boundary of the street at your property line will be determined by AT&T.
2. Minimum radial clearance from all other trench occupants, except CATV, must be no less than 12 inches. A minimum 24" of coverage (dirt backfill) over the conduit is required within 5' of your property line (trench depth should be 27"). A minimum of 18" of coverage is acceptable for the remainder of the trench.
3. There may be no more than two 90 degree bends or a combination of bends that exceed 180 degrees total. If this requirement can not be met, then a minimum size 11" x 17" pull box must be installed in the conduit run in lieu of the bend. Consult with the AT&T engineer if necessary.



Conduit

Conduit placed for AT&T must be for its exclusive use. AT&T will not occupy the same conduit with other utilities or foreign cable/communication systems. AT&T may refuse to occupy conduit that deviates from our plans and specifications.

The property owner is responsible for repairing or resolving any problems with the conduit they have installed that prevents AT&T from pulling its wire through the conduit using normal installation methods. Conduit must be rodded, cleared, and roped prior to AT&T pulling in wire.

Material Requirements

1. Two inch (2") conduit must be type PTS 66/DB 120 rigid plastic or Schedule 40.
 - Minimum sweep for 2" conduit is a two ft 90 degree radius
 - Maximum of two (2) 90 degree bends
 - Install one quarter inch (1/4") plastic rope pull line, No. 12 pull wire, or weather proof pull tape
2. Rigid steel, condulets, plumber's fittings, flexible tubing, or water and gas pipes are not acceptable materials.

Installation Requirements

1. Minimum trench coverage for conduit is detailed under Trenching.
2. Conduit must be terminated into the ends or sides of the box. Conduit may not enter the bottom of the box.
3. Conduits at the house must be plugged by the property owner to provide a seal against water intrusion.
4. Use a temporary universal plug to keep conduit free of debris. Cap all stubbed conduit. Stake conduit at property line for AT&T tie-in.

Pull Boxes

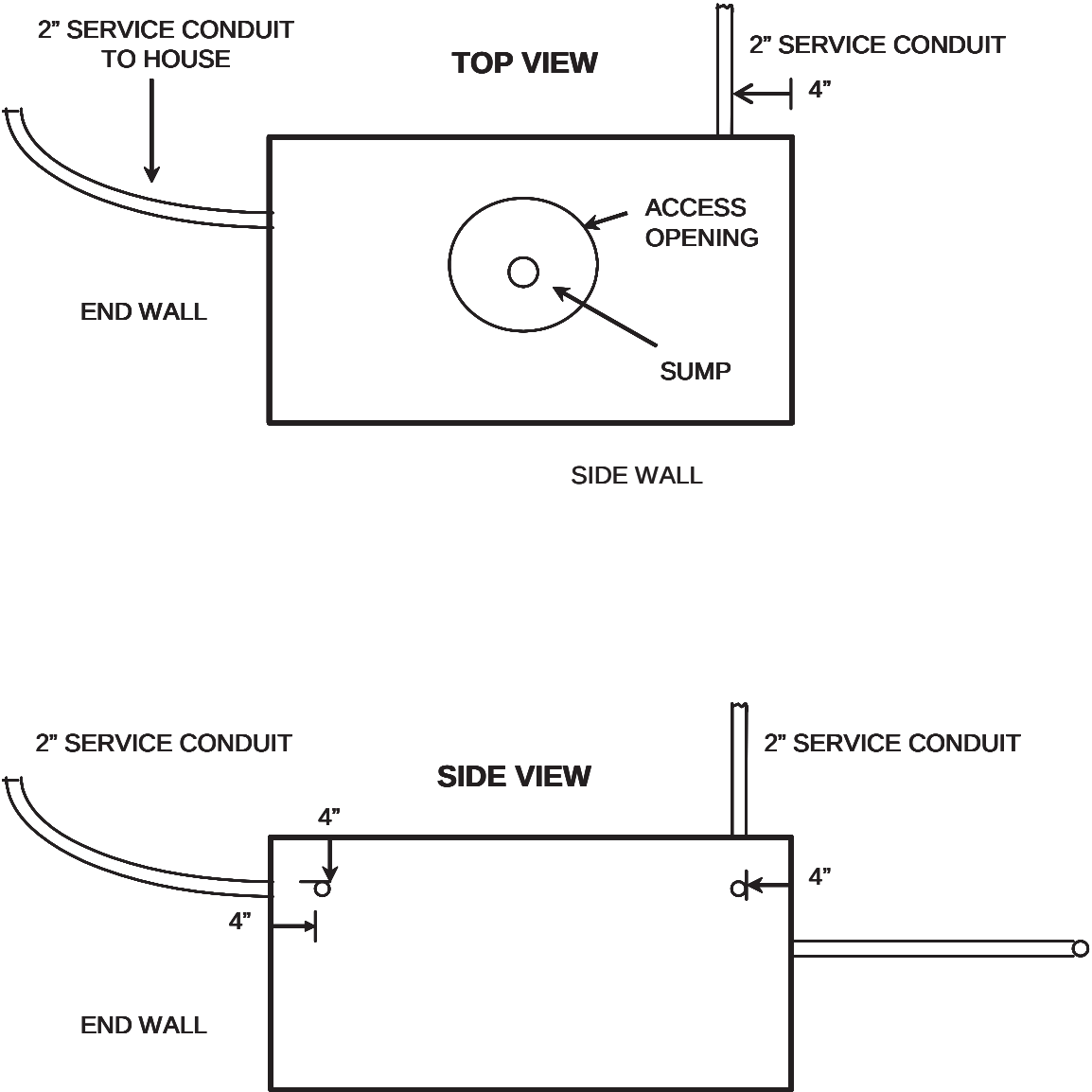
Material Specifications

All pull boxes that will be owned and maintained by the property owner must be approved for use by AT&T. You may purchase from any manufacturer that meets AT&T's specifications for boxes. Boxes placed on private property and owned by the property owner must have a generic telephone emblem on the lid. The use of AT&T's name or logo is not permitted on a property owner's box. The pull box must be for AT&T's exclusive use. AT&T will not install its facilities in any box that is also being used by other utilities.

Installation Specifications for Boxes

1. Boxes must be installed at the final grade of the property.
2. A pull box for drainage and to prevent water from entering your house is required on your property at the property line when the conduit to the telephone box on your house is below sidewalk elevation or when your house is more than 2% down grade from the street elevation.
3. A minimum of six inches (6") of compacted sand, graded level is required under all pull boxes. Equip each box with sump hole and crushed rock for drainage.
4. Conduit must terminate at the end wall or side wall of a pull box. Entry through the bottom of a box is not acceptable.
5. All conduits entering knockouts in a plastic or polymer box must be cut within one inch (1") flush with the inside of the wall and sealed. Bush ends on conduit to remove sharp edges. All joints must be mortared and all unused ports and openings sealed. Use cement mortar, water plug cement or other approved prepared mortars.

CONDUIT TERMINATIONS IN PULL BOXES



DO NOT INSTALL SERVICE CONDUITS INTO THE BOTTOM OF THE BOX

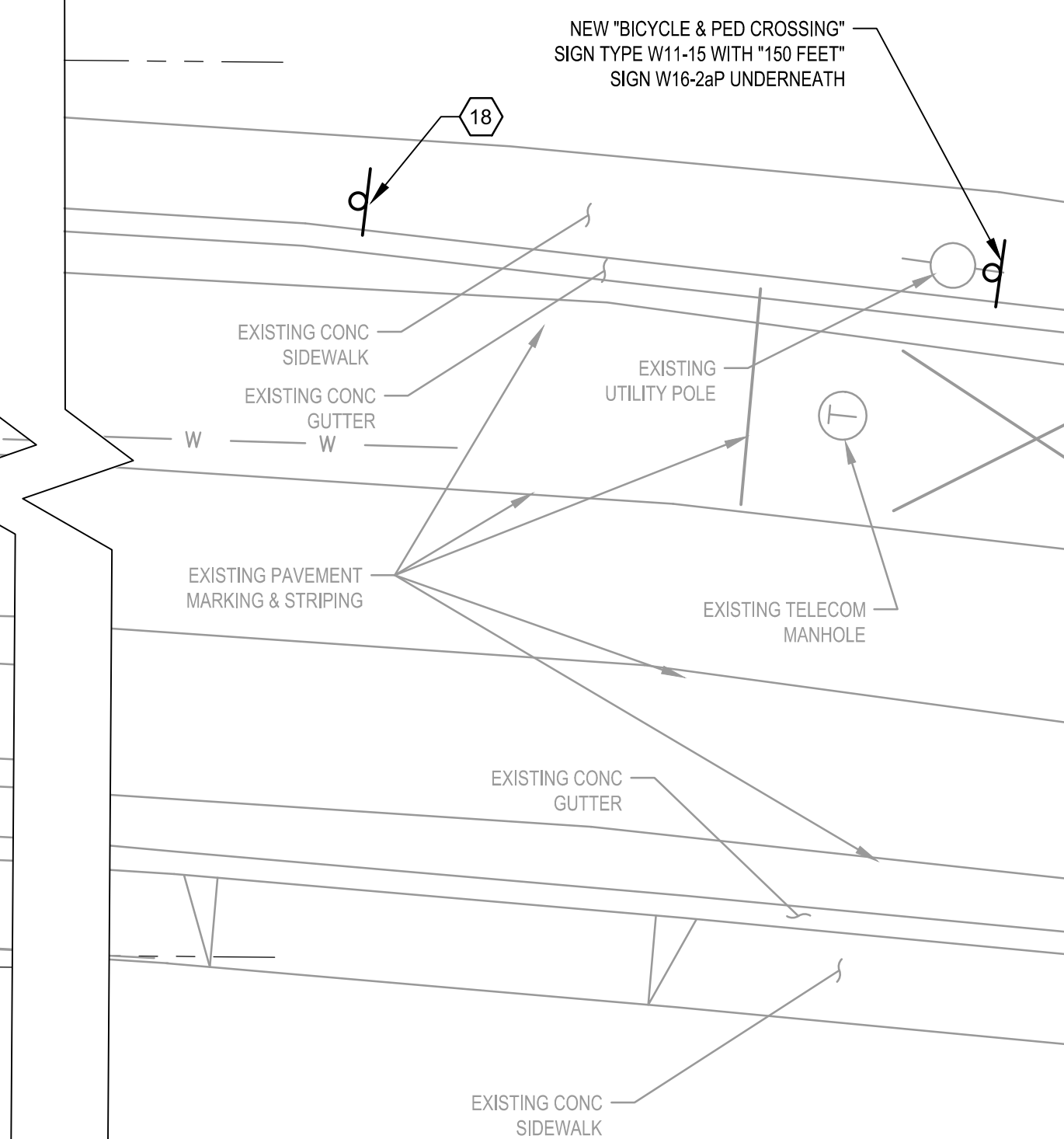
Bonding and Grounding

Bonding and grounding requirements must meet the National Electrical Code. Grounding Options are listed in the order of preference.

- 1. #10 copper ground wire to Electrical Power Service Grounding Electrode, Service Grounding Electrode Conductor or Service Panel**
- 2. #10 copper ground wire to a Concrete-Encased Electrode meeting the requirements of the NEC (UFER Ground)**
- 3. #10 copper ground wire to a Ground Ring meeting the requirements of the NEC or to the metal frame of the building which is effectively grounded.**

KEYNOTES

- SEE SHEET C101 FOR
TRAIL IMPROVEMENTS



REMOVE ALL EXISTING STRIPING AND MARKINGS
WITHIN LIMITS OF PLANNED IMPROVEMENTS

GOBBI STREET INTERSECTION

Client	CITY OF UKIAH		
Project	NORTHWESTERN PACIFIC RAIL TRAIL PROJECT - PH		
Title	GOBBI STREET INTERSECTION IMPROVEMENT PLAN		
Contract No.	8410167		
Original Size	A		11
Sheet	24	of	38
ANSI D	Drawing No: C401		Rev:

GENERAL ENGINEERING SPECIFICATIONS

ALL SUBSTRUCTURE LAYOUT AND DESIGN COMPLETED BY OUTSIDE PERSONNEL MUST BE ***REVIEWED AND APPROVED*** BY CABLECOM OF CALIFORNIA, INC ENGINEERING PERSONNEL ***30 DAYS PRIOR TO CONSTRUCTION START***. ALL SUBSTRUCTURE DRAWINGS OR COMPOSITES SHALL BE TO SCALE (PREFERABLY 1" = 100') AND ***SHALL INDICATE TRENCH ROUTE AND FOOTAGE***. DRAWINGS MUST BE COMPLETED TO COMCAST CORP. CABLE STANDARDS USING COMCAST CORP. CABLE SYMBOLS AS INDICATED ON ATTACHED SHEET.

TRENCHING SPECIFICATIONS

ALL MAINLINE CONDUIT (2" CONDUIT INSTALLED IN PUBLIC RIGHT OF WAYS, STREETS OR DRIVEWAYS) SHALL BE INSTALLED AT A ***MINIMUM DEPTH OF 24" BELOW FINISHED GRADE***.

SERVICE CONDUIT INSTALLED ON PRIVATE PROPERTY IN DIRT OR PLANTER AREAS MUST HAVE A ***MINIMUM COVER DEPTH OF 12" BELOW FINISHED GRADE***.

CONDUITS SHOULD BE PROTECTED WITH A ***MINIMUM OF 3" OF SAND IN THE BASE*** OF THE TRENCH AND CONDUIT SHOULD BE ***COVERED WITH A MINIMUM OF 3" OF SAND*** PRIOR TO INTERMEDIATE BACKFILL. ALL TRENCHES MUST BE ***COMPACTED TO A MINIMUM OF 95 PERCENT***.

COMCAST CORP. CABLE PREWIRE SPECIFICATIONS

THE NATIONAL ELECTRIC CODE, AS IT PERTAINS TO THE CLASSIFICATION AND LABELING OF ALL CATV WIRE USED IN COMMERCIAL AND RESIDENTIAL STRUCTURES IS AS FOLLOWS:

CATVP - TO BE USED IN AIR HANDLING SPACES (PLENUMS)

CATVR - TO BE USED IN RISER SHAFTS (ANY VERTICAL PASSAGEWAY)

CATVX - TO BE USED AS WIRING IN RESIDENTIAL OR COMMERCIAL BUILDING AREAS OTHER THAN THOSE LISTED ABOVE.

THE CABLE THAT CURRENTLY MEETS COMCAST CORP. SPECIFICATIONS IS **RG6** AND IS MANUFACTURED BY COMMSCOPE. THIS CABLE CAN BE PURCHASED THROUGH COMCAST CORP.

DIFFERENT VENDORS MAY OFFER AN EQUIVALENT TYPE OF WIRE, BUT IF YOU USE CABLE OTHER THAN COMMSCOPE CONTACT THE CONSTRUCTION COORDINATOR FOR THIS AREA FOR APPROVAL. NAME AND NUMBER ARE ON THE THIRD PAGE OF THIS LETTER.

PLEASE NOTE: SERVICE LEADS ARE NOT TO EXCEED 150'

FOR SERVICE LEADS OVER 150' USE **RG11** OR CALL FOR INSTRUCTIONS

COMCAST CORP. RESERVES THE RIGHT TO REFUSE ANY WIRING THAT DOES NOT MEET OUR SPECIFICATIONS. THIS INCLUDES THE TYPE OF WIRE AND THE METHOD OF WIRING. NO LOOP SYSTEMS!

PLEASE SEE ATTACHED RECOMMENDED WIRING EXAMPLES

CONDUIT SPECIFICATIONS CONTINUED

ANY CONDUIT DESIGNATED FOR FIBER MUST ENTER PEDESTALS THROUGH THE BOTTOM AND EXTEND 4" INTO THE INSIDE. ALL CONDUITS WILL BE PLUGGED WITH CONDUIT CAPS IMMEDIATELY AFTER INSTALLATION AND PRIOR TO BACKFILL.

ALL CONDUIT DESIGNATED FOR FIBER SHALL BE MANDREL PROOFED WITH WALL TO WALL MEASUREMENTS USING MEASURING TAPE OF CONDUIT RUNS.

UPON COMPLETION OF CONDUIT INSTALLATION, A 1/8" POLYPROPYLENE **PULL ROPE MUST BE INSTALLED** IN ALL CONDUITS TO ENSURE CONTINUITY.

ANY QUESTIONS OR NEED FOR ADDITIONAL INFORMATION REGARDING THE ABOVE MENTIONED SPECIFICATIONS MAY BE OBTAINED THROUGH CABLECOM OF CALIFORNIA INC.'S ENGINEERING OFFICE DURING NORMAL WORK HOURS AT (707) 590-6012.

CONDUIT SWEEP SPECIFICATIONS – NO SUBSTITUTIONS

4" PVC SCHEDULE 40, BOE 90 DEGREE, MINIMUM 60" RADIUS SWEEP. MANUFACTURED SWEEPS ARE TO BE AVOIDED IN 4" RUNS WITH EXCEPTIONS APPROVED BY CABLECOM OF CALIFORNIA INC.'S INSPECTOR IN ADVANCE. **NO 45 OR 90-DEGREE BENDS SHALL BE USED ENTERING OR EXITING BOXES.**

CABLECOM OF CALIFORNIA INC WILL ALLOW INSTALLATION WITH A MINIMAL BEND/SWEEP 4" CONDUITS (FIBER OPTIC) PROVIDED THAT:

1. SWEEP OR BEND RADIUS IS 60" **MINIMUM OR GREATER.**
2. SWEEP OR BEND ARC IS **NOT MORE THAN 45 DEGREES** (PREFERABLY 11 OR 22 DEGREES).
3. THERE ARE **NEVER MORE THAN FIVE (5) 90 DEGREE BEND OR SWEEP'S** IN ANY CONTINUOUS CONDUIT RUN.
4. ANY AND ALL MANUFACTURED BENDS ARE **STEEL OR CONCRETED** TO THE INSIDE OF THE SWEEP TO PROTECT AGAINST BURNING THROUGH THE PIECE.
5. MANUFACTURED BENDS ARE USED **ONLY** WHEN NECESSARY.

CableCom of California Inc. ■ 825 Chadbourne Rd. ■ Fairfield, Ca. 94534 ■
Phone (877) 230-3010 Fax (877) 230-2770
Contractor_For_Comcast@CableComLLC.Net

6. CONDUITS ARE STRAIGHT FOR A DISTANCE **NOT LESS THAN 10'** IN OR OUT OF A VAULT, BOX OR PEDESTAL AND **LINE UP FOR STRAIGHT THROUGH PULLING.**

2" PVC SCHEDULE 40 BOE 90 DEGREE, MINIMUM 24" RADIUS SWEEP.
THERE SHALL BE NO MORE THAN FOUR (4) 90-DEGREE SWEEPS ALLOWED **PER CONDUIT RUN.**

2" PVC SCHEDULE 40 BOE 45 DEGREE, MINIMUM 24" RADIUS SWEEP.
THERE SHALL BE NO MORE THAN FOUR (4) SWEEPS OF ANY KIND ALLOWED **PER CONDUIT RUN.**

1" PVC SCHEDULE 40 BOE 90 DEGREE, MINIMUM 18" RADIUS SWEEP.
THERE SHALL BE NO MORE THAN FOUR (4) SWEEPS OF ANY KIND ALLOWED **PER CONDUIT RUN.**

RECOMMENDED CONDUIT SUPPLIES

VIKOMATIC
11290 POINT EAST DR. STE 230
RANCHO CORDOVA, CA
(916) 635-9273

UNDERGROUND CABLE TV CONSTRUCTION SPECIFICATIONS (CONT.)

BOX SPECIFICATIONS

CHRISTY FIBERLYTE "FL SERIES" MARKED CABLE TV. EACH BOX INSTALLATION SHALL INCLUDE A FIBERLYTE CONCRETE OR IRON LID (TRAFFIC AREAS), AN A FIBERLYTE BOX, EACH RATED FOR INCIDENTAL TRAFFIC.

BOX SIZES ARE AS FOLLOWS:

B-30	13" X 24"	ROUGH DIMENSIONS	13" X 24" X 18"
B-36	17" X 30"	ROUGH DIMENSIONS	17" X 30" X 18"
B-48	48" X 30"	ROUGH DIMENSIONS	48" X 30" X 12"

CABLECOM OF CALIFORNIA INC. RESERVES THE OPTION TO SUBSTITUTE A CHRISTY CONCRETE B-30 BOX IN PLACE OF A FIBERLYTE FL-30, DEPENDING ON NEED.

CableCom of California Inc. ■ 825 Chadbourne Rd. ■ Fairfield, Ca. 94534 ■
Phone (877) 230-3010 Fax (877) 230-2770
Contractor_For_Comcast@CableComLLC.Net

DESIGNATES 8' GROUND ROD PLACEMENT

GROUND ROD INSTALLATION

IN MDU PROJECTS GROUNDING AT THE TERMINATION POINT OR BACKBOARD LOCATIONS IS THE RESPONSIBILITY OF THE DEVELOPER. A 5/8" BY 8' GROUND ROD (PROVIDED BY CABLECOM OF CALIFORNIA INC. UPON REQUEST) IS TO BE INSTALLED FOR COMCAST GROUNDING PURPOSE. IF A GROUND ROD CAN NOT BE PLACED THEN ANOTHER MEANS OF COMPATIBLE GROUNDING NEEDS TO BE PROVIDED BY THE DEVELOPER. GROUNDING WITH IN SUB DIVISIONS (SFU) WILL BE THE RESPONSIBILITY OF CABLECOM OF CALIFORNIA INC.

SUBSTRUCTURE INSPECTIONS

INSPECTIONS ARE REQUIRED ON ALL CONDUIT AND BOX INSTALLATION COMPLETED BY DEVELOPER. ALL DEVELOPER OR CONTRACTOR INSTALLED SUBSTRUCTURE MUST BE INSPECTED DURING NORMAL WORKING HOURS (7:00 AM TO 3:00 PM) BY A CABLECOM OF CALIFORNIA INC. CONSTRUCTION INSPECTOR PRIOR TO BACKFILL AND MUST BE SIGNED OFF AS APPROVED ON A DAILY BASIS. 24 HOUR NOTICE IS REQUIRED FOR ALL INSPECTIONS. ALL BOX INSTALLATIONS REQUIRE INSPECTION AND APPROVAL. DEVELOPER IS RESPONSIBLE FOR COST OF ALL INSPECTION TIME. FAILURE TO COMPLY WILL RESULT IN A FORMAL COMPLAINT BEING FILED WITH THE BUILDING INSPECTOR. THIS COMPLAINT WILL REQUEST THAT THE JOB BE SHUT DOWN UNTIL COMPLAINT IS MADE.

TRENCH SPECIFICATIONS - PEDESTAL & BOX ROUGH DIMINSIONS

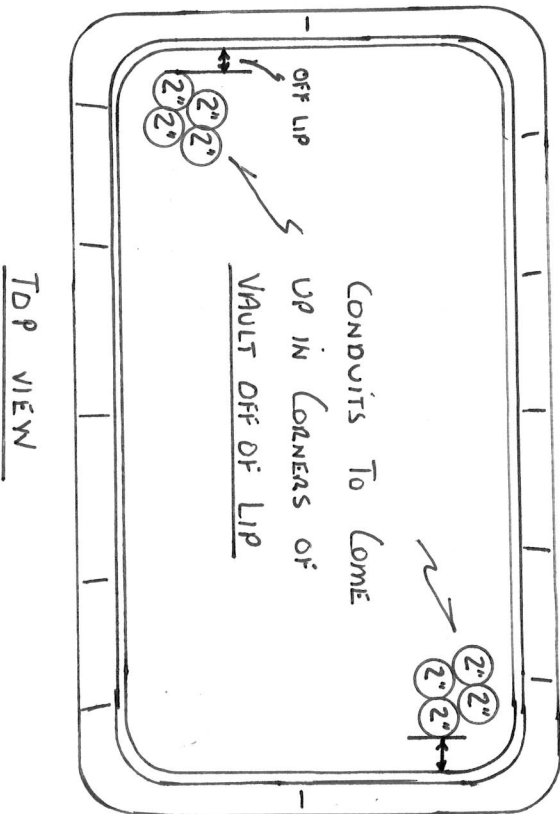
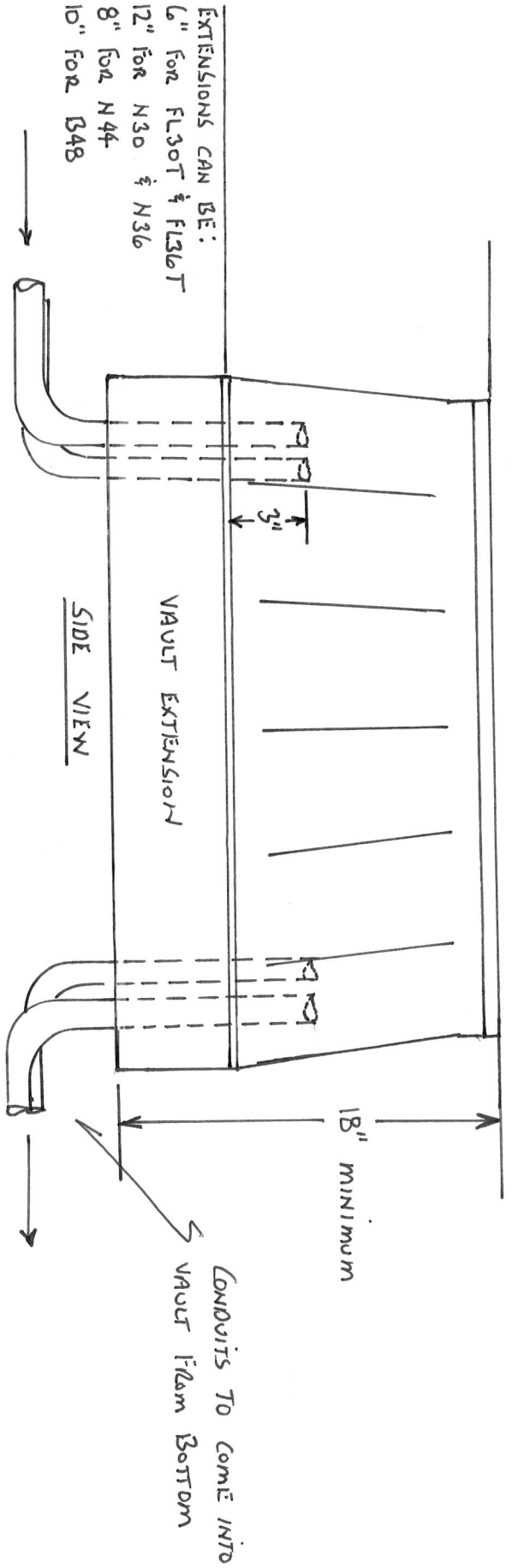
COMCAST CORPS. SYMBOL PEDESTALS

 TV-CPH-1230 12" X 30" X 6"
 TV-CPH-1730 17" X 30" X 6"

BOX ROUGH DIMENSIONS

 B-30 13" X 24" X 18"
 B-36 17" X 30" X 18"
 B-48 48" X 30" X 12"

COMCAST VAULT INSTALLATION DETAIL



NOTE: FL VAULTS TO BE PLACED IN DIRT
 N VAULTS TO BE PLACED IN CONCRETE
 ANY VAULT PLACED IN TRAVEL WAY NEEDS TO BE TRAFFIC RATED WITH A TRAFFIC RATED LID WITH BOLT DOWN

Christy Concrete Products


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Electrical and Telephone

Traffic Utilities & Traffic Valves

Drainage

WOOD

MAG

Pks, Vaults, & Catch Basins

Miscellaneous

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Polymer Products

Fibrelyte Boxes

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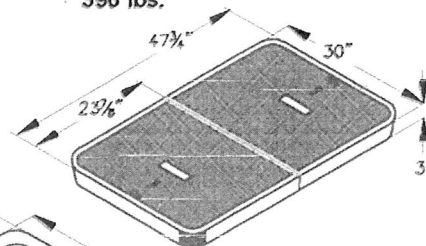


ChristySales@oldcastleprecast.com

REINFORCED CONCRETE LID

No. B48D2

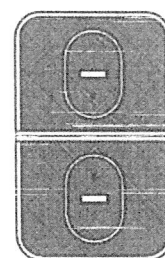
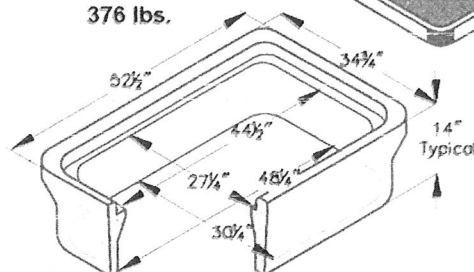
396 lbs.



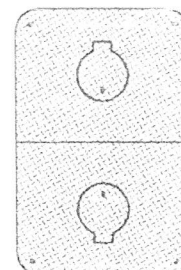
UTILITY BOX

No. B48BOX

376 lbs.



B48M2



B48-62G

A high density reinforced concrete box with non-setting shoulders positioned to maintain grade and facilitate back filling. Approximate dimensions and weight shown.

Ordering Code	Item	Approx. Shipping Weight	Description
B48BOX*	BOX	376	B48 Utility Box (30 1/4" x 48 1/4") - 3 per pallet
B48D2	LID	396	2 pc. Reinforced concrete
B48M2	LID	321	2 pc. Reinforced concrete with two 10" x 16" oval, concrete reading lids
B48-62D	COVER	155	2 pc. Steel checker plate
B48-62G	COVER	154	2 pc. Steel checker plate with two 10" round, self-closing, reading lid
B48X10	EXTENSION	288	10" Reinforced concrete - 3 per pallet
B48SL	SLAB	406	Reinforced concrete (36" x 53")
* Will not accept bolt down lids (see Electrical V48" Box)			
Galvanizing available on a steel covers.			



MADERA/TRACY/ROSEVILLE/PHOENIX
Phone: (800) 486-7070 Fax: (800) 486-6804
© 2008 Oldcastle Precast, Inc.

B48 BOX

File Name: B48_ISO

Issue Date: January 2009

www.oldcastleprecast.com

B48 UTILITY BOX
30-1/4" x 48-1/4"
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Please return to:

CITY OF UKIAH
300 Seminary Avenue
Ukiah, California 95482-5400
(707) 463-6200

NOTICE OF COMPLETION

NOTICE IS HEREBY GIVEN:

1. That the project described as: Gobbi Street Underground Project
2. That the nature of the work: Installation of Electrical Infrastructure on Gobbi Street from State Street to Orchard Ave, Specification No. 19-03.
3. That on the 2nd day of November, 2020, the Contract work for this project was actually completed.
4. That the name and address of the Contractor is St. Francis Construction, P.O. Box 2057, San Leandro, CA 94577.
5. That the property location of work performed herein referred to is situated in the County of Mendocino, State of California, and is described as follows: Gobbi Street from Orchard Ave to State Street, Marshall Street and sections of Main Street and Leslie Street, Ukiah, CA.

I hereby certify under penalty of perjury that the forgoing is true and correct:

City Council Approval CITY OF UKIAH, a Municipal Corporation

_____ By: _____
Date Kristine Lawler, City Clerk Date

State of California

County of Mendocino

Exempt from recording fees pursuant to Government Code Section 27383



AGENDA SUMMARY REPORT

SUBJECT: Approve Professional Services Contract Amendment No. 1 with L.S. Mitchell Architect, Inc. to Increase Contract Funding for Engineering and Construction Services for the 1350 Hastings Road Property in an Amount Not to Exceed \$45,000.

DEPARTMENT: Electric Utility **PREPARED BY:** Cindy Sauers, Assistant Electric Utility Director
PRESENTER: Consent Calendar

ATTACHMENTS:

1. L.S. Mitchell, Inc. Contract #1617-091
2. Amendment 1 - C #1617-091

Summary: The City Council will consider approval of a professional services contract Amendment No. 1 with L.S. Mitchell Architect, Inc. to increase contract funding for engineering and construction services for the 1350 Hastings Road property in an amount not to exceed \$45,000. The facility was purchased for the City's Electric Department and is currently being modify for the Department's operational needs.

Background: On July 20, 2016, the City of Ukiah entered into Contract #1617-091 (Attachment 1) with L.S. Mitchell Architect, Inc. for \$120,000 for consulting services related to site development services for the adaptive reuse of property located at 1350 Hastings Road in Ukiah for the City's Electric Department. The initial scope focused on site design related to storm water retention, grading, compaction, hazardous material testing, fencing and roofing. Design of the project is complete and the City Council approved the Plans and Specifications on August 5, 2020.

Discussion: Additional engineering and construction support will be needed as the project approaches construction. Amendment No. 1, if approved, (please refer to Attachment 2 for a draft copy of the amendment) will provide additional funding for engineering services as well as construction support to ensure compliance with the plans and specifications.

Mr. Mitchell's professional experience, coupled with his knowledge of the project, are invaluable as the project enters the construction phase. The vast scope of the project requires multidisciplinary knowledge of the specifications and plans. Mr. Mitchell's coordination of these disciplines for the design of this project will prove to be extremely valuable to see this project to completion.

It is therefore staff's recommendation to approve professional services contract Amendment No. 1 with L.S. Mitchell Architect, Inc. (Attachment 2) in the amount not to exceed \$45,000 for engineering and construction services for the 1350 Hastings Road property.

Recommended Action: Approve professional services contract Amendment No. 1 with L.S. Mitchell Architect, Inc. to increase contract funding for engineering and construction services for the 1350 Hastings Road property in an amount not to exceed \$45,000.

BUDGET AMENDMENT REQUIRED: No.
CURRENT BUDGET AMOUNT: \$1,810,674.42; 80126100.80220.17023
PROPOSED BUDGET AMOUNT:
FINANCING SOURCE:
PREVIOUS CONTRACT/PURCHASE ORDER NO.: Contract 1617-091
COORDINATED WITH: Mary Horger, Financial Services Manager

Approved: 
 Sage Sangiacomo, City Manager

COU No. 1617091

AGREEMENT FOR
PROFESSIONAL CONSULTING SERVICES
[Design Professional]

This Agreement, made and entered into this 9th day of June, 2017 ("Effective Date"), by and between CITY OF UKIAH, CALIFORNIA, hereinafter referred to as "City" and L. S. Mitchell Architect, Inc., a corporation organized and in good standing under the laws of the state of California, hereinafter referred to as "Consultant".

RECITALS

This Agreement is predicated on the following facts:

- a. City requires consulting services related to architectural services related to the design and building plans for the 1350 Hastings Road Property.
- b. Consultant represents that it has the qualifications, skills, experience and properly licensed to provide these services, and is willing to provide them according to the terms of this Agreement.
- c. City and Consultant agree upon the Scope-of-Work and Work Schedule attached hereto as Attachment "A", describing contract provisions for the project and setting forth the completion dates for the various services to be provided pursuant to this Agreement.

TERMS OF AGREEMENT

1.0 DESCRIPTION OF PROJECT

- 1.1 The Project is described in detail in the attached Scope-of-Work (Attachment "A").

2.0 SCOPE OF SERVICES

- 2.1 As set forth in Attachment "A".
- 2.2. Additional Services. Additional services, if any, shall only proceed upon written agreement between City and Consultant. The written Agreement shall be in the form of an Amendment to this Agreement.

3.0 CONDUCT OF WORK

- 3.1 Time of Completion. Consultant shall commence performance of services as required by the Scope-of-Work upon receipt of a Notice to Proceed from City. Consultant shall complete the work to the City's reasonable satisfaction, even if contract disputes arise or Consultant contends it is entitled to further compensation.

4.0 COMPENSATION FOR SERVICES

- 4.1 Basis for Compensation. For the performance of the professional services of this Agreement, Consultant shall be compensated on a time and expense basis not to exceed a guaranteed maximum dollar amount of \$120,000. Labor charges shall be based upon hourly billing rates for the various classifications of personnel employed by Consultant to perform the Scope of Work as set forth in the attached Attachment B, which shall include all indirect costs and expenses of every kind or nature, except direct expenses. The direct expenses and the fees

to be charged for same shall be as set forth in Attachment B. Consultant shall complete the Scope of Work for the not-to-exceed guaranteed maximum, even if actual time and expenses exceed that amount.

- 4.2 Changes. Should changes in compensation be required because of changes to the Scope-of-Work of this Agreement, the parties shall agree in writing to any changes in compensation. "Changes to the Scope-of-Work" means different activities than those described in Attachment "A" and not additional time to complete those activities than the parties anticipated on the date they entered this Agreement.
- 4.3 Sub-contractor Payment. The use of sub-consultants or other services to perform a portion of the work of this Agreement shall be approved by City prior to commencement of work. The cost of sub-consultants shall be included within guaranteed not-to-exceed amount set forth in Section 4.1.
- 4.4 Terms of Payment. Payment to Consultant for services rendered in accordance with this contract shall be based upon submission of monthly invoices for the work satisfactorily performed prior to the date of invoice less any amount already paid to Consultant, which amounts shall be due and payable thirty (30) days after receipt by City. The invoices shall provide a description of each item of work performed, the time expended to perform each task, the fees charged for that task, and the direct expenses incurred and billed for. Invoices shall be accompanied by documentation sufficient to enable City to determine progress made and the expenses claimed.

5.0 ASSURANCES OF CONSULTANT

- 5.1 Independent Contractor. Consultant is an independent contractor and is solely responsible for its acts or omissions. Consultant (including its agents, servants, and employees) is not City's agent, employee, or representative for any purpose.

It is the express intention of the parties hereto that Consultant is an independent contractor and not an employee, joint venturer, or partner of City for any purpose whatsoever. City shall have no right to, and shall not control the manner or prescribe the method of accomplishing those services contracted to and performed by Consultant under this Agreement, and the general public and all governmental agencies regulating such activity shall be so informed.

Those provisions of this Agreement that reserve ultimate authority in City have been inserted solely to achieve compliance with federal and state laws, rules, regulations, and interpretations thereof. No such provisions and no other provisions of this Agreement shall be interpreted or construed as creating or establishing the relationship of employer and employee between Consultant and City.

Consultant shall pay all estimated and actual federal and state income and self-employment taxes that are due the state and federal government and shall furnish and pay worker's compensation insurance, unemployment insurance and any other benefits required by law for himself and his employees, if any. Consultant agrees to indemnify and hold City and its officers, agents and employees harmless from and against any claims or demands by federal, state or local government agencies for any such taxes or benefits due but not paid by Consultant, including the legal costs associated with defending against any audit, claim, demand or law suit.

Consultant warrants and represents that it is a properly licensed professional or professional organization with a substantial investment in its business and that it maintains its own offices and staff which it will use in performing under this Agreement.

- 5.2 Conflict of Interest. Consultant understands that its professional responsibility is solely to City. Consultant has no interest and will not acquire any direct or indirect interest that would conflict with its performance of the Agreement. Consultant shall not in the performance of this Agreement employ a person having such an interest. If the City Manager determines that the Consultant has a disclosure obligation under the City's local conflict of interest code, the Consultant shall file the required disclosure form with the City Clerk within 10 days of being notified of the City Manager's determination.

6.0 INDEMNIFICATION

- 6.1 Insurance Liability. Without limiting Consultant's obligations arising under Paragraph 6.2 Consultant shall not begin work under this Agreement until it procures and maintains for the full period of time allowed by law, surviving the termination of this Agreement insurance against claims for injuries to persons or damages to property, which may arise from or in connection with its performance under this Agreement.

A. Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office ("ISO) Commercial General Liability Coverage Form No. CG 20 10 10 01 and Commercial General Liability Coverage – Completed Operations Form No. CG 20 37 10 01.
2. ISO Form No. CA 0001 (Ed. 1/87) covering Automobile Liability, Code 1 "any auto" or Code 8, 9 if no owned autos and endorsement CA 0025.
3. Worker's Compensation Insurance as required by the Labor Code of the State of California and Employers Liability Insurance.
4. Errors and Omissions liability insurance appropriate to the consultant's profession. Architects' and engineers' coverage is to be endorsed to include contractual liability.

B. Minimum Limits of Insurance

Consultant shall maintain limits no less than:

1. General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage including operations, products and completed operations. If Commercial General Liability Insurance or other form with a general aggregate limit is used, the general aggregate limit shall apply separately to the work performed under this Agreement, or the aggregate limit shall be twice the prescribed per occurrence limit.
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage.

3. Worker's Compensation and Employers Liability: Worker's compensation limits as required by the Labor Code of the State of California and Employers Liability limits of \$1,000,000 per accident.
4. Errors and Omissions liability: \$1,000,000 per occurrence.

C. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects to the City, its officers, officials, employees and volunteers; or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

D. Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverages

- a. The City, its officers, officials, employees and volunteers are to be covered as additional insureds as respects; liability arising out of activities performed by or on behalf of the Consultant, products and completed operations of the Consultant, premises owned, occupied or used by the Consultant, or automobiles owned, hired or borrowed by the Consultant for the full period of time allowed by law, surviving the termination of this Agreement. The coverage shall contain no special limitations on the scope-of-protection afforded to the City, its officers, officials, employees or volunteers.
- b. The Consultant's insurance coverage shall be primary insurance as respects to the City, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees or volunteers shall be in excess of the Consultant's insurance and shall not contribute with it.
- c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officers, officials, employees or volunteers.
- d. The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

2. Worker's Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the City, its officers, officials, employees and volunteers for losses arising from Consultant's performance of the work, pursuant to this Agreement.

3. Professional Liability Coverage

If written on a claims-made basis, the retroactivity date shall be the effective date of this Agreement. The policy period shall extend two years from date of final invoice.

4. All Coverages

Each Insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City.

E. Acceptability of Insurers

Insurance is to be placed with admitted California insurers with an A.M. Best's rating of no less than A- for financial strength, AA for long-term credit rating and AMB-1 for short-term credit rating.

F. Verification of Coverage

Consultant shall furnish the City with Certificates of Insurance and with original Endorsements effecting coverage required by this Agreement. The Certificates and Endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates and Endorsements are to be on forms provided or approved by the City. All Certificates and Endorsements are to be received and approved by the City before Consultant begins the work of this Agreement. The City reserves the right to require complete, certified copies of all required insurance policies, at any time. If Consultant fails to provide the coverages required herein, the City shall have the right, but not the obligation, to purchase any or all of them. In that event, after notice to Consultant that City has paid the premium, the cost of insurance may be deducted from the compensation otherwise due the contractor under the terms of this Contract.

G. Subcontractors

Consultant shall include all sub-contractors or sub-consultants as insured under its policies or shall furnish separate certificates and endorsements for each sub-contractor or sub-consultant. All coverage for sub-contractors or sub-consultants shall be subject to all insurance requirements set forth in this Paragraph 6.1.

6.2 Indemnification. Notwithstanding the foregoing insurance requirements, and in addition thereto, Consultant agrees, for the full period of time allowed by law, surviving the termination of this Agreement, to indemnify the City for any claim, cost or liability that arises out of, or pertains to, or relates to any negligent act or omission or the willful misconduct of Consultant and its agents in the performance of services under this contract, but this indemnity does not apply to liability for damages for death or bodily injury to persons, injury to property, or other loss, arising from the sole negligence, willful misconduct or defects in design by the City, or arising from the active negligence of the City.

"Indemnify," as used herein includes the expenses of defending against a claim and the payment of any settlement or judgment arising out of the claim. Defense costs include all

costs associated with defending the claim, including, but not limited to, the fees of attorneys, investigators, consultants, experts and expert witnesses, and litigation expenses.

References in this paragraph to City or Consultant, include their officers, employees, agents, and subcontractors.

7.0 CONTRACT PROVISIONS

- 7.1 Documents and Ownership of Work. All documents furnished to Consultant by City and all documents or reports and supportive data prepared by Consultant under this Agreement are owned and become the property of the City upon their creation and shall be given to City immediately upon demand and at the completion of Consultant's services at no additional cost to City. Deliverables are identified in the Scope-of-Work, Attachment "A". All documents produced by Consultant shall be furnished to City in digital format and hardcopy. Consultant shall produce the digital format, using software and media approved by City.
- 7.2 Governing Law. Consultant shall comply with the laws and regulations of the United States, the State of California, and all local governments having jurisdiction over this Agreement. The interpretation and enforcement of this Agreement shall be governed by California law and any action arising under or in connection with this Agreement must be filed in a Court of competent jurisdiction in Mendocino County.
- 7.3 Entire Agreement. This Agreement plus its Attachment(s) and executed Amendments set forth the entire understanding between the parties.
- 7.4 Severability. If any term of this Agreement is held invalid by a court of competent jurisdiction, the remainder of this Agreement shall remain in effect.
- 7.5 Modification. No modification of this Agreement is valid unless made with the agreement of both parties in writing.
- 7.6 Assignment. Consultant's services are considered unique and personal. Consultant shall not assign, transfer, or sub-contract its interest or obligation under all or any portion of this Agreement without City's prior written consent.
- 7.7 Waiver. No waiver of a breach of any covenant, term, or condition of this Agreement shall be a waiver of any other or subsequent breach of the same or any other covenant, term or condition or a waiver of the covenant, term or condition itself.
- 7.8 Termination. This Agreement may only be terminated by either party: 1) for breach of the Agreement; 2) because funds are no longer available to pay Consultant for services provided under this Agreement; or 3) City has abandoned and does not wish to complete the project for which Consultant was retained. A party shall notify the other party of any alleged breach of the Agreement and of the action required to cure the breach. If the breaching party fails to cure the breach within the time specified in the notice, the contract shall be terminated as of that time. If terminated for lack of funds or abandonment of the project, the contract shall terminate on the date notice of termination is given to Consultant. City shall pay the Consultant only for services performed and expenses incurred as of the effective termination date. In such event, as a condition to payment, Consultant shall provide to City all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by the Consultant under this Agreement. Consultant shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder,

subject to off-set for any direct or consequential damages City may incur as a result of Consultant's breach of contract.

7.9 Execution of Agreement. This Agreement may be executed in duplicate originals, each bearing the original signature of the parties. Alternatively, this Agreement may be executed and delivered by facsimile or other electronic transmission, and in more than one counterpart, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. When executed using either alternative, the executed agreement shall be deemed an original admissible as evidence in any administrative or judicial proceeding to prove the terms and content of this Agreement.

8.0 NOTICES

Any notice given under this Agreement shall be in writing and deemed given when personally delivered or deposited in the mail (certified or registered) addressed to the parties as follows:

CITY OF UKIAH
DEPT. OF ELECTRIC UTILITY
300 SEMINARY AVENUE
UKIAH, CALIFORNIA 95482-5400

L.S. MITCHELL ARCHITECT, INC.
ATTN: LAWRENCE MITCHELL
135 WEST GOBBI STREET
UKIAH, CALIFORNIA 95482

9.0 SIGNATURES

IN WITNESS WHEREOF, the parties have executed this Agreement the Effective Date:

L.S. MITCHELL ARCHITECT, INC.

BY: Lawrence Mitchell, President June 9, 2017
Date

PRINT NAME: LAWRENCE MITCHELL

45-5218361
IRS IDN Number

CITY OF UKIAH

BY: Sage S. S. S.
SAGE SANGIACOMO
CITY MANAGER

6-12-17
Date

ATTEST

Kristine Lantry
CITY CLERK

6-12-17
Date

L.S. Mitchell Architect, Inc.

Building Architects / Land Planners

FILE INFORMATION & WORK OUTLINE

Project: UKIAH ELECTRIC UTILITY RELOCATIONDate: 4.18.2014Client Name: TBACompany: TBA

Address: _____

Contact: MEL GRANDIStatus: 391-0778

Phone: _____

Facsimile: _____

Alternate: _____

Bill Address: ELECTRIC UTILITY DEPT411 W. CLAY ST.UKIAH, CA

Email: _____

Other: 463-6295Phone: 707-467-5711Facsimile: 707-463-6740DIANE RUCKER 272-5555

ADMIN. ASSIST. DIANN LUCCHETTI (467-5711)

APN(s): 180-070-19-00Project Location: 1350 HASTINGS ROADUKIAH, CA 95482

APLU _____

Zoning Classification: C-2

FY _____

SY _____

RY _____

H't _____

GPLU _____

Project Description:

Minimum Lot Area: _____

- * ADAPT EXISTING SITE & BUILDING TO NEW USE
- * NEW USE TO CONSIST OF FACILITIES FOR CITY OF UKIAH ELECTRIC UTILITY, INCLUDING VEHICLE PARKING, MATERIAL STORAGE, AND SUPPORT SERVICES.

1) Scope of Service(s): (~~***Phase I***/**Phase II***/~~)

PROGRAM & PLAN FOR INTERIOR & EXTERIOR SITE & BUILDING ALTERATIONS FOR PROJECT. INCLUDE ARCHITECTURAL, STRUCTURAL, MECHANICAL, & ELECTRICAL DESIGN & CONSTRUCTION DOCUMENTATION & OVER-SITE.

2) Form of Presentation: Blueprints and/or photocopies of work in progress submitted for review at completion of each phase checked below:

- ☒ PD_Pre-Design
 ☐ SA_Site Analysis
 ☒ SD_Schematics Design
 ☒ DD_Design Development
 ☐ CD_Construction Documentation
 ☒ BN_Bid/Negotiation
 ☒ CA_Contract Administration
 ☐ PC_Post Construction
 ☐ SS_Supplemental
 ☐ Other: _____

135 West Gobbi Street, Suite #203, Ukiah, CA 95482

Voice: 707-489-3337 Facsimile: 707-462-9109

Email: ukiaharch@gmail.com / April 01, 2013

3) Schedule (Time goals): TBA

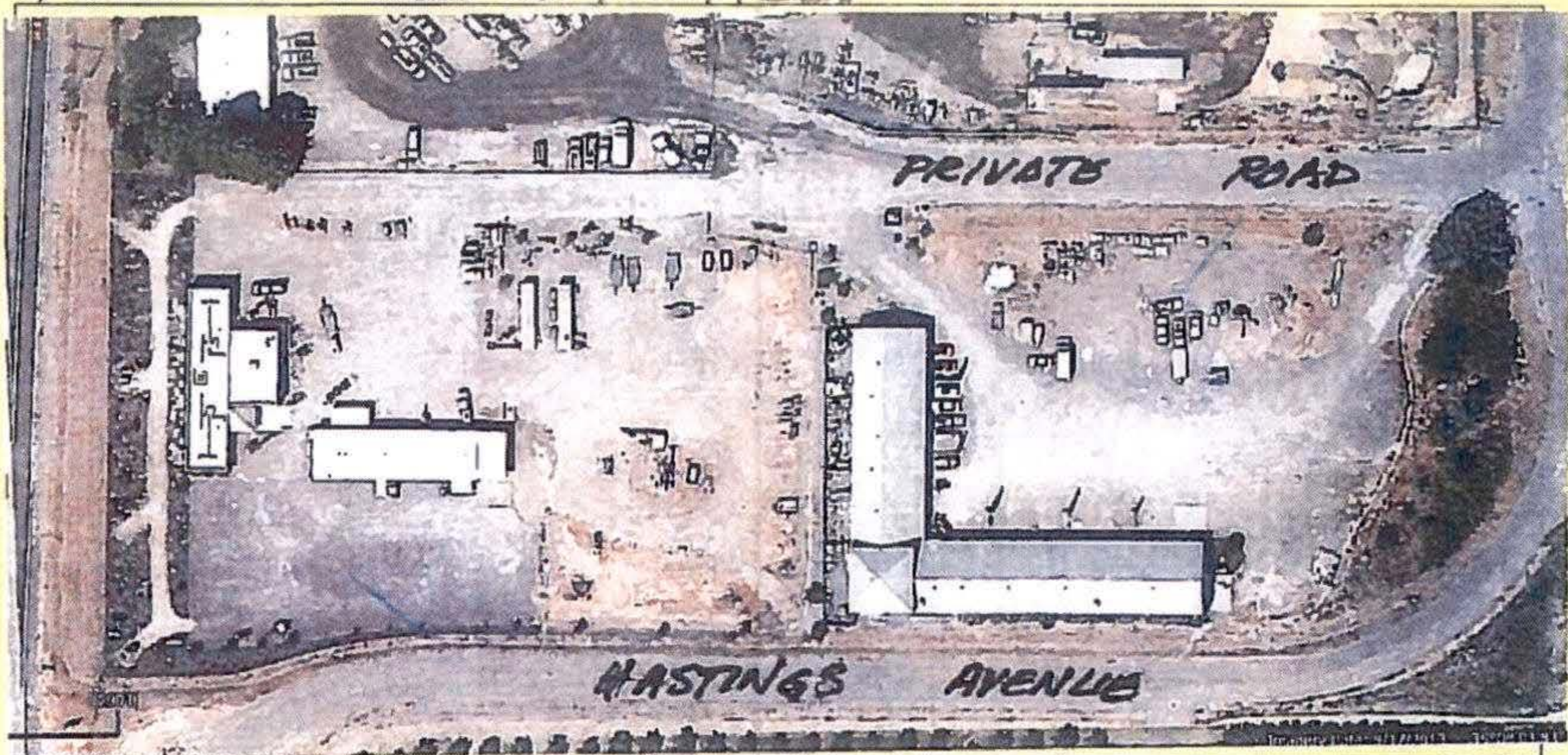
4) Budget (A&E / Project): TBD

5) Stake Holders: TBD

6) Other Information: CITY OF UKIAH TO PROVIDE
CIVIL ENGINEER DESIGN & DOCUMENTATION.
CITY HAS PROVIDED OR WILL PROVIDE:

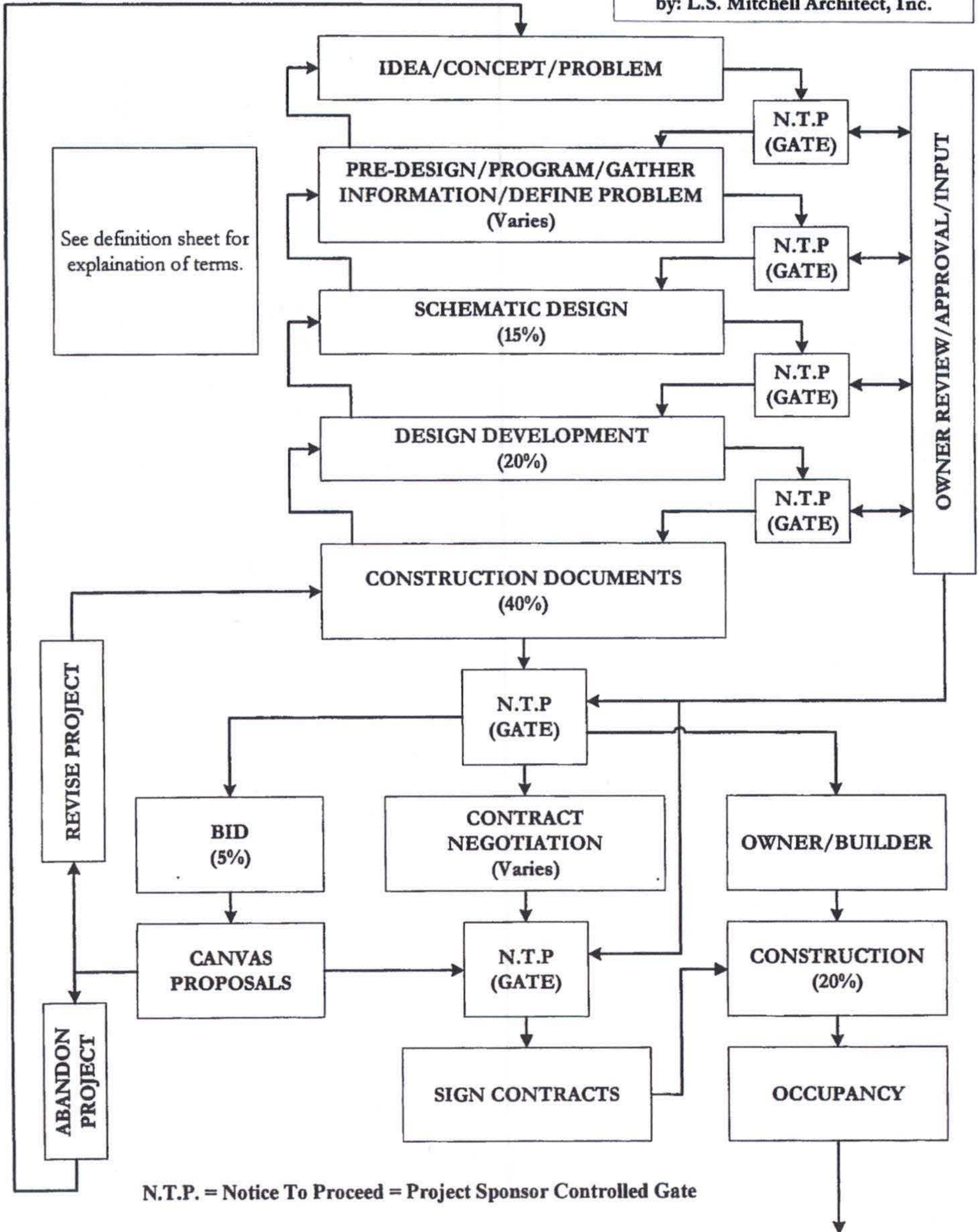
- ACIA REPORT.
- GEOTECHNICAL REPORT.
- SITE BASE SURVEY.
- SOLAR APPLICATION CONSULTATION.

7) Sketch Notes: SEE ATTACHED.



- 8) **Decision-making Process:** Decision for the Owner will be made directly through the contact person listed above. All decision shall be rendered within a reasonable period of time, according to the context of the issue and the program schedule.
- 9) **Special Provision(s):** Owner, through the contact person (will not be providing/will provide) (As-built/Record) drawings of the existing building(s), the site, and any equipment that may influence the work. The design team will use the drawings and other information during the planning and design phases of the work as references for their product and to assist in the coordination of new components and their placement.
- 10) **Reporting Requirements:** (Verbal/written) Report(s) shall be limited to periodic progress reports to contact person listed above. During construction phase field reports will be filed following each trip to the site document observed conditions.
- 11) **Fee Type/Terms:** TIME QUARTER & NITE. A total cost of service estimate will be provided with this proposal for budget purposes. ~~The Architect reserves the right to adjust the total cost once the full scope of the project is developed or if changes are made. This will usually occur at the completion of the schematic design phase, but will also happen any time the scope of work changes. Hourly charge rates for individuals and surcharge mark-ups are listed in the agreement under Article 3 entitled Compensation.~~ LSM 6.09.17
6-13-17
- 12) **Changes in Work/Uncovered Conditions:** As indicated in #6 above changes in scope of work will cause a review of the fee structure and may cause a commensurate adjustment of the fee.
- 13) **Professional Subcontract(s):** At this time (it is/~~is not~~) anticipated that consultation services will be required. Potential disciplines if checked will come from the following design and engineering areas: ☒ Landscape Architecture ☐ Civil ☒ Structural ☒ Mechanical ☒ Electrical. It is understood that the (Design Professional in Responsible Charge/~~Owner~~) will employ these persons directly to work on the design team. Other consultations may also be required and will be identified at a later date.
- 14) **Substantial Completion (define):** For Schematic through Construction Document Phases of the work, Owner's notice to proceed [NTP] with the succeeding phase of the work will signal acceptance and substantial completion of the preceding phase. With the Construction Document Phase substantial completion shall extend to building agency plan review. Once the plans have been accepted as adequate for permitting, then that act shall signal completion of that phase. The Construction Phase of the work will be substantially complete when the Owner files the notice so stating with the County Recorder and/or is in receipt of the Occupancy Permit.
- 15) **Work Schedule/Delivery Time Estimate:** TBA/~~See attached~~
- 16) **Other:** During programming phase of the work and intermittently through the design period the (Owner/Sponsor) will allow and/or provide access to the site, to the on-site improvements, and to key people who will ultimately use the facility. Said access will be for the purpose of investigating building related issues and discussing character of use, viewing existing conditions, and in general gathering information. It is important that all view points, goals, and objective at least be considered.

BASIC PROCESS FLOW CHART
by: L.S. Mitchell Architect, Inc.



PROJECT DESCRIPTION:

Relocate existing City of Ukiah – Electric Utility Field Operations from the existing City of Ukiah corporation yard to the building and site located at 1350 Hastings Road also in Ukiah.

DISTRIBUTION OF SERVICE:

PHASE I

STAGE ONE	(PD)	PREDESIGN
STAGE TWO	(AS)	SITE ANALYSIS
STAGE THREE	(SD)	SCHEMATIC DESIGN

PHASE II

STAGE FOUR	(DD)	DESIGN DEVELOPMENT
STAGE FIVE	(CD)	CONSTRUCTION DOCUMENTS
STAGE SIX	(B/CN)	BID/CONTRACT NEGOTIATION
STAGE SEVEN	(CA)	CONTRACT ADMINISTRATION

STAGE EIGHT	(PC)	POST-CONSTRUCTION
STAGE NINE	(SUP)	SUPPLEMENTAL

PRE-DESIGN (PD):

Review proposed plan and possibly present alternate concept(s) for group review. Interview users and elevate all interior wall surfaces and plan cabinetry. Develop equipment list and establish power & gas load criteria. Discuss quality issues with group and prepare outline specifications. In this phase, the architect seeks to understand user needs and translates those needs into a list of space definitions, the requirements of those spaces, and the relationships among the spaces. This leads directly to the programming stage where occupancy requirements and space relationships are coordinated with budget considerations and funding. Because of the project history and the design work completed to date this would be more of a review, familiarization, and confirmation process than a start from scratch effort.

SITE ANALYSIS (SA):

Again as a result of the project history the Architect would review site design concept and to a limited extent test it against building conceptual design, the applicable Codes, and the site. Regardless of building type, the questions of feasibility and site characteristics must be considered first, and it is highly important that architectural (and often engineering) services be available during these preliminary studies. Physical and environmental conditions at the site may exert strong influence on the type of structure required to house the contemplated functions; and when market potential and financial analysis are being carried out by economic consultants, the concurrent availability of architectural consultation will bring technical considerations to bear on the many factors that call for joint resolution.

Zoning and permit consultation and coordination. Upon completion of the schematic design phase assemble and submit application package to the City and shepherd it through the technical and planning hearing schedule. Consultant service would be focused and limited during this process.

SCHEMATIC DESIGN (SD):

Normally in this phase, the needs expressed in the program are translated into a three-dimensional building design. This is the creative part of the process where the architect can take the concepts outlined in the program, combine them with the human interaction and non-specific input of the programming activity and let creativity take control. When all concerned has approved the program, the project is ready to proceed through the schematic and design development phases of basic architectural and engineering services. In this case because of the advance stage of the concept the architect would review previous decisions and test them with the aid of consultants against the results of the pre-design interviews and the Code. The results of this phase would be schematic plans suitable for review by the Planners, agency staff, and funding sources.

DESIGN DEVELOPMENT (DD):

Once schematic documentation have been accepted and approved by the local organization and the City, the conceptual ideas expressed in schematics are turned into a building on paper. The architect will research various building materials and systems and begins to finalize how the facility will be built.

CONSTRUCTION DOCUMENTATIONS (CD):

These documents consist of working drawings, legal documents, and technical specifications. These and other documents required for bidding and construction are prepared from the definitive design drawings and outline specification developed in the design phase.

BID AND CONTRACT NEGOTIATIONS (B/CN):

If construction is to be accomplished by competitive-bid lump-sum contract, invitations to bid (or advertisements with public work) are issued and bids are received on a specified date at the end of the bidding period. After analyzing and checking the bids, the architect makes recommendations to the owner, who then proceeds to award the contract and authorize the start of construction.

CONSTRUCTION ADMINISTRATION (CA):

During the process of constructing the project, the architect and his engineering consultant team carries out its contract administration functions as delineated in the agreement between owner and architect. With the Architect in the lead, this includes general administrative tasks, coordination of consultant activities, document checking, agency consulting, schedule monitoring, and coordination of Owner supplied data. It included periodic site visits and observation of the work to confirm that construction is in accordance with the design concept. It includes review shop drawings and other submittals, and generally the representation of the Owner and issuance of requests for proposals (RFP's) and change orders (CO's) during construction. It involves the review of substitutions proposed by the Contractor or his forces, provision responses to request for information (RFI's), and the issuance supplemental instructions when required. Review of the contractor's periodic applications for payment and the monitoring of the schedule of values are also included. The work is substantially complete when construction of the building is sufficient that the owner can take occupancy and a punch list has been prepared. The project is eligible for close out, and Final completion is when the items of work listed on the punch list have been completed, final inspection has happened, and the Owner has accepted the Work and final payment has been made.

POST-CONSTRUCTION (PC):

No work proposed.

SUPPLEMENTAL (SUP):

No work proposed.

- | | |
|---|--|
| <p>01. Project Development Phase: PHASE I</p> <ul style="list-style-type: none">a. Obtain plans of existing facility, both site(s) and building(s)b. Assist in development of schedulec. Assist in establishing channels of communicationd. Assist in determining responsibility for dimensionse. Assist in determining drawing standards and specifications formatf. Assist in determining number of meetings and number of site visits and building accessg. Assist in auditing existing developing space inventory of existing locations for new space planningh. Negotiate fees and payment schedulei. Review and execute contractj. Meet with Tenant Representatives separately and start planning activities and listing of needs and goalsk. Audit existing furniture and equipment for space planningl. Audit existing systems, both environmental and life safetym. Analyze data and lists <p>02. Schematic Design Phase (Prepare preliminary graphic scheme):</p> <ul style="list-style-type: none">a. Develop preliminary probable cost statementb. Submit scheme and cost to Owner/Tenant for reviewc. Develop general information for construction documentsd. Review and analyze Owner/Tenant responsese. Prepare response and plan revisions as necessaryf. Submit revisions for second review (if necessary)g. Assist in Further Project Schedulingh. Assist in Updating Statement of Probable Construction Cost | |
| <p>03. Design Development Phase (systems integration): PHASE II</p> <ul style="list-style-type: none">a. Project Administrationb. Discipline Coordination and Document Checkingc. Agency Consulting and Coordinationd. Coordination of Owner Supplied Data and Informatione. Coordinate and Oversee System Design Integration and Documentationf. Material Research and Specificationg. Assist in Further Project Schedulingh. Assist in Updating Statement of Probable Construction Cost . <p>04. Construction Document Phase:</p> <ul style="list-style-type: none">a. Project Administrationb. Discipline Coordination and Document Checkingc. Agency Consulting and Coordinationd. Coordination of Owner Supplied Data and Informatione. Coordinate and Oversee System Design Integration and Documentationf. Material Research and Specificationg. Assist in Further Project Schedulingh. Assist in Updating Statement of Probable Construction Costi. Make final check of documents | |

- j. Submit to Owner PHASE II, CONT'D
05. Bid/Negotiation Phase:
- a. Agency Consulting and Coordination Bid Materials and Coordination
 - b. Issue Addenda
 - c. Provide Clarification and Respond to Request for Information (RFI)
 - d. Assist with Bid Opening and Log Results
 - e. Assist with Evaluation and Canvas Proposal
 - f. Assist with Preparation and Execution of Construction Agreements
06. Construction Administration /Observation Phase:
- a. Project Administration
 - b. Discipline Coordination and Document Checking
 - c. Agency Consulting and Coordination
 - d. Progress Review (Site Visit) and Construction Observation
 - e. Issue Field Reports
 - f. Assist with Schedule Monitoring
 - g. Attend Meetings
 - h. Assist in Establishing Communication Procedures
 - i. Assist in Establishing Testing and Inspection Procedures
 - j. Evaluate and Track Submittals
 - k. Coordinate with Agency Inspections and Reviews
 - l. Review Testing and Inspection Reports and Initiate Appropriate Actions
 - m. Review and Certify Periodic Draws or Applications for Payment
 - n. Assist with Changes and Related Documentation
 - o. Assist with Project Close-out Including Collection of O&M Data & Documentation and Preparation of Punch List(s)
07. Post Construction Services
- a. Project Administration
 - b. Discipline Coordination and Document Checking
 - c. Agency Consulting and Coordination
 - d. Progress Review (Site Visit) and Construction Observation
 - e. Issue Field Reports
 - f. Assist with Project Out-Fitting

Factors for Estimating Job Costs

Job: 1350 Hastings Road
Ukiah, CA 95482
Client: City of Ukiah - Electric Utility, Phase II

Architect: L.S. Mitchell Architect, Inc. (Lawrence S. Mitchell, AIA)

Civil: Franz Engineering, Inc.
Structural: ZRA Associates, Inc.
Mechanical: 15000, Inc. (Matt Torre, M.E.)
Electrical: Sonoma Electrical Engineering, Inc.
Landscape: Daly Landscape Architecture, Inc.

JOB REQUIREMENTS	YES	NO	JOB REQUIREMENTS	YES	NO
Make field measurements -confirm existing		X	Soil conservation		X
Draw existing systems		X	HVAC	X	
Use existing drawings		X	Energy conservation	X	
We receive utilities site plan		X	Fuel analysis		X
Red line on plans		X	Electrical power	X	
We do working drawings	X/Except Civil		Electrical lighting	X	
Paper supplied by others		X	Site lighting	X	
Seals by others		X	Fire and security system	X	
We provide paper	2/2/6		Sound systems	X/Assisted Listening	
Specification on drawings		X	Telephone system	X	
Specification Master - CSI		X	Power study		X
Specification Master - Short Form		X	Flat fee		X
Shop drawing review	X		Percentage		X
Construction review, - trips	X(See Budget)		Time and materials	X/N.T.E.	
Analysis of bids	X		Partial payments		X
Observation and reporting	X		Down payment		X
Tenant drawings		X	1-1/2% per month unpaid balance	X	
Cost estimate	X/by phase		Overtime authorized		X
Plumbing, inside	X		Limitation of liability	\$1,000,000.00	
Plumbing, site		X	Special conditions:		
Private disposal system		X	Civil Engineering	Furnished by Owner	X
Private water system		X	Topographic Survey	Furnished by Owner	X
Fire protection system (Alteration of Existing)	X/Performance		Geotechnical Engineering	Furnished by Owner	X
Site storm drainage		X	Site Work Observation & Testing	Furnished by Owner	X
Inside storm drainage		X	Interior ACM & LCM Survey	Furnished by Owner	X

L.S. Mitchell Architect, Inc.

[illegible]

REPRODUCTIONS/COPIES BUDGET

Page 1 of 1 Pages

L.S. Mitchell Architect, Inc.

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FEE BUDGET SUMMARY

Page 1 of 1 Pages

CONSULTANT QUESTIONNAIRE

NAME OF COMPANY L.S. Mitchell Architect, Inc.FEDERAL TAX I.D. NUMBER 45-5218361DBA SAME AS ABOVESTREET ADDRESS 135 West Gobbi Street, Suite #203CITY Ukiah TELEPHONE 707-462-8778CONTACT PERSON LAWRENCE S. MITCHELL, AIA TELEPHONE 707-462-8778STATE LICENSE NO. C-13860 TYPE ARCHITECTBANK REFERENCES: Savings Bank of Mendocino County, Ukiah, Main Branch Office (707) 462-6613

Provide Names, Addresses and Telephone numbers for three past clients of similar projects:

Project Name	Contact Person	Address	Telephone #
1. <u>Tenant Improvement</u>	<u>Dan Thomas</u>	<u>290 E. Gobbi St., Ukiah</u>	<u>707-462-1425</u>
2. <u>Feasibility Study</u>	<u>Dr. Donald Coursey, etal</u>	<u>1165 S. Dora St., Ukiah</u>	<u>707-462-8855</u>
3. <u>Office Addition</u>	<u>Dr. Paul Otto</u>	<u>205 W. Clay St., Ukiah</u>	<u>707-462-1644</u>

HOW LONG IN BUSINESS? 1976 (+/- 39 year) HOW MANY EMPLOYEES? 2.50ARE YOU AN EQUAL OPPORTUNITY EMPLOYER? YESARE YOU ELIGIBLE TO PERFORM FEDERAL GOVERNMENT WORK? YESNAME AND ADDRESS OF INSURANCE CARRIER(S): General Liability & Professional Liability -
Dealey, Renton & Associates, Insurance Brokers, P.O. Box 12675, Oakland, CA 94604-2675Conflict of Interest: Are you or any member of your family related to (1) any employee of the Owner or member of the governing board of the Owner?No XXX; Yes _____. (2) If yes, please explain relationship:

Lawrence Mitchell
Signature

Date March 6, 2016

END OF FORM

FORM OF NON-COLLUSIVE AFFIDAVIT

AFFIDAVIT

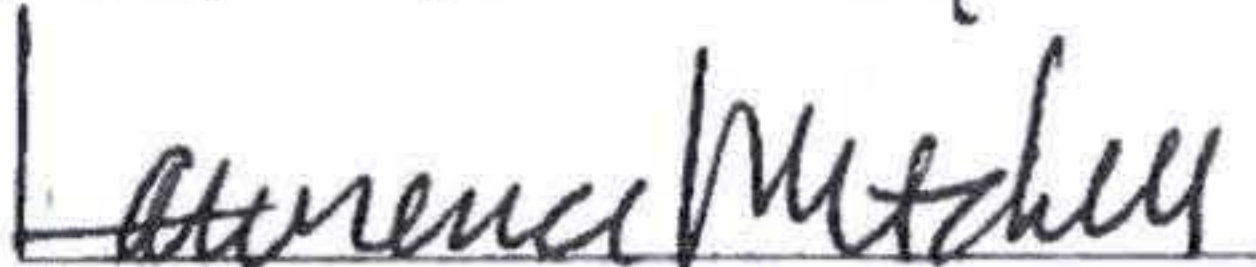
State of California)
County of Mendocino) ss
City of Ukiah)

Lawrence S. Mitchell, hereby attests and says:

That he is the party making the foregoing proposal for bid, that such proposal or bid is genuine and not collusive or sham; that said bidder has no colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not, in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person interested in the proposed contract, and that all statements in said proposal for bid are true.

Architects' Project I.D.: Adapt Existing - Ukiah Electric Utility – Field Operations

Location: 1350 Hastings Road, Ukiah, CA 95482

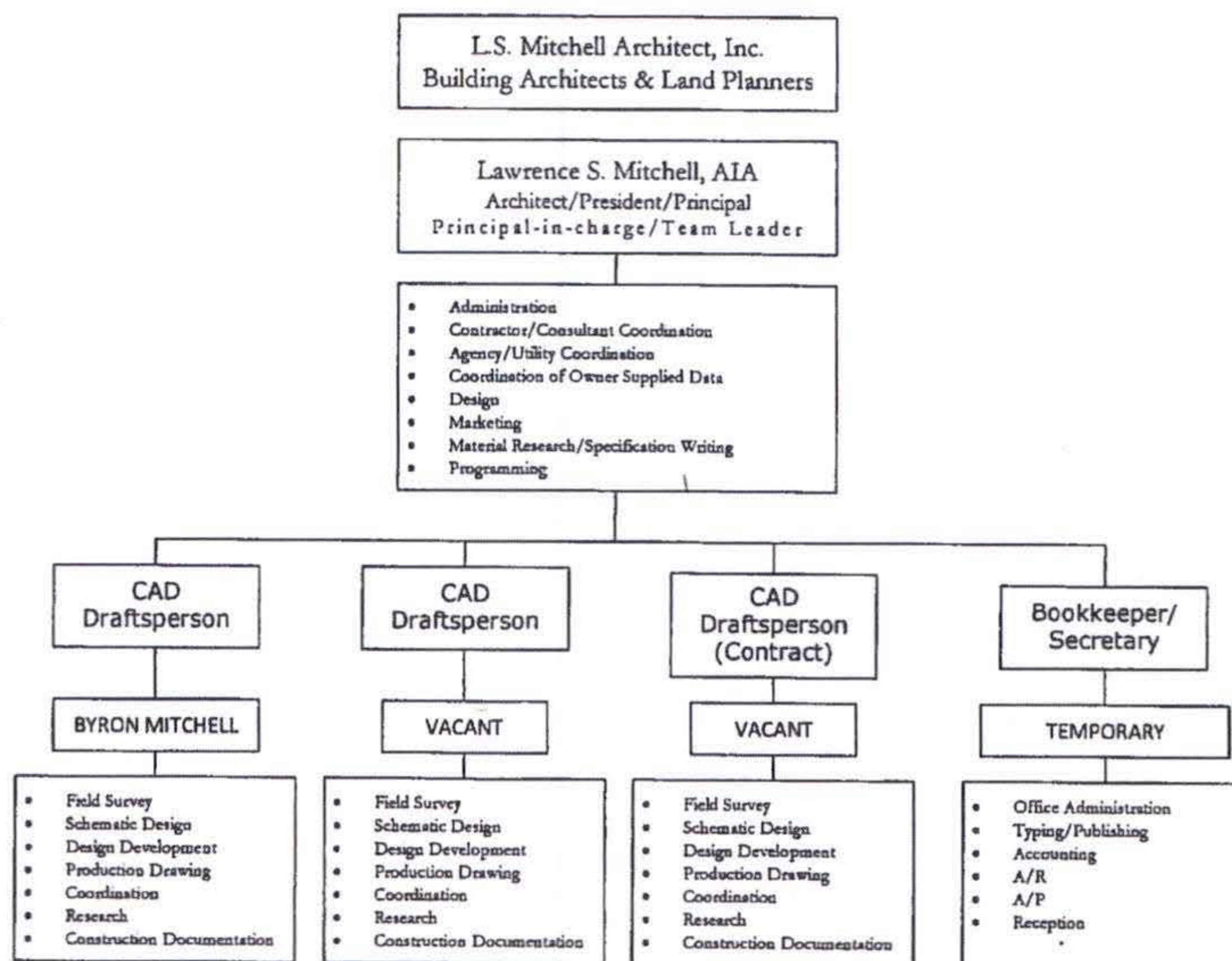

Signature

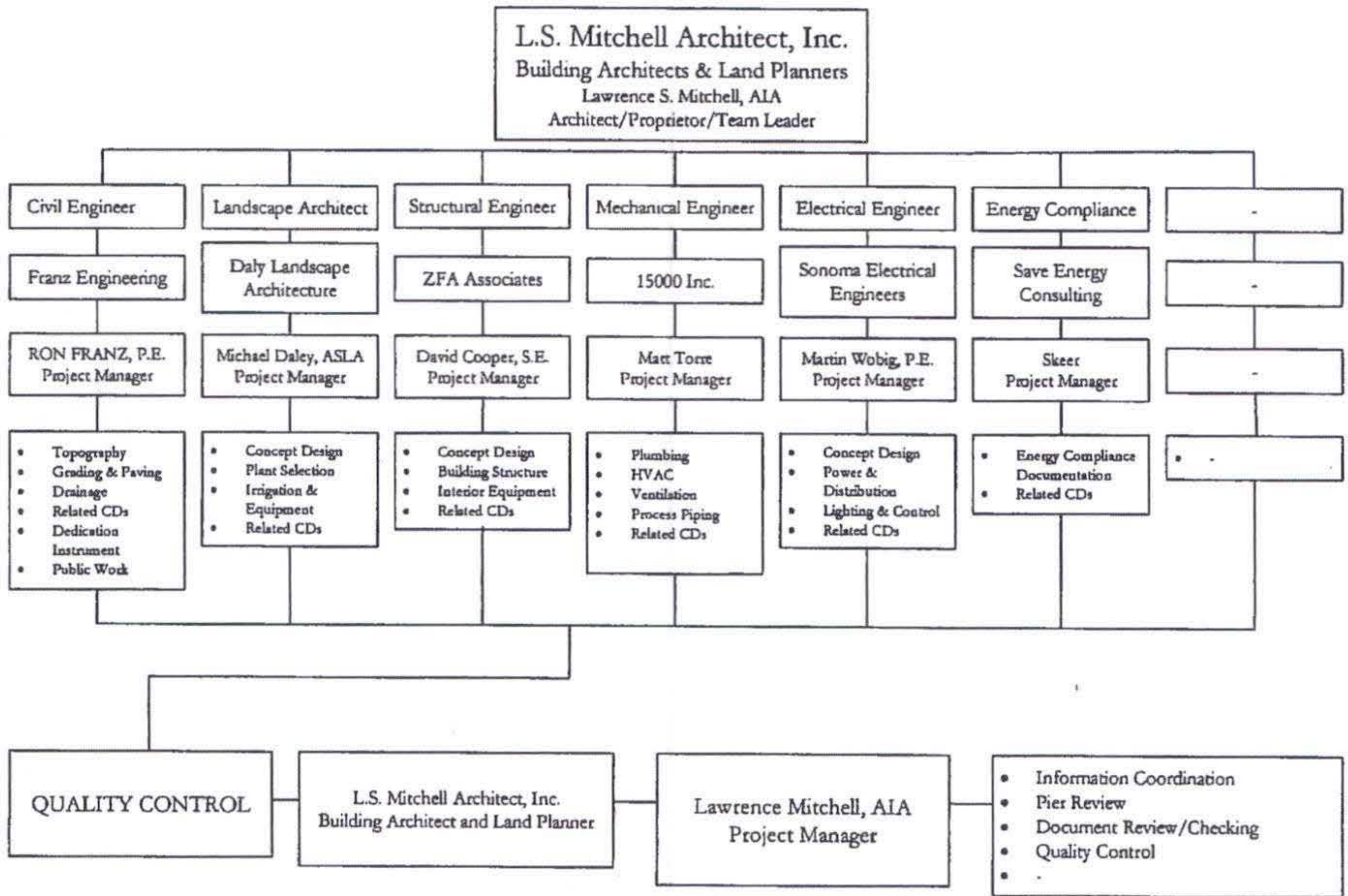
Lawrence S. Mitchell, Architect
Name and Title

Date: March 6, 2016

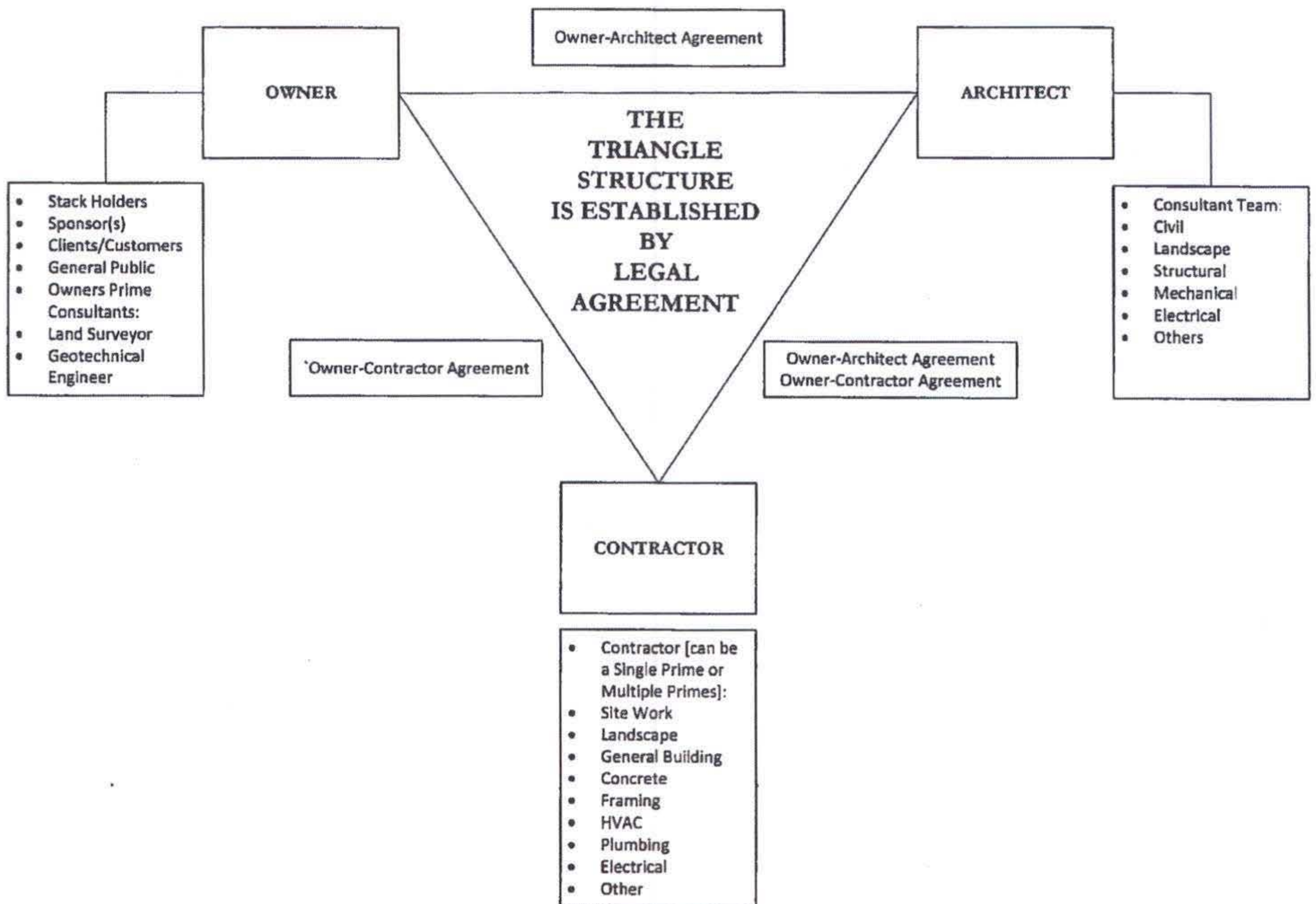
(Signature can be notarized if so desired.)

END OF FORM





RELATIONSHIP AND BASIC TASK SUBDIVISIONS



L.S. Mitchell Architect, Inc.
BUILDING ARCHITECT & LAND PLANNER
Effective JANUARY, 2017

SCHEDULE OF RATES

PRINCIPAL ARCHITECT (I. Mitchell).....	\$125.00
ARCHITECT (Vacant).....	\$100.00
DESIGN ASSOCIATE (Vacant).....	\$85.00
TECHNICIAN/DRAFTSMAN II/CAD MANAGER (Vacant).....	\$65.00
TECHNICIAN/DRAFTSMAN I/CAD OPERATOR (B. Mitchell)	\$55.00
OFFICE MANAGER/SECRETARY/BOOKKEEPER (Vacant)	\$45.00
MARK-UP ON REIMBURSIBLE EXPENSES & SUBCONTRACT SERVICES	Cost plus 10.0%
MILEAGE REIMBURSEMENT	\$0.55 / Mile

NOTES:

- Minimum hourly charge is one (1) hour.
- Minimum time unit is 8 minutes.
- Fee structure is defined elsewhere in the agreement.
- These rates shall be adjusted annually on the anniversary date of the agreement in accordance with the Consumer Price Index issued by the U.S. Department of Labor, Bureau of Labor Statistics for "All Urban Consumers" in San Francisco-Oakland" for "All Items."

CITY OF UKIAH
AMENDMENT 1
TO
PROFESSIONAL SERVICES
CONTRACT #1617-091 – ARCHITECTUAL SERVICES RELATED TO THE
DESIGN AND BUILDING PLANS FOR THE 1350 HASTINGS ROAD
PROPERTY.

This Amendment No. 1, entered on _____, 2020, revises the Agreement for Professional services dated June 9, 2017 between the City of Ukiah and L.S. Mitchell Architect, Inc. for architectural services related to the design and building plans for the 1350 Hastings Road Property.

This Amendment No. 1:

- 1) Amends the Scope of Services to include additional engineering services and construction support for 1350 Hastings Road construction project.
- 2) Adds an additional dollar amount of \$45,000, for a revised total contract amount of \$165,000.

Except as expressly amended by this Amendment, all other terms remain unchanged and in full force and effect.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS AMENDMENT ON THE EFFECTIVE DATE:

L.S. MITCHELL ARCHITECT, INC.

BY: _____
LAWRENCE MITCHELL

DATE: _____

CITY OF UKIAH

BY: _____
SAGE SANGIACOMO, CITY MANAGER

DATE: _____

ATTEST

BY: _____
KRISTINE LAWLER, CITY CLERK

DATE: _____



AGENDA SUMMARY REPORT

SUBJECT: Consideration of City of Ukiah's Community Green Lighting Program to Enhance and Promote Energy Conservation, and Approval of LED Lighting Rebate.

DEPARTMENT: Electric Utility

PREPARED BY: Mel Grandi, Electric Utility Director

PRESENTER: Consent Calendar

ATTACHMENTS:

None

Summary: Council will consider the a Community Lighting Program for the holidays to enhance and promote energy conservation, and also consider approval of LED Lighting Rebate.

Note: There are a number of holiday activities in the planning process. In the upcoming weeks, the City will be working with community partners to develop and/or promote those activities.

Background: Over the last several months, COVID 19 has had significant impact on our community and the world in many ways. One notable result is the reduced social interaction and community activities like Sundays in the Park, Pumpkinfest, and Truckers' Light Parade. Therefore, the Community Services and the Electric Utility Departments have teamed up to support our customers' efforts in making this holiday season more bright and joyful.

Discussion: These City teams are jointly developing a holiday lighting program to enhance our community while providing cost effective, low carbon options for lighting to our customers.

The proposed program would generally include the following elements:

1. A community-wide, decorative LED lighting contest recognizing the best in class use of LED lighting. Recognition categories and awards include:

Residential:

- a. Top 3 awards receive \$350 each.
- b. Best Residential Neighborhood – Public recognition.

Commercial/Industrial:

- a. Top 3 awards receive \$360 each.

2. LED Holiday Light Purchase Rebates:

- a. Up to 100% rebates for the cost of LED decorative holiday lighting.
- i. 100% cost reimbursement when replacing incandescent holiday lighting. Requires proof of purchase with the replaced lights being submitted with rebate application.

ii. 50% cost reimbursement with proof of purchase.

b. Benefit cap of \$15 per string with a \$300 cap per residence or commercial account.

3. Rebate claims must be submitted by January 31, 2021.

The Electric Utility, through electric revenues, administers the Public Benefits programs to promote energy efficiency, provide rebates to encourage investment in energy efficient products, and assist and educate our commercial and residential customers in energy related matters including energy audits. The electric rate payers provide the funding through a State mandated 2.85 percent of rate revenue received.

City Staff recommends approving this opportunity to enhance our community while providing cost effective, low-carbon options for lighting to our customers.

Additional holiday events including those with community partners are still in the planning stage, and further details will be forthcoming.

Recommended Action: Approve the Community Decorative Green Lighting Program and Updated LED Lighting Rebate.

BUDGET AMENDMENT REQUIRED: No

CURRENT BUDGET AMOUNT: 80626450.52139 Public Benefits Research, Development & Demonstration: \$15,000; 80626450.52135 Public Benefits Energy Conservation: \$133,000

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: David Rapport, City Attorney, Shannon Riley, Assistant City Manager and Neil Davis, Community Service Program Administrator

Approved: 
Sage Sangiacomo, City Manager



AGENDA SUMMARY REPORT

SUBJECT: Receive Status Report and Consider Any Action or Direction Related to the Novel Coronavirus (COVID-19) Emergency Including Operational Preparedness and Response; Continuity of City Operations and Services; Community and Business Impacts; and Any Other Related Matters.

DEPARTMENT: City Manager /
Admin

PREPARED BY: Tami Bartolomei, Office of Emergency Services
Coordinator

PRESENTER: Tami Bartolomei, Office of Emergency
Management Coordinator

ATTACHMENTS:

None

Summary: The City Council will receive a status report and consider any action or direction related to the Novel Coronavirus (COVID-19) Emergency including operational preparedness and response; continuity of City operations and services; community and business impacts; and any other related matters.

Background: On March 4, 2020, California Governor Gavin Newsom declared a State of Emergency in California in response to the COVID-19 pandemic.

The County of Mendocino declared a State of Emergency related to the COVID-19 on March 4, 2020.

On March 17, 2020, the City Manager, acting as the Director of Emergency Services, declared the existence of a local emergency.

On March 18, 2020, City Council approved a Resolution ratifying the proclamation declaring the existence of a local emergency.

Since the onset of the emergency, the City of Ukiah has worked to respond to the public health and safety needs of the community in cooperation with the County of Mendocino and other partners. The local response for public health is lead regionally by the County of Mendocino and the County's Public Health Officer. In addition, the City of Ukiah has worked to maintain the continuity of public services including public safety, water, sewer, electric, airport, public works, and other essential activities.

Discussion: As the coronavirus "COVID-19" continues to evolve, the City of Ukiah continues to monitor the situation and respond to emerging needs of the community. The City is in continued contact with local and state agencies, as well as community partners, hospitals, schools, and neighboring cities to ensure we have the most updated information pertaining to COVID-19 and are coordinating efforts.

Reports and/or information from the City of Ukiah's Emergency Operation Center (EOC) will include:

- * Emergency Operation Center (EOC) Status
- * COVID-19 Case Updates
- * Public Information Officer

- * Medical Services
- * School/Education
- * Public Safety (Police/Fire/EMS)
- * Shelter in Place Monitoring and Compliance
- * Community Service Groups
- * Homeless Response
- * Business Impacts/Services
- * Public Infrastructure/Construction Status
- * City Finance
- * Recovery Efforts and Planning
- * Other Related matters

Staff will provide a status report to City Council and will seek direction or action on operational preparedness and response; continuity of City operations and services; community and business impacts; and any other related matters.

Go to the City's website (www.cityofukiah.com) for direct access to information related to the Novel Coronavirus (COVID-19) emergency including local updates, City Services, Community/Resident Information, and Business Resources.

Recommended Action: Receive status report and consider any action or direction related to the Novel Coronavirus (COVID-19) Emergency including operational preparedness and response; continuity of City operations and services; community and business impacts; and any other related matters.

BUDGET AMENDMENT REQUIRED: N/A

CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: Sage Sangiacomo, City Manager

Approved: 
Sage Sangiacomo, City Manager



AGENDA SUMMARY REPORT

SUBJECT: Consideration and Possible Approval of Option #2 in the October 20, 2020 Mead & Hunt Technical Memorandum (Attachment 1) to Protect for a Future 5,000-Foot Runway for CalFire and Other Operations; and Direction to Staff to Communicate Council's Recommendation to the Mendocino County Airport Land Use Commission.

DEPARTMENT: Community Development **PREPARED BY:** Craig Schlatter, Community Development Director, Greg Owen, Airport Manager
PRESENTER: Greg Owen, Airport Manager

ATTACHMENTS:

1. UKI.C130 Memo.101920_complete
2. Airport Commission - Letter to Council 11-3-20

Summary: Council will consider and possibly approve Option #2 of the October 20, 2020 Mead & Hunt Technical Memorandum in Attachment 1 to protect for a future 5,000-foot runway for CalFire and other operations. Council will also possibly direct Staff to communicate Council's recommendation to the Mendocino County Airport Land Use Commission.

Background: Since February 2019, Mead & Hunt in collaboration with City staff, the Mendocino County Airport Land Use Commission (ALUC), and Mendocino County staff have been preparing a new stand-alone Airport Land Use Compatibility Plan (ALUCP) for Ukiah Municipal Airport (UKI). The UKI ALUCP would replace the current Mendocino County Airport Comprehensive Land Use Plan (CLUP) for Ukiah Municipal Airport, adopted in 1996.

In recent months, and due to the increasing threat of wildfires in the region as evidenced by the two mega-fires in 2017 and 2020, the two largest in State history, Staff has been working with the Ukiah Airport Commission and Airport Land Use Commission on a special exception area within the 2020 UKI ALUCP to protect the area for a possible runway extension to 5,000 feet. Extending the runway to 5,000 feet would enhance firefighting abilities by enabling C-130 aircraft and other firefighting aircraft to land and take off from UKI. Staff has also had preliminary discussions with Federal Aviation Administration (FAA) representatives regarding UKI's importance to current and future operational needs for broader disaster response efforts. FAA support would be a key component to funding a future runway extension.

Discussion: On October 20, 2020 Mead & Hunt released a technical memorandum (Attachment 1) outlining three possible options for modifying the draft UKI ALUCP to protect for a future runway extension. This memorandum was shared with the Ukiah Airport Commission, Chair of the ALUC, and Mendocino County staff.

On November 3, 2020, the Ukiah Airport Commission moved unanimously to transmit the letter in Attachment 2 to the Council. The Airport Commission's recommendation closely aligns with Option #2 of the October 20, 2020 Technical Memorandum.

In consideration of the Airport Commission's recommendations, Staff recommends Council approve Option #2

of the October 20, 2020 Mead & Hunt Technical Memorandum for the purposes of protecting for a future 5,000-foot runway extension. Additionally, because of the ALUC's duties and powers related to the UKI ALUCP, Staff also recommends Council direct Staff to communicate this direction to the ALUC.

Staff believes Council's approval of Option #2 will ultimately lead to a speedier approval of the draft UKI ALUCP by the ALUC. Conversations with Mead & Hunt suggest such a modification can be accomplished fairly quickly, with minimal technical or procedural issues to address, and support of the modification by the Ukiah Airport Commission and Chair of the ALUC should enable a smoother adoption process.

Recommended Action: Approve Option #2 in the October 20, 2020 Mead & Hunt Technical Memorandum within Attachment 1 to protect for a future 5,000-foot runway for CalFire and other operations; and direct staff to communicate Council's direction to the Mendocino County Airport Land Use Commission.

BUDGET AMENDMENT REQUIRED: N/A

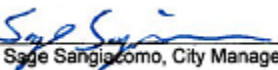
CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: Ukiah Airport Commission

Approved: 
Sage Sangiacomo, City Manager

TECHNICAL MEMORANDUM



To: Mr. Craig Schlatter
City of Ukiah Community Development Director

From: Ken Brody, Senior Airport Planner, and
Maranda Thompson, Senior Project Manager

Date: October 20, 2020

Subject: Potential C-130 Operations at Ukiah Municipal Airport and
Implications for Draft Airport Land Use Compatibility Plan

THE ISSUE

CalFire is in the process of adding several C-130s to its fleet of fire attack aircraft in the state. There is a potential that the agency may seek to operate these aircraft at Ukiah Municipal Airport when circumstances warrant. Significantly, the C-130 is much larger than the S-2T aircraft now operating at the airport (132-foot wingspan versus 73 feet). The airport design features that would need to be modified to accommodate the C-130 (runway length, taxiway setbacks, parking area, etc.) have not yet been fully studied.

From an airport land use compatibility planning standpoint, however, the most critical feature would be the runway length. Preliminary CalFire information indicates that full functionality of the C-130 requires a minimum of 5,000 feet of runway length. Ukiah Municipal Airport currently has a runway length of 4,423 feet and the 2019 airport layout plan (ALP) approved by the city, the FAA, and Caltrans calls for extending the runway 465 feet to the north to a total length of 4,888 feet. The length of this extension was fixed by FAA airport design requirements for an object free area beyond the end of runways and the city's desire at the time to avoid the need to realign or close Hastings Avenue. Whether an additional extension of 112 feet is feasible and, if so, whether it could best be provided on the north or the south end of the runway is not known at this time. Nevertheless, the immediate question is whether the draft *Ukiah Municipal Airport Land Use Compatibility Plan* (ALUCP) now undergoing public review can be modified to better enable a longer runway than presently planned.

A major consideration in this regard is that state airport land use compatibility planning statutes dictate that ALUCPs be based upon a Caltrans-approved, current airport master plan or airport layout plan. A longer runway length as discussed above is not reflected in any current plans for the airport and updating those plans could be a costly and time-consuming process depending upon what documentation Caltrans would require. Thus, the focus in this memo is on whether more can be done within the present draft ALUCP to prevent future development that would add to the complexities of a further runway extension while still basing the ALUCP on the approved airport layout plan.

THE OPTIONS

Given the mandatory relationship between an updated ALUCP and the current ALP, it is important to first take a closer look at the currently established zones and criteria for the areas near the runway ends in order to identify options for how the draft ALUCP might be modified.

In conjunction with the northerly runway extension, the 2019 ALP shows a corresponding shift in the location of the runway protection zone (RPZ) (see **Figure 1**). The future RPZ would extend to Talmage Road. While most of the central sections of both the current and future RPZs are on airport property, outer corners of the future RPZ, especially to the east, would extend onto private property. The city controls aviation easements on these lands as well as on property abutting the north side of Talmage Road. These easements limit the allowable height of structures and vegetation on the underlying property and also restrict or prohibit lights, lighted signs, and other lighted objects and uses that generate radio or electromagnetic interference. The easements do not otherwise restrict the uses of the properties.

The 1996 *Mendocino County Airport Comprehensive Land Use Plan* (ACLUP) that currently remains in effect for the Ukiah Municipal Airport does, however, set additional restrictions on most of this land in what is called the A* Zone. The boundary of the A* Zone was set based on the 1996 ALP to encompass a larger RPZ that was required in accordance with FAA design standards that have since been modified. Note that, as shown in **Figure 1**, the A* Zone boundary extends slightly farther to the east and less far to the north than the area covered by aviation easements. The criteria for the A* Zone are the same as those for the remainder of the A Zone, all of which is on airport property. All new nonaeronautical structures are prohibited. Automobile parking is allowed provided that it attracts no more than 10 people per acre. Policy 6.1 indicates that “it is the intention of the City of Ukiah to provide long-term control of the land uses within these areas [A* and B1* Zones] by either acquiring the property in fee or obtaining approach protection easements restricting the type and density of land uses permitted.”

The city also controls aviation easements at the south end of the runway. The easement area encompasses all of the RPZ, the size of which is the same now as in the 1996 ALP. This area is reflected in the 1996 ACLUP that establishes A* and B1* Zones covering the affected private property (see **Figure 2**).

Three options are apparent for addressing the ALUCP issues brought on by the possible need to accommodate the C-130 at Ukiah Municipal Airport.

- **Option 1:** Adopt the current draft ALUCP by the end of the year as scheduled. During 2021, consult with Caltrans to determine what type of ALP documentation they would require to support an ALUCP that assumes a longer runway. The FAA can then be approached to see if they would provide funding support to ascertain runway length requirements for C-130 operations at Ukiah, to determine how the runway can best be further extended, and to update the ALP. Once the ALP has been updated, the ALUCP can be modified accordingly.

- **Option 2:** Immediately modify the draft ALUCP to include compatibility zone boundaries and/or criteria that would better preserve the potential for a longer runway. Any such modifications will need to be based upon features depicted in the 2019 ALP, specifically the current and proposed aviation easements. This can most readily be achieved by creating a Compatibility Zone 1*. This concept is supported by the existence of the A* Zone in the 1996 ACLUP.

Further, to reflect the fact that the affected area is mostly private property, the criteria should be less restrictive than for Zone 1 but more restrictive than the Zone 2 criteria. For example, future uses could be limited to very-low-intensity activities (30 people per acre maximum) such as storage or light industrial with uses such as retail, offices, and residential prohibited. Limits on the size of buildings also could be set.

- **Option 3:** Similar to Option 2, but uses a “conceptual RPZ” to protect for a possible need for a 5,000-foot long runway to serve future C-130 aircraft operations. The conceptual RPZ would either define the outer limits of Zone 1 or a new Zone 1*. The criteria for the extended zone could either be the same as Zone 1, which prohibits all new structures, or include slightly less stringent criteria. Note that the conceptual RPZ has not been validated by the City nor is it supported by the 2019 ALP. Therefore, this option puts the City and/or ALUC in a vulnerable position to defend new compatibility zone boundaries based on the conceptual RPZ.

Among the factors to be considered in choosing from these options, two in particular are important to highlight here.

- **Timing:** State airport land use planning statutes limit adoption of revisions to ALUCPs to once per calendar year. Thus, regardless of which option is chosen, it would be best if ALUC action is taken before the end of this year (2020) so that the ALUCP could be amended during 2021. Otherwise, any revisions would need to wait until 2022.
- **CEQA:** For Option 1, the necessary CEQA document has already been prepared and would not need to be revised for the immediate adoption of the ALUCP. Even for Options 2 and 3, CEQA document changes can arguably be avoided if the revised compatibility zones and criteria do not impose any greater restrictions on land uses than exist under the 1996 ACLUP now in effect. Increased restrictions would not only have CEQA implications but would also raise the specter of causing inverse condemnation.

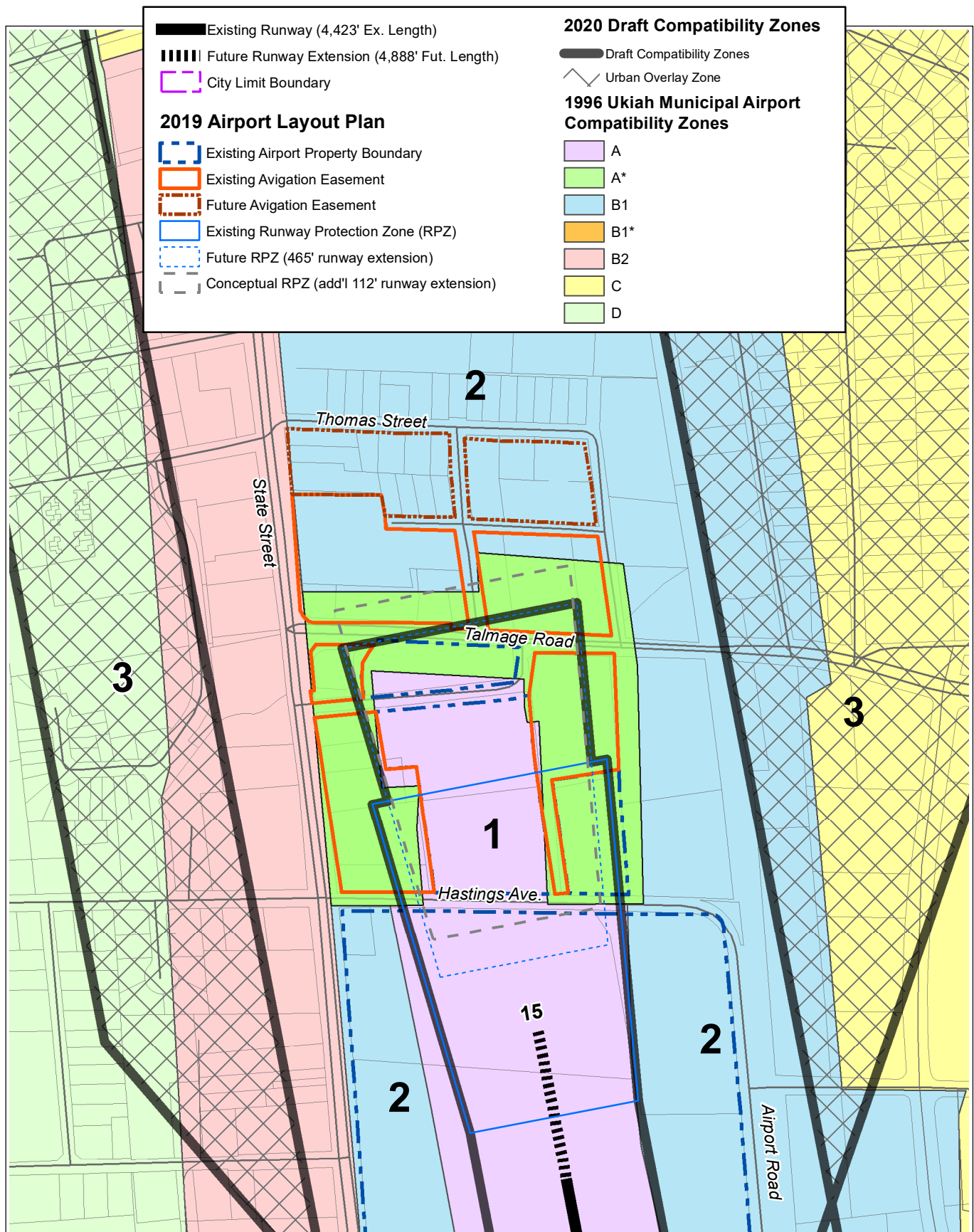


Figure 1

Comparison Map:
Draft Zone 1 and 1996 Zone A* (North)
Ukiah Municipal Airport

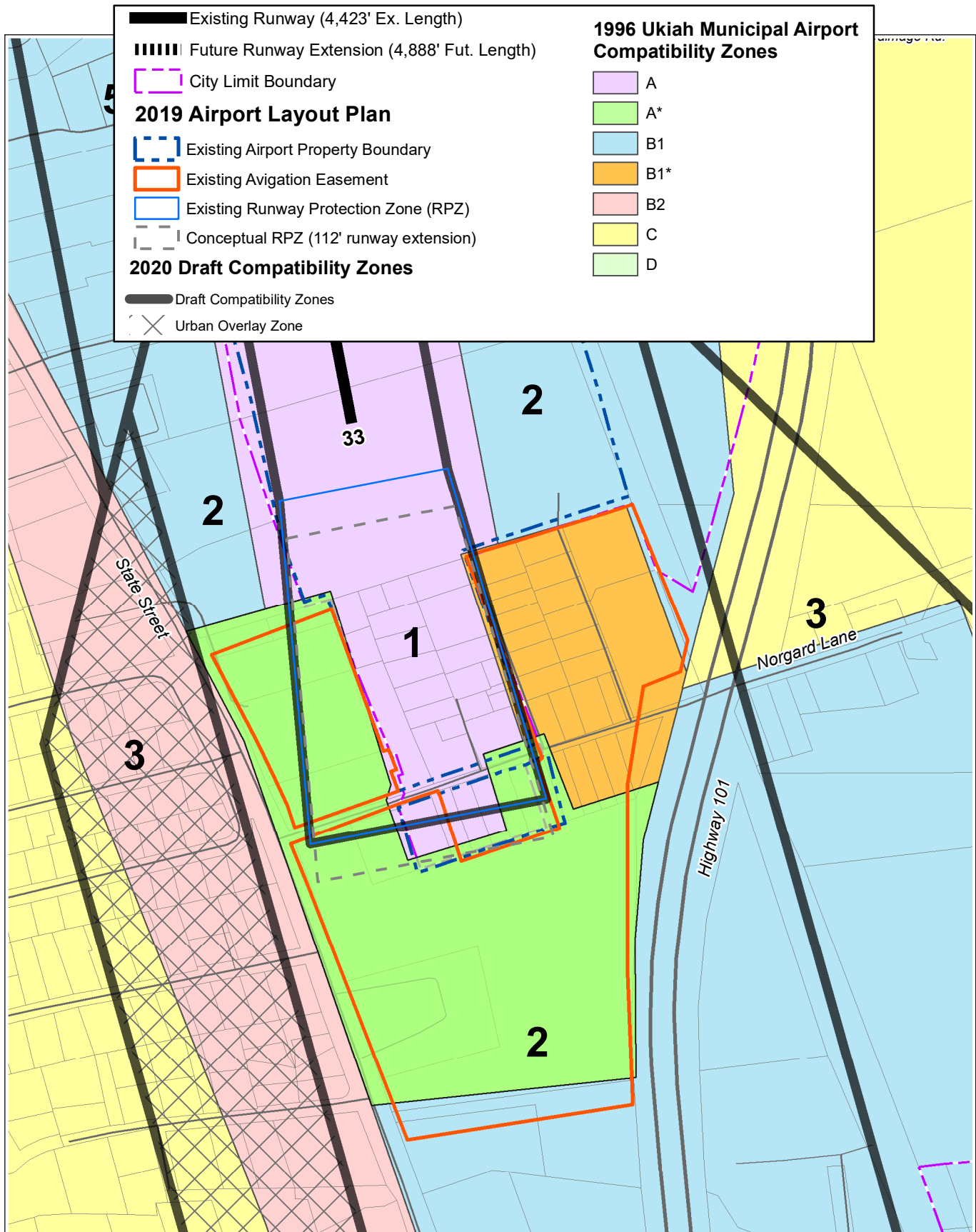
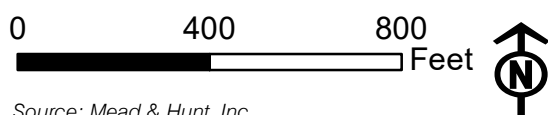


Figure 2



Source: Mead & Hunt, Inc.

Comparison Map: **Draft Zone 1 and 1996 Zone A* (South)** **Ukiah Municipal Airport**

Attachment 2

November 3rd, 2020

The City of Ukiah Airport Commission is deeply concerned at the removal of existing restrictions that are being contemplated at both the North and South ends of the Ukiah Airport. The areas designated A under the existing Comprehensive Land Use Plan (CLUP) do not allow for development. Under the current draft of the proposed CLUP those properties that were not permitted to be developed could have construction right up to the Runway Protection Zone (RPZ) lines. This would make reclaiming the runway length that was lost in the 1980 virtually impossible to recover.

The City of Ukiah also learned during the course of the development of the CLUP revision that Cal-Fire, our largest fuel client, and critical provider of regional fire protection are requiring 5,000' for the aircraft currently being adopted to replace the S-2's in the fleet. With our runway length of 4,423' we cannot support these aircraft under Cal-fire operations rules. As an Enterprise Fund it is abundantly clear that without rents and fuel sales from Cal-Fire's Air Attack Base the Ukiah Airport will not be able to remain economically viable. This is in addition to the prospect of losing a critical public safety service. To preserve the possibility of preserving the Ukiah Airport, it is critical that we work to regain the runway length we already lost and to work towards extending it to 5000+ feet. To do this it is imperative that the new CLUP preserve the Ukiah Airport's ability to meet this critical local and regional need. While we don't know the timeline of Cal-Fire's adoption of new hardware it seems clear the trend will be toward larger aircraft that need longer runways.

Based on these new revelations the Ukiah Airport Commission strongly recommends to the Ukiah City Council that the necessary portion of the A Zones under the current CLUP be preserved and that staff be directed to immediately work toward regaining previously lost runway length with the goal of providing at least 5,000' of runway. For the Ukiah Airport to have a chance to remain a Cal-Fire Air Attack Base the City of Ukiah must act now. Step one of that goal is preserving the existing land use restrictions in the portion of the current A Zone necessary to achieve a 5000' runway; which if relinquished will likely prove impossible to recover at a later date. The modification needed in the draft CLUP to achieve this goal includes preservation of A Zone land use restrictions by 112' to the north and south of the future RPZ as depicted in the attached exhibit prepared by Mead and Hunt. This will preserve the opportunity to extend a new RPZ to accommodate a 5000' runway in full to the north or south or a combination of the two.



Eric Crane

Acting Ukiah Airport Commission Chair



AGENDA SUMMARY REPORT

SUBJECT: Consideration of Adoption of a Resolution Adopting the 2020 Multi-Jurisdictional Hazard Mitigation Plan for Mendocino County.

DEPARTMENT: City Manager / Admin
PREPARED BY: Tami Bartolomei, Office of Emergency Services Coordinator
PRESENTER: Tami Bartolomei, Office of Emergency Management Coordinator;
Torie Jarvis, Planning Manager with Dynamic Planning

ATTACHMENTS:

1. Volume 1 Mendocino MJHMP
2. Volume 2 Mendocino MJHMP
3. Resolution Adopting Hazard Mitigation Plan City of Ukiah

Summary: Council will consider adopting a Resolution to adopt the Mendocino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) required by FEMA, allowing the City to apply for funding under FEMA's Hazard Mitigation Assistance Program.

Background: The County of Mendocino applied for mitigation funding and took the lead in developing the Mendocino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP).

Mendocino County, along with participating jurisdictions, developed an update to the 2014 Hazard Mitigation Plan over the past 10 months to reduce losses resulting from natural disasters. Hazard mitigation is the use of long-term actions to reduce the loss of life, personal injury, and property damage that can result from a disaster. All participating jurisdictions, the MJHMP Planning Committee, and the public have reviewed, or are currently reviewing, the MJHMP. Boards and councils of participating jurisdictions are now being asked to adopt the Mendocino MJHMP.

The plan was developed by the MJHMP Planning Committee, made up of participants from all participating jurisdictions advising on hazard and mitigation action priorities both for the County as a whole and each jurisdiction individually, with expertise from consultants on the project, Dynamic Planning and Science. The plan has been reviewed by the public from October 13-26, and comments have been addressed. The MJHMP is currently being reviewed by the California Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA).

The Draft Plan consists of two volumes; Mendocino MJHMP Volume 1 (Attachment 1), Planning-Area-Wide Elements, and Mendocino MJHMP Volume 2 (Attachment 2), Multi-Jurisdictional Annex where the City of Ukiah's plan is located. The Draft Plan is likely to change based on Cal OES and FEMA review, but those changes are not expected to be substantive and will be subject to review by each participating jurisdiction. Because of the December 2020 deadline for FEMA and Cal OES approval, adoption of the MJHMP will happen during Cal OES and FEMA review of the Plan, and adoptions incorporate any edits made in response

to Cal OES and FEMA feedback.

Discussion: A current and approved hazard mitigation plan is a prerequisite for jurisdictions wishing to pursue funding under FEMA's Hazard Mitigation Assistance Program (HMA). The Mendocino County MJHMP must be updated every five (5) years to remain in compliance with regulations and Federal mitigation grant conditions; FEMA approved a December 2020 deadline for approval of an updated Mendocino County MJHMP, and several jurisdictions have funding contingent on approval of this Update.

Staff recommends City Council adopt the Resolution (Attachment 3) to adopt the Mendocino County Multi-Jurisdictional Hazard Mitigation Plan required by FEMA allowing the City to apply for funding under FEMA's Hazard Mitigation Assistance Program.

Recommended Action: Adopt the Resolution adopting the Mendocino County Multi-Jurisdictional Hazard Mitigation Plan required by Federal Emergency Management Agency (FEMA) to apply for funding under FEMA's Hazard Mitigation Assistance Program.

BUDGET AMENDMENT REQUIRED: N/A

CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: County of Mendocino

Approved: 
Sage Sangiacomo, City Manager

MENDOCINO COUNTY

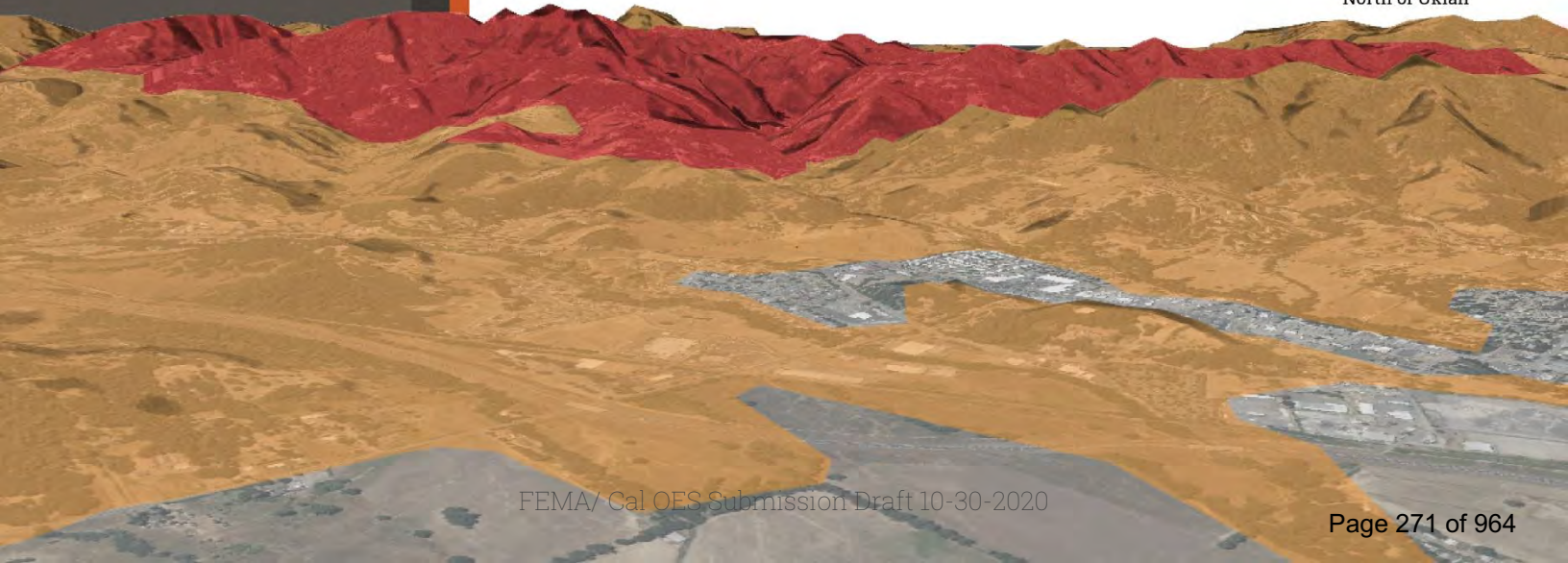
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

**MENDOCINO COUNTY EXECUTIVE OFFICE
OFFICE OF RECOVERY AND
OFFICE OF EMERGENCY SERVICES**

951 LOW GAP ROAD
UKIAH, CA 95482



DEPICTED BELOW:
Composite Wildfire Layer
North of Ukiah





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Mendocino County

Multi-Jurisdiction Hazard Mitigation Plan

Volume 1

Planning-Area-Wide Elements

Executive Summary	xiii
What is a hazard mitigation plan?	xiv
Why have a hazard mitigation plan?	xiv
Why is the plan updated so often?	xv
Participating Jurisdictions	xv
Plan Development and Update Methods	xvi
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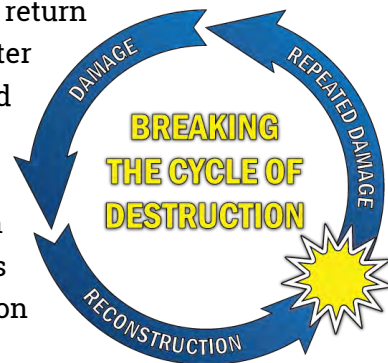
Executive Summary

MENDOCINO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



Mendocino County prepared this hazard mitigation plan to guide County and City Officials and School District Administrators in protecting the people and property within the County from the effects of natural disasters and hazard events. This plan demonstrates Mendocino County's commitment to reducing risk from natural hazards through mitigation and serves as a tool to direct County resources to achieve optimum results with available administrative, technical, and financial resources.

The term **"hazard mitigation"** refers to actions or strategies that can reduce or eliminate long-term risks caused by natural disasters. Mitigation activities can be developed, planned, and implemented before or after a disaster occurs. After disasters, repairs and reconstruction often are completed in such a way as to simply restore damaged property to pre-disaster conditions. These efforts may return property and infrastructure to "the norm", but the replication of pre-disaster conditions may result in a repetitive cycle of damage and reconstruction. Hazard mitigation planning in Mendocino County can break this repetitive cycle by reducing vulnerability to hazards through smart construction and proper planning of future development and critical infrastructure. Hazard mitigation activities can be conducted through a wide variety of mitigation strategies, such as construction of regional flood control projects or implementing fuel reduction around buildings within high wildfire risk areas.



What is a hazard mitigation plan?

This hazard mitigation plan provides an explanation of prevalent hazards within the County. It also describes how hazards may affect the County and participating jurisdictions differently based upon various relationships to natural hazards. This plan also identifies risks to vulnerable assets, both people and property. Most importantly, the mitigation strategy presented in this plan responds to the identified vulnerabilities within each community and provides prescriptions or actions to achieve the greatest risk reduction based upon available resources. The County and participating jurisdictions intend to save lives, reduce injuries, reduce property damage, and protect natural resources for future generations through mitigation activities.

Why have a hazard mitigation plan?

The passage of the Disaster Mitigation Act in 2000 (DMA 2000) requires proactive pre-disaster planning as a condition of receiving certain federal financial assistance under the Robert T. Stafford Act. DMA 2000 encourages state and local authorities to work together on pre-disaster planning to assist local governments to accurately assess mitigation needs, resulting in faster allocation of funding and more cost-effective risk reduction projects under FEMA's Hazard Mitigation Assistance program. The purpose of this Multi-jurisdictional Hazard Mitigation Plan (MJHMP) is twofold. First, it provides the County and participating jurisdictions continued access to grant funding from FEMA to conduct hazard mitigation activities for participating jurisdictions. Secondly, it provides resources for residents wishing to conduct



hazard mitigation efforts by identifying areas of extreme risk and providing financial and technical mitigation resources based upon current gaps.

Why is the plan updated so often?

As a DMA 2000 requirement, the plan must be updated every five years to remain in compliance with federal mitigation grant conditions. Federal regulations require hazard mitigation plans to include a plan for monitoring, evaluating, and updating the hazard mitigation plan. An update process provides an opportunity to reevaluate recommendations, monitor the impacts of actions that have been accomplished, and determine if there is a need to change the focus of mitigation strategies over time. Grant compliance is contingent on meeting the plan update requirements that are contained in the Code of Federal Regulations (CFRs). Jurisdictions that allow a plan to expire are not able to pursue funding under the Robert T. Stafford Act.



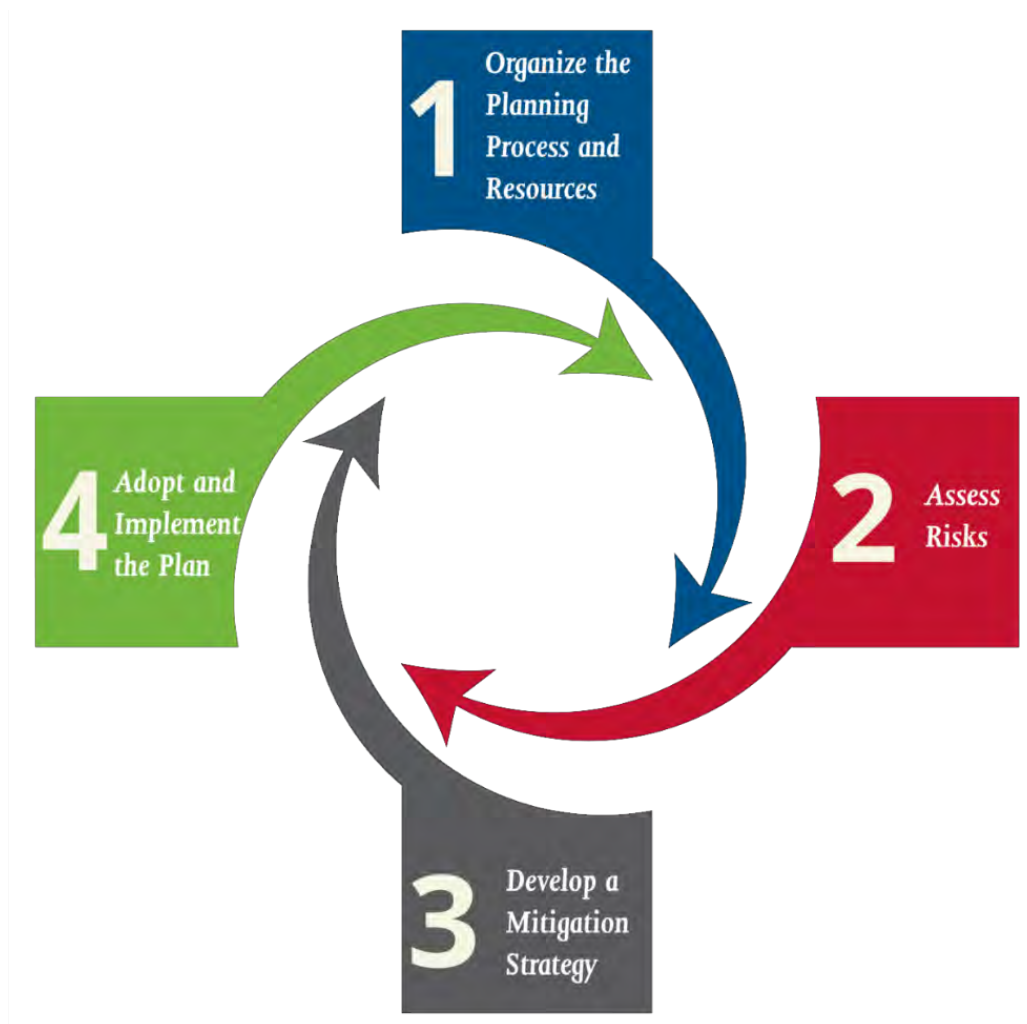
Participating Jurisdictions

The Mendocino County MJHMP has multiple participating jurisdictions and geographically covers the entire area within Mendocino County (hereinafter referred to as the “planning area”). A planning partnership was formed to develop and steer content in this Plan. This partnership consists of Mendocino County stakeholders and participating jurisdictions who have worked together to create the goals, objectives, mitigation strategies, and implementation methods to reduce risk. Any local government or non-profit agency with the ability to regulate building or infrastructure development or maintenance may participate in the planning process. However, to obtain FEMA approval, each of the local jurisdictions must meet all FEMA planning requirements outline in federal regulations at 44 CFR § 201.6 *et seq.* A list of jurisdictions that have elected to participate in this MJHMP can be found in Table 2-1.



Plan Development and Update Methods

Hazard mitigation planning is the process through which hazards are identified, likely impacts determined, mitigation goals set, and appropriate mitigation strategies identified. This plan documents the hazard mitigation planning process the County and participating jurisdictions used to increase natural hazard resiliency in the community. Mendocino County and all participating jurisdictions followed the recommended FEMA four-step process to develop this 2020 updated plan. This update included a reorganization of planning partners to provide clear delineation of jurisdiction information, development of a new risk assessment, revaluation of goals and objectives, development of new mitigation actions, new enhancements for implementing mitigation actions, updates to all sections of the 2014 plan, and a new website for stakeholder involvement and public information.





Risk Assessment

The risk assessment measures the potential loss of life, personal injury, economic injury, and property or infrastructure damage resulting from natural hazards in order to determine vulnerability. For this update, the risk assessment utilized new data and technologies that have become available since 2014. The County and participating jurisdictions used risk assessment information to rank risks and to gauge the potential impacts of each hazard of concern in the Operational Area. The risk assessment included:

- Hazard identification and profiling,
- Assessment of the impact of hazards on physical, social, and economic assets,
- Identification of particular areas of vulnerability,
- Additional impacts of each hazard due to climate change, and
- Estimates of the cost of potential damage.

The following natural hazard threats were identified and profiled as County priority hazards:

Dam Failure
SECTION 4.5.1



Pandemic
SECTION 4.5.5



Slope Failure
SECTION 4.5.8



Drought
SECTION 4.5.2



Flood
SECTION 4.5.6



Soil
Section 4.5.9



Climate Change
SECTION 4.5.3



Severe Weather
SECTION 4.5.7



Wildfire
SECTION 4.5.10



Earthquake
SECTION 4.5.4





Participating jurisdictions also individually assessed risks applicable to their jurisdiction. Many participating jurisdictions identified fewer than the County-identified hazards. Those jurisdiction-specific profiles are included in Volume 2 of this MJHMP.

Hazard Exposure and Damage Estimation

In Mendocino County, earthquakes, flooding, slope failure, dam failure, sea-level rise, naturally occurring asbestos, and wildfire have known geographic extents and corresponding spatial information, which make exposure and damage estimation possible. In order to describe vulnerability for each hazard, it is important to understand the total population and total assets at risk. This provides the estimated damage and losses expected during a “worst case scenario” event for each hazard.

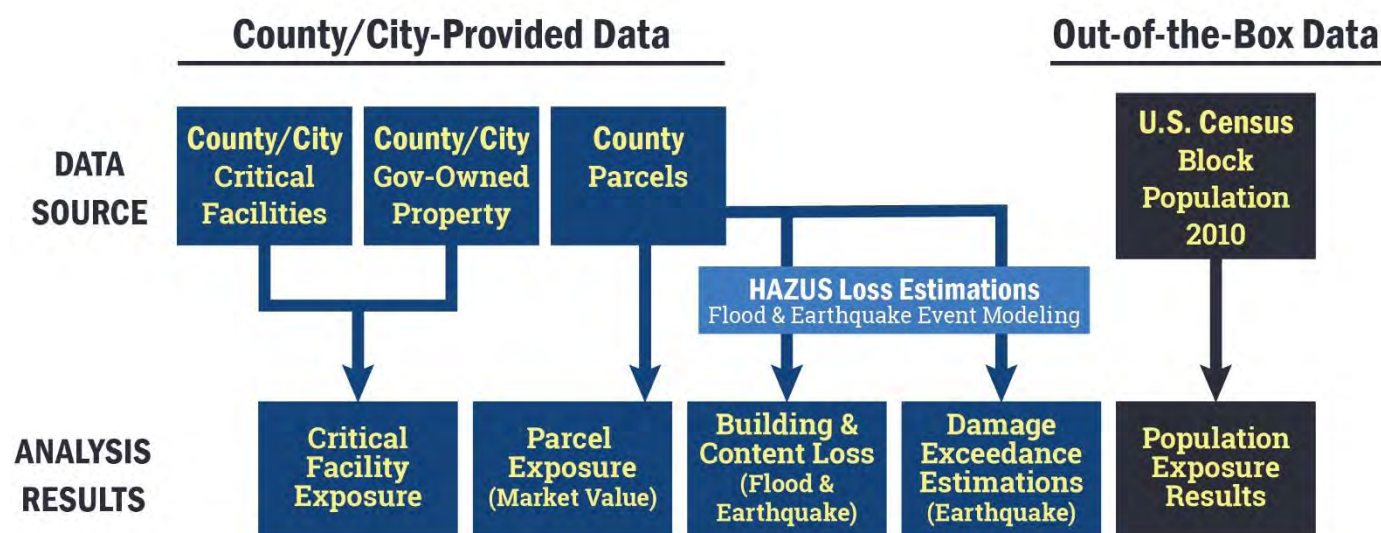


Figure ES 1: Risk Assessment Methodology Summary

Population and Asset Exposure

The total counts of parcels, people, facilities, assets, and the sum of values within the planning area which could be exposed to a hazard event is referred to as the “exposure” in this plan. A natural hazards overlay was developed to reflect the combination of many known natural hazard spatial footprints. The spatial overlay method enables summarization of building values, parcel counts, population exposure, and critical facility exposure within a hazard’s geographic extents (see Figure ES 2 exposure example). This method has been used to evaluate exposure for earthquakes, landslides, flooding, dam inundation, and wildfire. For a more detailed explanation on Risk Assessment Methods, see Section 4.4 and Appendix A at A1-3.



Figure ES 2: Exposure explanation graphic

Damage Assessments

FEMA's Hazus software was used to conduct a detailed loss estimation for flood and earthquake. Hazus is a nationally-applicable, standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. Hazus uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. For this planning effort, Hazus was used to generate damage estimations due to possible earthquakes and flooding. The estimated damage and losses provided by the Hazus Software is a "worst case scenario" event and provides the ability to understand possible widescale damage to buildings and facilities.

In the hypothetical map in Figure ES 3, even though both structures are exposed to flooding, it is predicted that the structure with a first floor height below the depth of flooding will receive significantly more damage than the structure with a first floor height above the expected water depth. For a more detailed explanation on risk Assessment Methods, see Section 4.4 and Appendix A at A1-3.

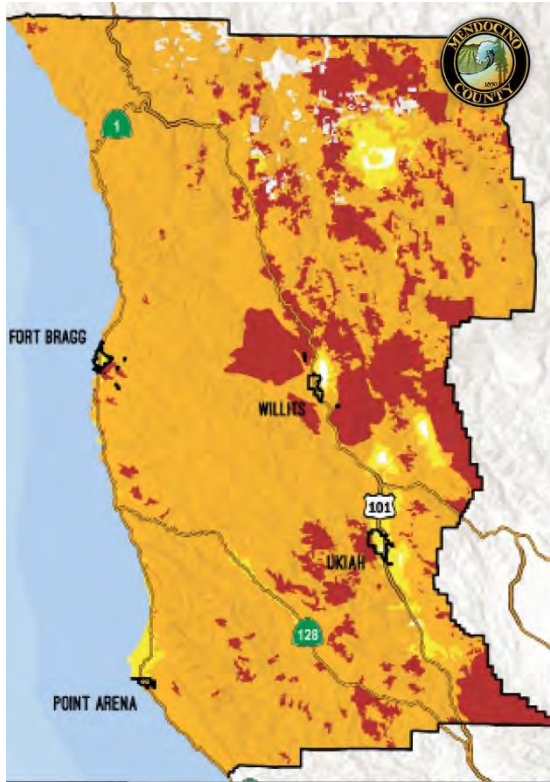


Figure ES 3: Hazus Damage Estimation Example



Summary of Vulnerable Assets: People, Property Value, and Infrastructure

Hazards with spatial boundaries can be analyzed to demonstrate the amount of population, critical infrastructure, and parcels within each hazard's footprint. At-risk populations, critical infrastructure, improved parcels, and loss results for each hazard category are provided in bar chart summary tables throughout this plan to evaluate the percentage of assets exposed to different types of hazards. The side-by-side comparison allows officials to evaluate the impacts of potential hazards to determine toward what hazards to direct energy and financial resource for mitigation activities. For detailed vulnerability assessment information, see the individual hazard specific sections presented in Section 4.5. This Executive Summary provides map summaries for the profiled hazards in Figure ES 4 through Figure ES 7.



WILDFIRE RISK EXPOSURE



CAL FIRE, CPUC

HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

42,883 73%

PARCEL

COUNT

17,668 72%

PARCEL VALUE

SUM OF IMPROVEMENT

\$3,123,610,383 69%

SUM OF CONTENT

\$1,711,753,135 64%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **47** 61%

High Potential Loss **184** 39%

Transportation & Lifeline **241** 70%

LINEAR MILEAGE

Transportation & Lifeline **17,129** 93%

*Exposure summaries include high and very high wildfire risk. Hazard data sources: Cal Fire, CPUC.



FEMA FLOOD RISK EXPOSURE



FEMA

HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

7,005 12%

PARCEL

COUNT

1,236 5%

PARCEL VALUE

SUM OF IMPROVEMENT

\$275,508,413 6%

SUM OF CONTENT

\$223,710,644 8%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **4** 5%

High Potential Loss **33** 7%

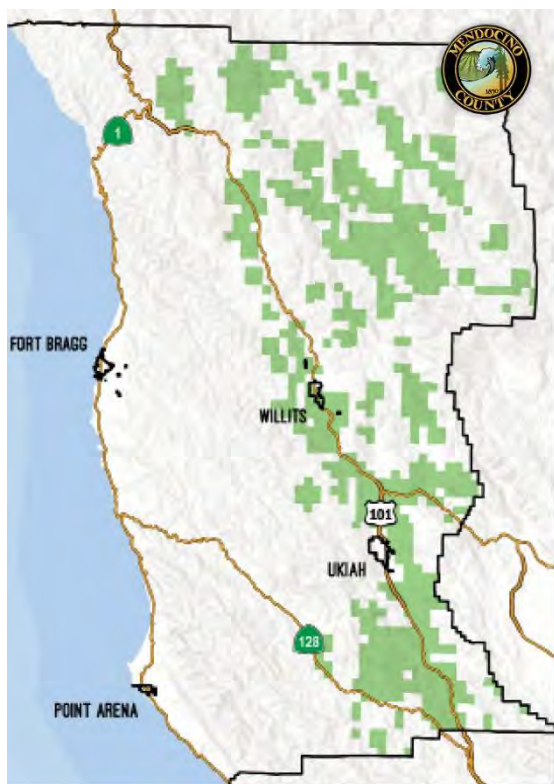
Transportation & Lifeline **125** 36%

LINEAR MILEAGE

Transportation & Lifeline **614** 3%

*Exposure summaries include 100yr, 100yr coast, and 500yr flood zones. Hazard data sources: FEMA.

Figure ES 4: Wildfire and FEMA Flood Risk Snapshots



NATURALLY OCCURRING ASBESTOS

MCAQMD

NATURALLY OCCURRING ASBESTOS

HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

20,571 35%

PARCEL

COUNT

7,721 32%

PARCEL VALUE

SUM OF IMPROVEMENT

\$1,444,250,947 32%

SUM OF CONTENT

\$909,637,874 34%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **20** 26%

High Potential Loss **116** 24%

Transportation & Lifeline **109** 32%

LINEAR MILEAGE

Transportation & Lifeline **4,154** 22%

*Exposure summaries include asbestos risk areas. Hazard data sources: MCAQMD.



DAM INUNDATION EXPOSURE

CGS

INUNDATION ZONE

HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

6,268 11%

PARCEL

COUNT

1,643 7%

PARCEL VALUE

SUM OF IMPROVEMENT

\$425,701,155 9%

SUM OF CONTENT

\$346,094,215 13%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **6** 8%

High Potential Loss **72** 15%

Transportation & Lifeline **70** 20%

LINEAR MILEAGE

Transportation & Lifeline **436** 2%

*Exposure summaries include dam inundation zones. Hazard data sources: CGS.

Figure ES 5: Naturally Occurring Asbestos and Dam Inundation Snapshot



M7.4 MAACAMA GARBERVILLE



HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

58,870 100%

PARCEL

COUNT

24,357 100%

PARCEL VALUE

SUM OF IMPROVEMENT

\$4,542,077,319 100%

SUM OF CONTENT

\$2,692,625,869 100%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **76** 99%

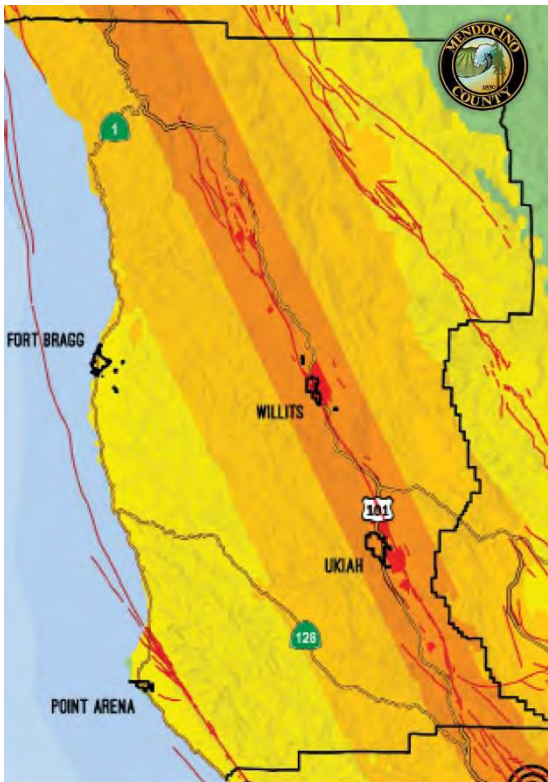
High Potential Loss **472** 100%

Transportation & Lifeline **343** 100%

LINEAR MILEAGE

Transportation & Lifeline **18,122** 98%

*Exposure summaries include violent, severe, very strong, and strong MMI shake areas. Hazard data sources: USGS.



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN



HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

55,319 94%

PARCEL

COUNT

22,376 92%

PARCEL VALUE

SUM OF IMPROVEMENT

\$4,367,628,069 96%

SUM OF CONTENT

\$2,587,544,399 96%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **64** 83%

High Potential Loss **430** 91%

Transportation & Lifeline **292** 85%

LINEAR MILEAGE

Transportation & Lifeline **13,559** 73%

*Exposure summaries include violent, severe, very strong, and strong MMI shake areas. Hazard data sources: USGS.

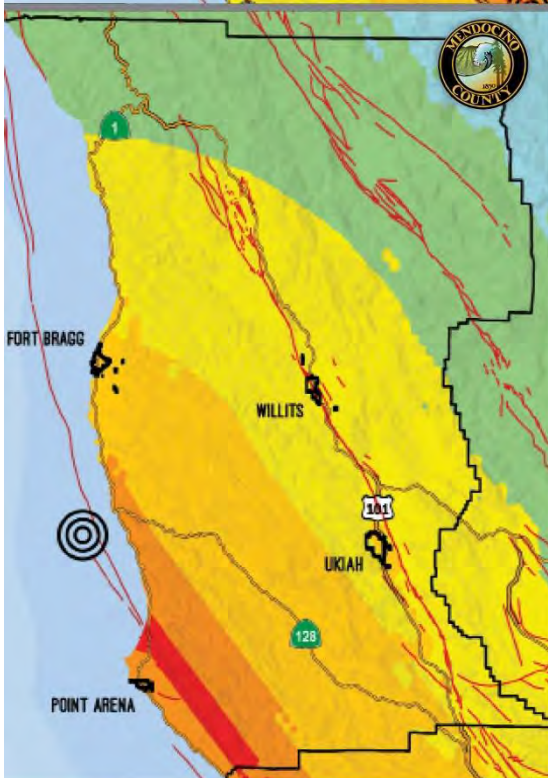


Figure ES 6: Maacama Garberville and N. San Andreas – N. Coast – Peninsula – SC MTN Snapshot



LANDSLIDE RISK EXPOSURE



HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

28,500 48%

PARCEL

COUNT

7,627 31%

PARCEL VALUE

SUM OF IMPROVEMENT

\$1,246,794,278 27%

SUM OF CONTENT

\$715,530,178 27%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **5** 6%

High Potential Loss **68** 14%

Transportation & Lifeline **82** 24%

LINEAR MILEAGE

Transportation & Lifeline **11,877** 64%

*Exposure summaries include high landslide risk areas. Hazard data sources: CGS.

TSUNAMI RUN-UP AREA



HAZARD EXPOSURE SUMMARIES*

POPULATION

COUNT OF PERSONS

264 0%

PARCEL

COUNT

52 0%

PARCEL VALUE

SUM OF IMPROVEMENT

\$17,276,416 0%

SUM OF CONTENT

\$14,053,136 1%

CRITICAL INFRASTRUCTURE

POINT COUNT

Essential Facilities **0** 0%

High Potential Loss **1** 0%

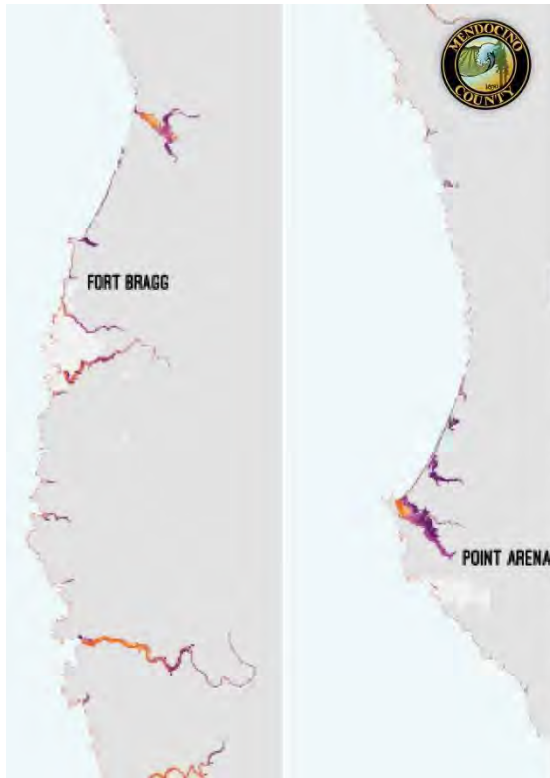
Transportation & Lifeline **6** 2%

LINEAR MILEAGE

Transportation & Lifeline **17** 0%

*Exposure summaries include tsunami runup areas. Hazard data sources: CGS.

Figure ES 7: Landslide and Tsunami Run-up Area Snapshot



SEA LEVEL RISE

AMOUNT OF RISE	
EXTREME	INTERMEDIATE
HIGH	INTERMEDIATE LOW
INTERMEDIATE HIGH	LOW

NOAA - CLASSIFIED
BY SCENARIOS LOW
RISE TO EXTREME
RISE

HAZARD EXPOSURE SUMMARIES*

POPULATION		CRITICAL INFRASTRUCTURE	
COUNT OF PERSONS		POINT COUNT	
423	1%	Essential Facilities	0 0%
PARCEL		High Potential Loss	2 0%
COUNT		Transportation & Lifeline	5 1%
45	0%	LINEAR MILEAGE	
PARCEL VALUE		Transportation & Lifeline	23 0%
SUM OF IMPROVEMENT		*Exposure summaries include all potential sea level rise amounts. Hazard data sources: NOAA - Classified by scenarios low rise to extreme rise.	
\$11,766,672	0%		
SUM OF CONTENT			
\$11,546,374	0%		

Figure ES 8: Sea-level rise Snapshot



Mitigation Goals

The Steering Committee reviewed and updated the goals from the 2014 Mendocino County Hazard Mitigation Plan. The following updated goals guided the Steering Committee and planning partners in selecting actions contained in this plan update:

Goal 1: Reduce loss of life, injuries, and structural and economic damage through the use of planning, regulations, and preventative measures.

Goal 2: Reduce loss of life, injuries, and structural and economic damage through the use of property protection measures.

Goal 3: Reduce loss of life, injuries, and structural and economic damage through the use of public education and awareness programs.

Goal 4: Reduce loss of life, injuries, and structural and economic damage through the use of natural resource/ systems protection.

Goal 5: Reduce loss of life, injuries, and structural and economic damage through the use of structural/ infrastructure projects.

Goal 6: Reduce loss of life, injuries, and structural and economic damage through the use of emergency services in relation to natural hazards.

Mitigation Strategy

The mitigation strategies and activities designed to reduce or eliminate losses resulting from natural hazards are the centerpiece of the mitigation planning process. Through the mitigation actions, participating jurisdictions will become more resilient to disasters. Actions identified in this plan may or may not be geared toward grant funding under HMA. Rather, the focus was the initiatives' effectiveness in achieving the goals of the plan within each jurisdiction's capabilities.

Participating jurisdictions individually selected a range of appropriate mitigation actions to work toward achieving the MJHMP's goals, compiled in Volume 2 jurisdictional annexes to the HMP. In addition, the



Steering Committee and participating jurisdictions identified countywide actions benefiting the whole partnership, as listed in Volume 1. These initiatives also are summarized in the following tables.

County Wide Priority Mitigation Actions

Mitigation No.	Hazard Type	Year	Title/Description
ma-AH-MC-134	All Hazard	2008	Develop a public outreach program that distributes consistent hazard mitigation content and mitigation tips for property owners. For example, wildfire outreach should focus on necessary ignition resistance and home hardening features - including defensible space - for county residents.
ma-AH-MC-205	All Hazard	2020	Develop an education program to inform both existing Class K structure owners and applicants of building permits for Class K structures of the inherent risks of such structures to all natural hazards
ma-AH-MC-299	All Hazard	2020	Construct evacuation routes as needed to ensure multiple egress routes from neighborhoods.
ma-CC-MC-221	Climate Change	2020	Offer agricultural disaster training and networking opportunities for farmers and agricultural regulatory agencies.
ma-CC-MC-298	Climate Change	2020	Develop public outreach to educate the public on household practices that can lessen the impacts of climate change.
ma-DF-MC-126	Dam Failure	2014	Develop a public outreach program that informs property owners located in the dam or levee inundation areas about voluntary flood insurance.
ma-DF-MC-199	Dam Failure	2020	Design and implement County-wide warning system program, with all other HMP participating jurisdictions as secondary participants, to warn everyone within a dam inundation zone of impending dam failure
ma-DR-MC-196	Drought	2020	Develop a public education campaign to encourage water conservation during drought.
ma-DR-MC-197	Drought	2020	Amend land use codes to incorporate regulations that encourage and incentive water savings for development.
ma-DR-MC-198	Drought	2020	Replace existing turf grass and water intensive landscaping with drought resistant landscaping



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Mitigation No.	Hazard Type	Year	Title/Description
ma-EQ-MC-127	Earthquake	2014	Seismically retrofit or replace County and local ramps and bridges that are categorized as structurally deficient by Caltrans, identified as needing replacement by the County, are located in an high ground shaking areas, and/or are necessary for first responders to use during and/or immediate after a disaster or emergency.
ma-EQ-MC-200	Earthquake	2020	Encourage privately owned critical facilities (e.g. churches, hotels, other gathering facilities) to evaluate the ability of the buildings to withstand earthquakes and to address any deficiencies identified.
ma-EQ-MC-201	Earthquake	2020	Retrofit / Harden County-owned critical facilities (including water & sewer infrastructure) and buildings and their ability to withstand earthquakes.
ma-EQ-MC-202	Earthquake	2020	Retrofit non-compliant suspended ceilings in County buildings. This includes Non-Structural Suspended Gypsum Dry-Wall & Cement Plaster Ceilings built 1950-1974.
ma-EQ-MC-203	Earthquake	2020	Install seismic gas shut-off valves on County buildings to prevent the flow of gas into buildings during a seismic event
ma-WS-MC-118	Extreme Weather	2014	Manage vegetation in areas within and adjacent to rights-of-way and in close proximity to critical facilities in order to reduce the risk of tree failure and property damage and avoid creation of wind acceleration corridors within vegetated areas.
ma-EW-MC-207	Extreme Weather	2020	Routinely inspect storm water channels for vegetation build up or encroachment, trash and debris, silt and gravel build up, and erosion or bank failure.
ma-EW-MC-208	Extreme Weather	2020	Perform a feasibility study for flood proofing options and analyze the drainage systems County-wide.
ma-FL-MC-125	Flood	2014	Acquire, relocate, or elevate residential structures, in particular those that have been identified as Repetitive Loss (RL) properties that are located within the 100-year floodplain.
ma-FL-MC-210	Flood	2020	Elevate and retrofit bridges and culverts to allow proper stormwater / 100-YR flows.
ma-FL-MC-213	Flood	2020	Draft a Floodplain Management Plan to address County-wide flooding and identify specific mitigation projects to reduce the magnitude, frequency, and severity of flooding in Mendocino County.
ma-FL-MC-215	Flood	2020	Adopt higher regulatory standards (including but not limited to freeboard, comp storage, lower substantial damage thresholds, setback and fill restrictions) as means to reduce future flood risk and support a no-adverse-impact (NAI) philosophy to floodplain management.
ma-PN-MC-222	Pandemic	2020	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic, including adequate ventilation and physical barriers



Mitigation No.	Hazard Type	Year	Title/Description
ma-PN-MC-223	Pandemic	2020	Institute necessary structural improvements to evacuation centers/sheltering locations to allow for proper ventilation, space for staff, and structural barriers to be used during pandemic and hazard event.
ma-PN-MC-224	Pandemic	2020	Develop alternative sheltering/ evacuation locations for social distancing required during pandemic and other hazard event
ma-SF-MC-139	Slope Failure	2008	Construct a lightweight fill prism under roads to prevent the slip plain from further movement and subsequent damage to roads.
ma-SF-MC-225	Slope Failure	2020	Establish a priority list of slope failure locations and implement slope stabilization projects in the highest risk areas.
ma-SH-MC-206	Soil Hazard	2020	Develop educational outreach during the building permit process to raise awareness about the presence naturally occurring asbestos.
ma-SH-MC-226	Soil Hazard	2020	Establish a priority list of coastal erosion locations and implement slope stabilization projects in the highest risk areas.
ma-WF-MC-123	Wildfire	2014	Create and/or help strengthen existing vegetation management programs that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.
ma-WF-MC-227	Wildfire	2020	Retrofit critical facilities (adult care, child care, schools, railways) with fire-resistant materials and create defensible space around structures.
ma-WF-MC-228	Wildfire	2020	Ensure addresses and locations are easily accessed during emergency, especially in the WUI. Methods include installation of high visibility address markers, partnering with County Fire Chief to reduce overlapping, duplicate, or misordered street and address markings, and developing GPS-based locating options for more remote or hard to find locations.
ma-WF-MC-238	Wildfire	2020	Update County Code/ Land Use Regulations/Subdivision Design Guidelines to include design and siting standards to incorporate, for example, emergency response access and turn around space or fire suppression water needs.
ma-WF-MC-239	Wildfire	2020	Coordinate with fire protection agencies to develop vegetation management program to remove understory brush, hazardous trees, and excessive fuels around County roads and evacuation routes.
ma-WF-MC-287	Wildfire	2020	Implement and continue to re-prioritize Mendocino County CWPP Mitigation Projects and support smaller scale neighborhood and community plans as appropriate.



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Mitigation No.	Hazard Type	Year	Title/Description
ma-WF-MC-300	Wildfire	2020	Identify and develop a plan and maintenance schedule for key fuel breaks currently existing around population centers and other key resources; develop new fuel breaks as identified.
ma-WF-MC-301	Wildfire	2020	Continue to support programs to reduce fuel loads in the County, including but not limited to continuing the chipper program, mastication and removal of fuels, and encouraging prescribed burns when practicable.
ma-WF-MC-302	Wildfire	2020	Develop a program to map and manage emerging high risk fuel sources.



Mitigation Action Implementation

Despite County efforts, no amount of planning or mitigation can prevent disasters from occurring or eliminate the risk and impacts of such events. Hazard events will continue to occur, and the County and participating jurisdictions will take actions to reduce the risks these hazards pose to life, property, and the economy. While this MJHMP identifies opportunities for reasonable mitigation actions, each individual has a responsibility to be aware of the potential hazards where they live and to minimize their own household's vulnerability.

The County's ability to carry out mitigation is limited to those facilities over which it has authority. The County does not have direct authority over schools, water and sanitation districts, private gas, electric and communication utilities, state and federal highways and facilities, private hospitals, or neighboring cities and tribes. The County will focus on actions within its authority to do while seeking to cooperatively work with other entities to address mutual areas of vulnerability and interdependence.

Full implementation of the plan's recommendations will take time and resources. The measure of the plan's success will be the coordination and pooling of resources within the participating jurisdictions and maintaining these successes over time. Teaming together to seek financial assistance at the state and federal level will be a priority to initiate projects that are dependent on alternative funding sources. This plan was built upon the effective leadership of a multi-disciplined steering committee and a process that relied heavily on public input and support. The plan will succeed for the same reasons.



Adoption Records (To be included)

To comply with DMA 2000, the County Board of Supervisors officially adopt this Mendocino County Multi-Jurisdictional Hazard Mitigation Plan Volume 1 and Volume 2 upon plan approval from Cal OES and FEMA. The adoption of the MJHMP in its entirety recognizes the County's commitment to reducing the impacts of natural hazards within the Cities and County. See the Record of Adoptions, below.

Volume 1

MENDOCINO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



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Section 1. Introduction

1.1 Purpose

Mendocino County and many other participating jurisdictions prepared this Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), originally approved by the Federal Emergency Management Agency (FEMA) in 2006 and updated in 2014. The plan in its current form reflects a comprehensive update in 2020. The purpose of this plan is to guide hazard mitigation planning to better protect the people and property of the County from the effects of hazard events. This plan demonstrates the commitment of each participating jurisdiction to reducing risks from hazards and serves as a tool to help decision-makers direct mitigation activities and resources. This plan was also developed to ensure Mendocino County and participating jurisdictions' continued eligibility for certain federal disaster assistance, specifically the FEMA Hazard Mitigation Assistance (HMA) grants, including the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance Program (FMA). The plan is also important for maintaining and improving the standing of the County in the National Flood Insurance Program's Community Rating System (CRS), which provides for lower flood insurance premiums to the residents in the unincorporated areas.

1.2 Background and Scope

Each year in the United States, natural disasters take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. These monies only partially reflect the true cost of disasters because additional expenses incurred by insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Many natural disasters are predictable, and much of the damage caused by these events can be reduced or even eliminated. Hazard mitigation is defined by FEMA as "any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event." The results of a three-year, congressionally mandated independent study to assess future savings from mitigation activities demonstrates that mitigation activities are highly cost-effective. On average, each dollar spent on mitigation saves society an average of \$6 in avoided future losses in addition to saving lives and preventing injuries. (National Institute of Building Sciences, 2017)

1.3 Participating Jurisdictions

The Mendocino County Multi-Jurisdictional Hazard Mitigation Plan geographically covers the entire area within Mendocino County's jurisdictional boundaries (hereinafter referred to as the "planning area"). A planning partnership was formed to develop and steer content in this plan. This partnership consists of Mendocino County and local government planning partners who worked together to create the goals, objectives, mitigation strategies, and implementation methods to reduce natural hazard risk within the



planning area. Any jurisdiction or organization may participate in the planning process. However, to obtain Federal Emergency Management Agency (FEMA) approval, each local jurisdiction must meet all requirements of hazard mitigation planning outlined in 44 C.F.R. § 201.6. Participating jurisdictions are listed in Table 2-1 and are shown in Figure 1-1.

1.4 Why Update This Plan?

Hazard mitigation is a way to reduce or alleviate the loss of life, personal injury, and property damage that can result from a disaster through long and short-term strategies. It involves strategies such as planning, policy changes, programs, projects, and other activities that can mitigate the impacts of hazards. The responsibility for hazard mitigation lies with many, including private property owners, business and industry, and local, state, and federal governments.

The Federal Disaster Mitigation Act of 2000 (DMA 2000) required state and local governments to develop hazard mitigation plans as a condition of federal disaster grant assistance. (Pub. L. No. 106-390; 42 U.S.C. § 5121 *et seq.*) Prior to 2000, federal disaster funding focused on disaster relief and recovery, with limited funding for hazard mitigation planning. DMA 2000 increased the emphasis on planning for disasters before they occur.

DMA 2000 encourages state and local authorities to work together on pre-disaster planning and promotes sustainability. Sustainable hazard mitigation includes the sound management of natural resources and the recognition that hazards and mitigation must be understood in the broadest possible social and economic context. The enhanced planning network called for by DMA 2000 helps local governments articulate accurate mitigation needs, resulting in faster allocation of funding and more cost-effective risk reduction projects.



1.4.1 Purposes for Planning

This Hazard Mitigation Plan identifies resources, information, and strategies for reducing risk from natural hazards. Mendocino County and the local jurisdictions that participated as planning partners (collectively “the planning partners”) initiated this planning effort for several key reasons. The Mendocino County area has significant exposure to numerous natural hazards that have caused millions of dollars in past damage. The planning partners want to be proactive in preparing for the probable impacts of natural hazards. Finally, limited local resources make it difficult to implement proactive risk-reduction measures. Federal and State financial assistance is paramount to successful hazard mitigation in the area.

Elements and strategies in the plan were selected because they best meet the needs of the planning partners and their citizens. The plan was developed to meet the following objectives:

- Meet or exceed requirements of the DMA 2000 and the 2015 California legislation requiring the incorporation of climate adaptation strategies into hazard mitigation planning (SB 379).
- Enable all planning partners to continue using federal grant funding to reduce risk through mitigation.
- Meet the needs of each planning partner as well as state and federal requirements.
- Create a risk assessment that focuses on Mendocino County hazards of concern.



Figure 1-1: Participating Jurisdiction Map



- Create a single planning document that integrates all planning partners into a framework that supports partnerships within the County and puts all partners on the same planning cycle for future updates.
- Coordinate existing plans and programs so that high-priority initiatives and projects to mitigate possible disaster impacts are funded and implemented.

1.5 Who Will Benefit from This Plan?

One benefit of multi-jurisdictional planning is the ability to pool resources and eliminate redundant activities within a planning area with fairly uniform risk exposure and vulnerabilities. FEMA encourages multi-jurisdiction planning under its guidance for the DMA 2000. The plan will help guide and coordinate mitigation activities throughout Mendocino County.

All citizens and businesses of Mendocino County are the ultimate beneficiaries of this MJHMP. The plan reduces risk for those who live in, work in, and visit the County. It provides a viable planning framework for all foreseeable natural hazards that may impact the County. County stakeholder participation helped ensure that plan outcomes will be mutually beneficial. The resources and background information in the plan are applicable countywide, and the Plan's goals and recommendations can lay the groundwork for the development and implementation of local mitigation activities and partnerships.

1.6 How to Use This Plan

This plan has been set up in two volumes to separate jurisdiction-specific elements (Volume 2) from those that apply to the whole planning area (Volume 1):

- **Volume 1**—Volume 1 includes all federally-required elements of a hazard mitigation plan that apply to the entire planning area. This volume includes the description of the planning process, public involvement strategy, goals and objectives, countywide hazard risk assessment, countywide mitigation initiatives, and a plan maintenance strategy. Volume 1 includes the following appendices:
 - Appendix A—Annex Methodology
 - Appendix B—Planning Process Documentation
- **Volume 2**—Volume 2 includes all federally-required, jurisdiction-specific elements for each participating jurisdiction. All planning partners have adopted Volume 1 in its entirety and each partner's jurisdiction-specific annex.



Section 2. What's New

This section includes background information on the 2014 MJHMP and this MJHMP Update. The 2014 mitigation actions were reviewed and have been changed, updated, and revised to reflect new priorities in this MJHMP. Only the information and data still valid from the 2014 Plan were carried forward as applicable to this MJHMP update. The sections below describe the planning process for this update. This update profiles the following ten hazards: dam failure, drought, climate change, earthquake, pandemic disease, flood, severe weather, soil, slope failure, and wildfire hazards.

2.1 Participating Jurisdictions in the 2014 HMP vs MJHMP Update

In September of 2014, the County met all approval requirements from the DMA and officially adopted an update to the 2006 HMP. The eligibility status of the planning partnership was monitored by the Mendocino County Point of Contact (POC) over the five-year update process. A partner was deemed to be meeting participation requirements based on:

- Progress reports being submitted annually by the specified time frames,
- Partners notifying the POC of changes in designated points of contact,
- Partners supporting the Steering Committee by attending designated meetings or responding to needs identified by the Committee, and
- Partners continuing to be supportive as specified in the planning partner expectations package provided to them at the beginning of the process.

Table 2-1 identifies the 2014 and 2020 Participating Jurisdictions.

Table 2-1: Participating Jurisdiction Tracker

Jurisdiction Name	2014 Participating Jurisdiction	2020 Participating Jurisdiction
County		
Mendocino County	Y	Y
Education		
Mendocino County Office of Education	Y	Y
Municipalities		
City of Fort Bragg	Y	Y
City of Point Arena	Y	Y
City of Ukiah	Y	Y
City of Willits	Y	Y



2.2 Mitigation Actions

During this MJHMP update process, each of the 2014 County-wide mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the 2014 HMP effort are an inherent part of the HMP update process or were not detailed enough for implementation at a local jurisdiction level, and thus were not included in this update. The County has made significant changes to other 2014 Mitigation Actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices.

Table 2-2 provides a record of *cancelled* County-wide Mitigation Actions and an explanation for why the mitigation action was cancelled. *Ongoing or pending* mitigations actions from previous HMPs are included within the Mitigation Action Plan in Table 5-6. *Completed* previous Mitigation Actions for the County are detailed in Table 2-3.

Table 2-2: Cancelled Previous Mitigation Actions

Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Reason Cancelled
ma-AH-MC-133	All Hazard	Cancelled	2008	Mendocino County	Integrate elements from the MHMP into other local planning documents, including the safety element section of general plans, hazard-specific zoning ordinances, and emergency operation plans.		not a mitigation action; opportunity for integration explored in capabilities assessment
ma-AH-MC-140	All Hazard	Cancelled	2008	Mendocino County	Examine and mitigate critical infrastructure that has been identified as currently being too narrow or having too many tight turns to ensure the safe transportation of truck loads within Mendocino County.		Does not address a profiled hazard in the HMP
ma-DF-MC-144	Dam Failure	Cancelled	2014	Mendocino County	Implement a flood warning system, including the use of stream gauges, for the Coyote Valley Dam. *	Mendocino County Inland Water and Power Commission	Incorporated into MC-199
ma-EQ-MC-128	Earthquake	Cancelled	2014	Mendocino County	Seismically retrofit or replace public works and/or emergency response facilities that are necessary during and/or immediately after a disaster or emergency.	Planning and Building Services	Incorporated into MC-201 and MC-202



Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Reason Cancelled
ma-EQ-MC-132	Earthquake	Cancelled	2008	Mendocino County	Strengthen, abate, or downgrade in occupancy, any structures that are owned or leased by Mendocino County or incorporated communities that do not meet the California Building Code (CBC) requirements for seismic safety or the California Codes Essential Services Building Act.		Incorporated in MC-201 and MC-202
ma-FL-MC-129	Flood	Cancelled	2014	Mendocino County	Acquire, relocate, elevate, and/or floodproof critical facilities that are located within the 100-year floodplain.	Planning and Building Services	Incorporated into MC-125
ma-FL-MC-130	Flood	Cancelled	2014	Mendocino County	Reinforce County and local ramps, bridges, and roads from flooding through protection activities, including elevating the road and installing culverts beneath the road or building a higher bridge across the area that experiences regular flooding.	Planning and Building Services	Incorporated into MC-210
ma-FL-MC-135	Flood	Cancelled	2008	Mendocino County	Continue to participate in the NFIP program by enforcing the floodplain management ordinance to reduce future flood damage.		Incorporated into MC-148
ma-HM-MC-122	HazMat	Cancelled	2014	Mendocino County	Conduct a public awareness and educational campaign to raise awareness about the presence of hazardous materials throughout the County, including naturally occurring asbestos.	Office of Emergency Services	Incorporated into MC-206
ma-IN-MC-143	Insects	Cancelled	2014	Mendocino County	Implement an infestation public awareness and educational campaign.	Department of Agriculture	Insect hazards were not prioritized in the 2020 HMP and this MA is no longer relevant



MENDOCINO COUNTY

MULTI-HAZARD MITIGATION PLAN

Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Reason Cancelled
ma-TS-MC-136	Tsunami	Cancelled	2008	Mendocino County	Participate in the Tsunami Ready Program. This new program, sponsored by the National Weather Service, is designed to provide communities with incentives to reduce their tsunami risks.		Incorporated into MC-154
ma-WF-MC-138	Wildfire	Cancelled	2008	Mendocino County	Develop a countywide chipper program in which local residents and business owners do their own vegetation management and the community offers free or reduced-cost roadside chipping.	Mendocino County	This is a duplicate MA that has been marked as completed (MC-142).



2.3 New Analysis and Risk Assessment Methodology

The County strengthened this plan by using new research methods and information systems. Geographic Information Systems (GIS) mapping provided the County with the tools to develop more comprehensive data sets than those in the 2014 MJHMP.

This MJHMP focuses on natural hazards. New MJHMP mitigation actions focus on four different classifications, including:

- Local Plans and Regulations – intended to reduce the County’s vulnerability to future hazard events through the implementation of codes and regulations.
- Structure and Infrastructure Projects – intended to protect existing structures by retrofitting, relocating, or modifying the structure to withstand a hazard event.
- Natural Systems – to reduce the effects of hazards on the natural resources within a region by preserving and/or restoring natural areas along with their mitigation functions.
- Public Information and Awareness – to advise residents, potential buyers, and visitors about hazards, potentially hazardous areas, and mitigation techniques.



2.4 Successful Mitigation Activities

The 2014 Mendocino County HMP guiding principle, goals, objectives, and mitigation actions have been implemented through various on-going projects, plans, and programs. The County has made improvements toward reducing natural hazard risks to life and property, with significant risk reduction efforts for floodplain management, flood damage prevention, and fire hazard reduction. Table 2-3 summarizes the completed mitigation actions since 2014. These successful policies, programs, and projects are summarized below.

Table 2-3: Completed Previous Mitigation Actions

Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description
ma-AH-UN-190	All Hazard	Completed	2008	Mendocino County	Develop a sustained public outreach program that encourages consistent hazard mitigation content. For example, consider publishing tsunami inundation maps in telephone books, wildland fire defensible space tips with summer water bills or along highway billboards, and the safe handling and disposal of hazardous waste and chemicals with garbage bills.
ma-EQ-UN-189	Earthquake	Completed	2008	Mendocino County	Strengthen, abate, or downgrade in occupancy, any structures that are owned or leased by Mendocino County or incorporated communities that do not meet the California Building Code (CBC) requirements for seismic safety or the California Codes Essential Services Building Act.
ma-FL-MC-131	Flood	Completed	2008	Mendocino County	Carry out minor flood and stormwater management projects that would reduce damage to infrastructure and residential buildings due to flooding. These projects include the modifying or replacing existing culverts and bridges, upgrading capacity of storm drains, stabilizing stream banks, clearing stream banks of debris and vegetation, and creating of debris or flood/stormwater retention basins in small watersheds.
ma-WF-MC-142	Wildfire	Completed	2008	Mendocino County	Develop a countywide chipper program in which local residents and business owners do their own vegetation management and the community offers free or reduced-cost roadside chipping.
ma-WF-UN-188	Wildfire	Completed	2008	Mendocino County	Create a vegetation management program that provides vegetation management services to elderly, disabled, or low-income persons who lack the resources to remove flammable vegetation around their homes.

**SUCCESS STORY: *Wildfire Prevention Initiative near Ukiah***

In 2019, the County in partnership with the City of Ukiah began an effort to increase wildfire mitigation capabilities. The County and City began conducting inspections in the region to identify any fire prone areas. They also conducted outreach by consulting local homeowners about their knowledge of fire safety issues and experiences with wildfire in the area.



During the same period, a number of Fire Safe Councils were created in and around the city. These Fire Safe Councils mapped non-ambulatory neighborhood residences. The Mendocino County Fire Safe Council, in particular, is managing the Ukiah Valley Fire Fuels Reduction Project. The Project's objective is to reduce fire fuels by performing roadside clearing, creating shaded fuel breaks, and holding neighborhood chipper days. An additional collaboration between the County, the City, and CalFire developed the shaded fuel breaks on the western hills above Ukiah in the unincorporated areas of the County. The City also provides debris bins free of charge for neighborhoods in order to minimize any risk from discarded debris.

2.5 Incorporation into other Planning Mechanisms

Over the past five years, the 2014 HMP was incorporated into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts. This newly-updated HMP will be referenced in Mendocino County's 2020 Safety Element Update and in the 2020 Climate Vulnerability Assessment. This update also will be incorporated into planning documents such as the County Flood Mitigation Plan, Groundwater Management Plan, Groundwater Sustainability Plan, General Plan, Wildfire Protection Plan, and the North Coast Integrated Regional Water Management Plan in the future.



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Section 3. Planning Process

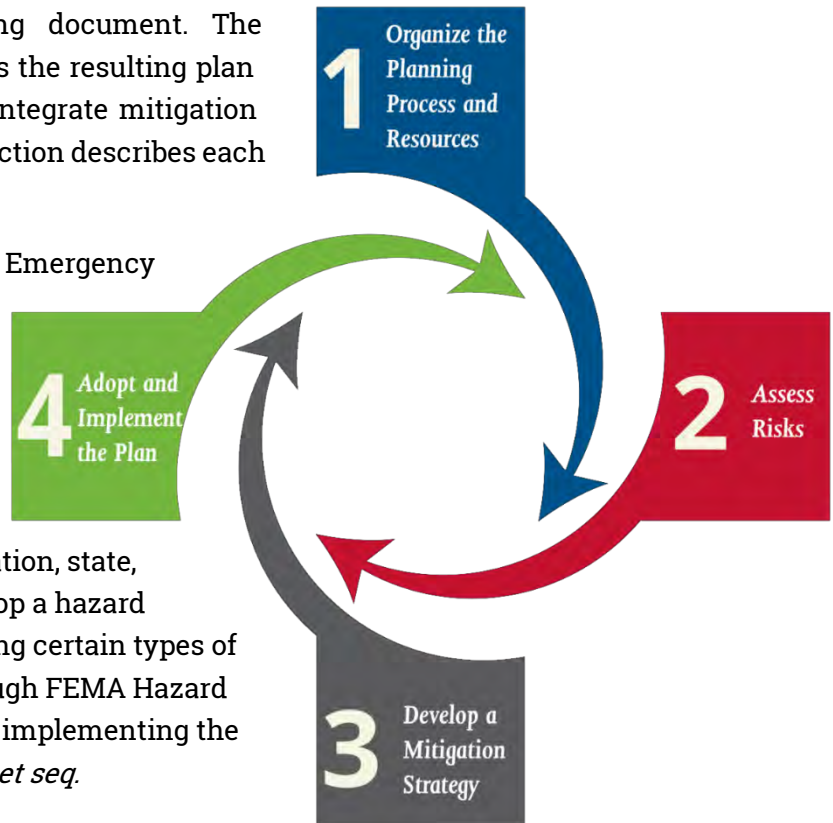
This section describes each stage of the planning process used to develop the MJHMP. The planning process provides a framework for document development and follows the FEMA recommended steps as enumerated in federal regulation and outlined herein. This MJHMP is a community-driven, living document. The planning process itself is as important as the resulting plan because it encourages communities to integrate mitigation with day-to-day decision making. This section describes each stage of the planning process.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by the Disaster Mitigation Act of 2000 (DMA 2000, 42 U.S.C. § 5165), is intended to “reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters.” Under this legislation, state, tribal, and local governments must develop a hazard mitigation plan as a condition for receiving certain types of non-emergency disaster assistance through FEMA Hazard Mitigation Assistance. FEMA regulations implementing the DMA 2000 are located at 44 C.F.R. § 201.6 *et seq.*

FEMA prescribes four major planning steps:

- **Step 1: Organize Resources**
- **Step 2: Assess Risk**
- **Step 3: Develop a Mitigation Strategy**
- **Step 4: Adopt and Implement the Plan**

Each jurisdiction that participated in the MJHMP independently followed the FEMA four-step process. Figure 3-1 provides a detailed, phased breakdown of the planning process that each participating jurisdiction completed. These four steps are integrated with a ten-step planning process that FEMA's Community Rating System uses to establish floodplain management credit in addition to Flood Mitigation Assistance programs.



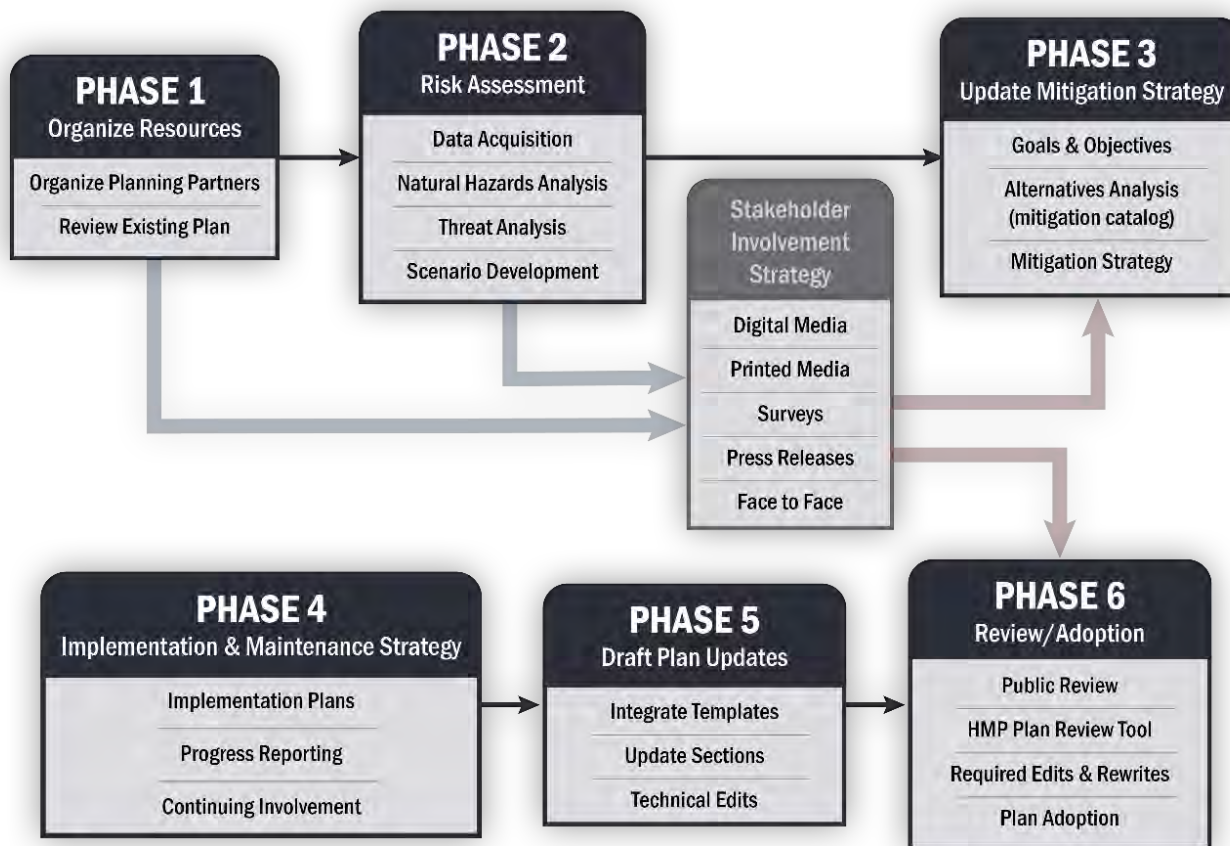


Figure 3-1: Mendocino County MHJHMP Planning Process



STEP 1: Organize Resources

The first step of the MJHMP planning process was organizing resources, consisting of developing the planning team development, reviewing relevant existing documents, and organizing public outreach.

Building the Planning Team

The Planning Team was comprised of participants from all participating jurisdictions who worked together to develop the MJHMP. The Planning Team consisted of a Steering Committee, Planning Committee, a broader group of residents and regional stakeholders, and an HMP consultant used for plan development and facilitation.



Steering Committee

The Steering Committee was at the core of the MJHMP planning process and was integral to ensuring the success of the planning process, its implementation, and future maintenance.

Members of the Steering Committee, listed in Table 3-1 below, represented jurisdictional leads from each planning partner and were also a part of the MJHMP Planning Partners Committee, discussed below and in the individual annexes in Volume 2.

Table 3-1: MJHMP Steering Committee

Jurisdiction	Point of Contact	Title
Mendocino County Executive Office	Nash Gonzalez	Mendocino County Disaster Recovery Director
Mendocino County Office of Education	Steve Turner	Director
City of Fort Bragg	John Smith	Director of Public Works
City of Point Arena	Paul Anderson	Administrative Assistant
City of Ukiah	Tami Bartolomei	Office of Emergency Management Coordinator
City of Willits	Dusty Duley	Community Development Director



Planning Committee

The MJHMP Planning Committee consisted of multiple key decisionmakers with specific expertise to contribute to the planning process from each participating jurisdiction. The Planning Committee served as liaisons to the greater community. Each Planning Committee member was responsible for communicating the direction and status of the planning effort to respective departments and constituents of each jurisdiction and were expected to represent the perspectives of the participating jurisdiction to the Committee.

The Planning Committee was involved in the following planning processes:

- Structured coordination and meetings
- Collection of valuable local information and other requested data
- Decision making on plan process and content
- Development of mitigation actions
- Review and comment on plan drafts
- Coordination of the public input process

All Planning Committee members did not necessarily attend stakeholder group meetings. Some participated by reviewing draft documents, assisting in individual jurisdictional vulnerability assessments, with public outreach, or at other stages of the process. Table 3-2 provides a list of the Planning Committee Members. Documentation of Planning Committee invitations are provided in Appendix B.

Table 3-2: MJHMP Planning Committee

NAME	TITLE	DEPARTMENT
MENDOCINO COUNTY		
Anne Molgaard	Director	Child Support Services
Barbara Moed	Executive Officer	Mendocino County Air Quality Management District (MCAQMD)
Bekkie Emery	Assistant Director	Social Services Division - Health and Human Services
Brentt Blaser	Emergency Services Coordinator	Mendocino County Sheriff's Office
Cody Snider	Executive Office	Information Systems Division Manager
Darcie Antle	Deputy CEO	Executive Office - Finance
Sarah Duckett	Water Agency	Mendocino County Water Agency
Greg Glavich	County of Mendocino County	Communications Coordinator
Heather Correll Rose	Executive Office	Risk Management
Howard Dashiel	Director	Department of Transportation
Leif Far	Mendocino County	Information Systems (GIS)
Matt Kendall	Sheriff	Mendocino County Sheriff



NAME	TITLE	DEPARTMENT
Michael Oliphant	Department of Planning and Building, Building Official	Mendocino County Building Official
Nash Gonzalez	Mendocino County Disaster Recovery Director	Mendocino County Executive Office
Shannon Barney	Lieutenant Sheriff's Department	Emergency Operations Center (EOC)
Steve Dunicliff	Deputy CEO County Facilities	Mendocino County Executive Office
Tammy Moss Chandler	Agency Director	Health and Human Services Agency (HHSA)
William Schurtz	Director	Human Resources
Xuyen Ung	Administrative Analyst	Recovery/CEO
Richard Molinari	Shelter Manager	Ukiah Animal Shelter
Joe Zicherman	Chairman	Mendocino County Fire Safe Council
Paul Duncan	Operations Chief	Cal Fire - Mendocino Unit
Anthony Massucco	Fire Captain	Cal Fire -Howard Forest Emergency Command Center
CITY OF FORT BRAGG		
John Naulty	Interim Chief	City of Fort Bragg Police Department
Tabatha Miller	City Manager	City Manager's Office
John Smith	Director of Public Works	City of Fort Bragg
CITY OF UKIAH		
Douglas Hutchison	Fire Chief	City of Ukiah
Greg Owen	Airport Manager	City of Ukiah
Justin Wyatt	Police Chief	City of Ukiah Police Department
Sage Sangiacomo	City Manager	City of Ukiah
Tami Bartolomei	Office of Emergency Management Coordinator	City of Ukiah
Tim Eriksen	Public Works Director	City of Ukiah
Craig Schlatter	City of Ukiah Community Development Director	Community Development
CITY OF WILLITS		
Cathy Moorhead	Deputy City Manager/City Clerk	City of Willits
Dusty Duley	Community Development Director	Community Development
Gregory Allen	Chief	City of Willits Police
Stephanie Garrabrant-Sierra	City Manager	Administration and Fiscal Services
CITY OF POINT ARENA		
Paul Anderson	Administrative Assistant	City of Point Arena
Richard Shoemaker	City Manager	City of Point Arena



NAME	TITLE	DEPARTMENT
NEIGHBORING JURISDICTIONS		
Amy Travis	Deputy Director, Office of Emergency Services	Glenn County
Andy Houghtby	Sergeant, Office of Emergency Services	Tehama County
Chris Godley	OES	Sonoma County
Chris Macedo	OES	Lake County
Dale Carnathan	OES	Lake County
Ed Prestley	Office of Emergency Services Manager	Trinity County
Jeff DuVall	OES	Sonoma County
Kim Hunter	Director of Building & Planning	Trinity County
Ryan Derby	OES	Humboldt County
Melanie Collins	Department of Emergency Management	Sonoma County
PARTICIPATING STAKEHOLDERS		
Andres Avila	Chief	Anderson Valley Fire Department
Andrew Watson	Field Office Chief	US Geological Survey, California Water Science Center
Ann Carlson	Supervisor's office	USDA Forest Service
Bill Pauli	Chief	Potter Valley Fire Department
Bob Matson	Chief	Elk VFD
Carla Meyer	General Manager	Mendocino Transit Authority (MTA)
Don Dale	Chief	Redwood Valley-Calpella Fire Department
Gregg Warner	Chief	South Coast Fire Protection District
Chris Dilks	Captain	South Coast Fire Protection District
Chris Wilkes	Chief	Little Lake Fire Protection District
Christopher Bartow	Mitigation Lands Project Manager	Resource Conservation District
Clay Eubank	Battalion Chief	Anderson Valley Fire Department
Dan Maxey	Chief	Westport VFD
Davey Beak	Chief	Comptche VFD
David Latoof	Chief	Mendocino VFD
Doren Freeman	Chief	Covelo Fire Department
Elizabeth Salomone	General Manager	Mendocino County Russian River Flood Control and Water Conservation Improvement District
George Gonzalez	Unit Chief	Cal Fire - Mendocino Unit
Hilary White	Outreach & Development Manager	Mendocino Land Trust
Jason Warner	Chief	Redwood Coast Fire Department



NAME	TITLE	DEPARTMENT
Jeff Adair	Training Division Chief	Ukiah Valley Fire Authority
Jim Kessler	Captain	Brooktrails Fire Department
Joaquin Jones	Training Officers Chief	Mendocino VFD
Jon K. Noyer	Chief	Brooktrails CSD Fire Department
JP McMillian	Training Officers Chief	Mendocino VFD
Let Reighter	Chief	Leggett Valley Fire Protection District
Marigold Klein	Community Events Team Member	Red Cross Mendocino County
Michael Rees	Asst. Chief/Training Officer	Albion-Little River VFD
Michael Suddith	Fire Protection Chief	Redwood Coast Fire Department
Mike Leskar	Chief	Whale Gulch (whitethorn) Fire Department
Mitch Franklin	Chief	Hopland Fire Protection District
Nephele Barrett	Executive Officer to MCOG	Mendocino Council of Governments (MCOG)
Patrick Landergen	Chief	Piercy Fire Protection District
R.D. Beacon	Chief	Greenwood Ridge Fire Department
Scott Cratty	Executive Director	Fire Safe Council
Steve Orsi	Chief	Fort Bragg Fire Department
Steve Unzi	Training Officer	Comptche VFD
Steve Wells	Fire Prevention	Fort Bragg Fire Department
Sue Carberry	Chief	Long Valley Fire Protection District/Laytonville Fire Department
Ted Williams	Chief	Albion-Little River VFD
Todd Crabtree	Executive Director	Community Development Commission - Housing Authority
EMS Officer	Training Officer/EMS Officer	Anderson Valley Fire Department
Vincent Heim	Associate Environmental Planner	Caltrans
Molly Nilsson	Environmental Protection Specialist	BLM Point Arena-Stornetta Unit

Consultant Team

The County enlisted a Consultant Team comprised of Atlas Planning Solutions and Dynamic Planning + Science (DP+S) due to its expertise in assisting public sector entities with developing hazard mitigation plans. The Team facilitated the planning process, collected and analyzed data, produced meeting materials, and produced drafts of the MJHMP for review. The MJHMP Consultant Team, as shown in Table 3-3, consisted of a variety of hazard mitigation and certified urban planning professionals.



Table 3-3: MJHMP Update Consultant Team

HMP Update Project Team	HMP Update Project Team Role
Aaron Pfannenstiel, AICP	Project Manager, Atlas Planning Solutions
Ethan Mobley, AICP	Assistant Project Manager, DP+S
Brian Greer	GIS Specialist/Spatial Analyst, DPS
Torie Jarvis	Outreach Manager, HMP Planner, DPS
Ty Johnson	Hazard Mitigation Planner, DPS
Daniel Spivak	Hazard Mitigation Planner, DPS
Alex Krebs	GIS Associate, DPS

Planning Committee Meetings

The Planning Committee met throughout the development of the updated MJHMP. Table 3-4 charts those meetings, including date, type, and topics discussed. Meeting documentation, including agendas, hazard maps, PowerPoint presentations, minutes, sign-in sheets, and other relevant handouts, are provided in Appendix B.

Table 3-4: Meeting Summary

Date	Meeting Type	Topics
March 5th, 2020	Planning Committee Kickoff Meeting	▪ <i>Mendocino County LHMP/Safety Element Update</i> ▪ <i>DMA 2000 Requirements</i> ▪ <i>Public Engagement</i> ▪ <i>Project Schedule</i> ▪ <i>Data Calls/Data Review</i>
April 29th, 2020	Planning Committee Meeting #1	▪ <i>Mitigation Planning Defined</i> ▪ <i>Expectations from Participating Jurisdictions</i> ▪ <i>Planning Process Review</i> ▪ <i>Project Schedule</i> ▪ <i>Website Review</i> ▪ <i>FEMA Hazard Mitigation Program</i> ▪ <i>2012 Mitigation plan Review</i> ▪ <i>What has Changed?</i> ▪ <i>Outreach</i>
May 27th, 2019	Planning Committee Meeting #2	▪ <i>Risk Assessment/ Community Vulnerability Review</i> ▪ <i>Jurisdictional Exercise</i> ▪ <i>RAMP Tool Review</i> ▪ <i>RAMP Tool Exercises</i> ▪ <i>Review Outreach Materials</i>
June 19th, 2019	Planning Committee Meeting #3	▪ <i>Planning Process Recap</i> ▪ <i>Mitigation Alternatives</i> ▪ <i>Setting Plan Goals</i> ▪ <i>Mitigation Action Review</i>



Review and Incorporation of Existing Documents

The Planning Team and Consulting Team reviewed and incorporated existing plans, studies, reports, and technical information in the formation of this MJHMP. Those documents are cited throughout the hazard profiles (Section 4.5) and are examined more closely in the Capabilities Assessment (Section 5.3) and in each hazard profiles' plans, policies, and regulatory environment section.

All documents cited in this MJHMP are included in Section 7, Works Cited.



Public Involvement and Outreach

Public involvement is an important and requisite component of any HMP update. The public outreach strategy for this update maximized public involvement throughout the planning process and utilized websites, local media, and community efforts. Due to the unfolding COVID-19 pandemic during the development of this HMP, discussed in detail in Section 4.5.5, all outreach was conducted digitally.

As required by FEMA, the general public was given an opportunity to be involved in the planning process while developing the HMP Update through surveys, a project website, and public review periods. Each is described below.

Surveys

An 8-question community survey was distributed by the County via a number of online platforms. A total of 376 survey responses were collected. The results of the survey were used to ensure that the priorities of the County and participating jurisdictions match those of the residents/community members. For example, community members were asked if they believe their property was at risk from a natural hazard disaster; 79% said "yes." An example survey result is displayed in Figure 3-2, while full results are summarized in Section 5.5.1.2. Full results and pie chart graphics can be found in Appendix B.



Do you believe your property is at risk from a natural hazard disaster?

376 responses

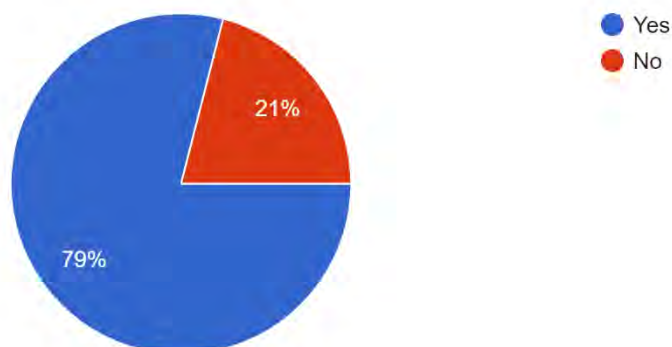


Figure 3-2: Snapshot of community survey results

HMP Update Website

For this MJHMP, a project portal at <https://mitigatehazards.com/mendocino-county/> served and will continue to serve as a centralized project information and file-sharing platform. This website provides a tool for project management, collaborative content, and a one-stop-shop for mitigation planning resources.

In addition to internal coordination, the project portal played a critical role in public involvement throughout the planning process and documenting public involvement,



including the community survey, meetings, and working sessions. Resources such as the Risk Assessment Mapping Platform (RAMP) and links to all meeting summaries are available to the public via the website. Project participants and stakeholders used the website as a project resource for the duration of the planning process and will continue to have access during the 5-year update cycle and beyond.

Public Review of Draft HMP

The public reviewed the draft HMP during October of 2020. The County and several other jurisdictions announced the available public draft via their websites, and the drafts were available at <https://mitigatehazards.com/mendocino-county/>. The public was able to provide comment via a collaborative PDF, an online submission form, or an email. The County made considerable changes to Volume 1 and mitigation actions in particular based on productive public feedback. Notably, given the severe wildfire season of 2020, many comments focused on vulnerabilities and mitigation actions for wildfire. The notice and response to comments received are available in Appendix B.



STEP 2: Assess the Risk

In accordance with FEMA requirements, the Planning Committee identified and prioritized the natural hazards affecting both Mendocino County as a whole and each participating jurisdiction individually. It also assessed the vulnerability of those identified hazards. Results from this risk assessment aided subsequent identification of appropriate mitigation actions. While the process is described below, the substance of this risk assessment is detailed in Section 4.

Identify/Profile Hazards

Based on a review of past hazard events, existing plans, reports, and other technical studies, data, and information, the Planning Committee determined if regional hazards could affect the planning area. The Planning Committee completed screening and prioritization processes to determine priority hazards to be assessed. A risk assessment finalized the prioritization process by ranking hazards according to the impact and threat to the County in Volume 1 and each participating jurisdiction in Volume 2.

Assess Vulnerabilities

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within Mendocino County are vulnerable to specific hazard events. The vulnerability assessment a GIS overlaying method for examining such vulnerabilities more in-depth. Planning partners completed this exercise both singly and jointly with the County, and the identified hazards varied widely depending on the geographic make-up of, priorities of, and services provided by the participating jurisdiction. Using these methods, planning partners estimated vulnerable populations, infrastructure, and potential losses from hazards.

Updated content for each hazard profile for the County, including vulnerability, is provided in Section 4.5. Planning partners are profiled individually in Volume 2 of this plan.

Web-Based Risk Assessment Mapping and Analysis

The web-based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com, allows interactive discovery of risk, vulnerability, and exposure data developed especially for Mendocino County. RAMP is a mapping platform built specifically for mitigation planning. It displays County facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. Figure 3-3 shows the location of RAMP on the project website.



MITIGATE HAZARDS

[WHY HAVE A PLAN?](#)[PLANNING PROCESS](#)[GRANT FRAMEWORK](#)[FEMA TOOLS](#)[PROJECTS](#)[RESOURCE LINKS](#)

Mendocino County MJHMP 2020

- Executive Summary
- Mitigation at Home
- Get Involved

Stakeholders

- Meetings
- POC App
- RAMP
- Planning Process Library
- Document Upload

Project Contacts

Mendocino
[NASH GONZALEZ](#)
707-463-4441

Atlas Planning Solutions
[AARON PFANNENSTIEL](#), AICP – Project Lead
909-374-4828

Dynamic Planning + Science
[BRIAN GREER](#)
510-253-0054

Mendocino – Local Hazard Mitigation Plan

2020

RAMP

MITIGATE HAZARDS

Mendocino County HMP

Risk Assessment Mapping Platform

Access the application with username and password both matching the project password.

LAUNCH RAMP

RAMP Resources

The RAMP user guide details RAMP's user interface and how to use the mapping application.

RAMP USER GUIDE

The hazards legend provides full details for each class of hazard portrayed in RAMP and provides data sources.

HAZARDS LEGEND

The GIS data dictionary itemizes the status of each GIS data layer that will be used in the project.

GIS DATA DICTIONARY

If you need additional help navigating these mapping tools or have any questions regarding data sources, analysis methods, etc., please email brian@dynamicplanning.co.

Figure 3-3: RAMP Access at mitigatehazards.com

The Planning Team used RAMP to understand vulnerabilities to the County and participating jurisdiction populations, critical facilities, and properties exposed to hazards with spatial footprints. Users interactively filter facilities and buildings by natural hazard zones and construction characteristics.

RAMP's robust data filtering and summation calculations allow the user to understand and visualize vulnerabilities at the facility level with detailed information on the number of structures exposed to various natural hazards. RAMP enables Mendocino County to pinpoint vulnerabilities and reinforces problem statements in the mitigation strategy. Figure 3-4 demonstrates the RAMP web-based interface.

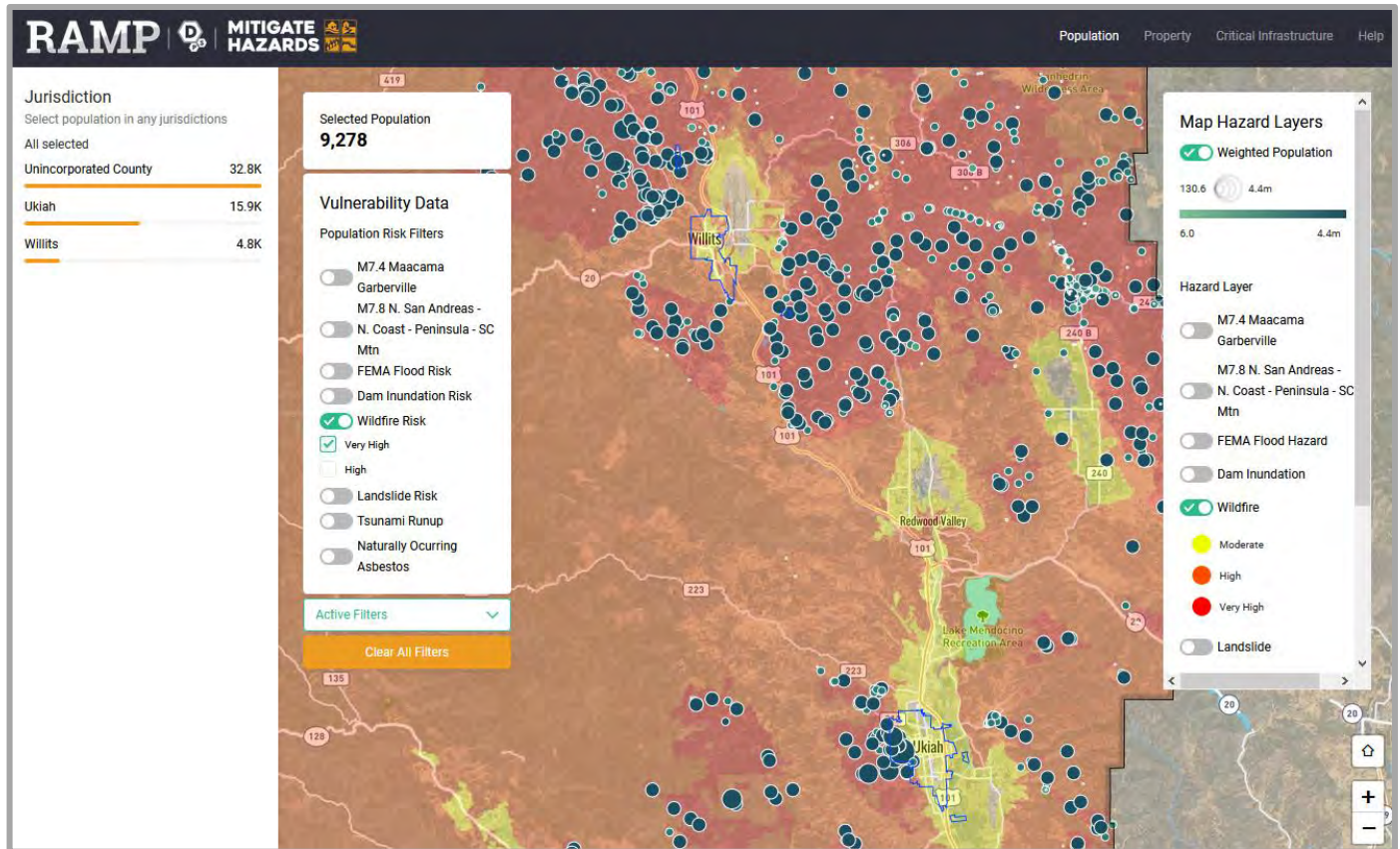


Figure 3-4: RAMP showing the population of Fort Bragg overlaid with FEMA Flood Hazard

STEP 3: Develop a Mitigation Strategy

This plan provides an explicit strategy and blueprint for reducing potential losses identified in the risk assessment based on existing authorities, policies, programs and resources, and participating jurisdictions' abilities to expand on and improve these existing tools. MJHMP development included identifying goals, assessing existing capabilities, reviewing the 2014 HMP goals, and identifying new mitigation actions. The MJHMP was prepared in accordance with requirements from DMA 2000 and the California Office of Planning and Research (OPR) and FEMA's HMP guidance. The process is described below; the substance of the mitigation strategy is detailed in Section 5 for the County and within Volume 2 for each participating jurisdiction.

Identify Goals

The Planning Committee reviewed the 2014 HMP goals and determined their current validity, consistent with FEMA requirements. The goals were updated to meet the current hazard environments and to be consistent with the changing policies and goals of participating jurisdictions. The goals are presented in Section 5.4.



Develop Capabilities Assessment

A capabilities assessment is a comprehensive review of participating jurisdictions' capabilities and tools to implement the mitigation actions in the MJHMP. The Planning Committee identified technical, financial, and administrative capabilities to implement mitigation actions, as detailed in Section 5.3 and in Volume2 for each participating jurisdiction.

Identify Hazard Problem Statements

The Planning Committee developed mitigation actions, as both planning activities and projects, to address problems that could originate from hazards identified in the risk assessment, in line with identified capability of each jurisdiction. Mitigation actions were created first by developing problem statements for prioritized hazards. As a rule of thumb, each hazard problem statement should be mitigated with a combination of short-term and long-range planning activities, through operational or physical projects. Hazard Problem Statements are located at the conclusion of each hazard profile in table format and are also uploaded in an interactive web-based Mitigation Action Support Tool (MAST), described below. Hazard problem statements for the County and other planning partners are categorized as impact-related, victim-related, or threat-related, as described in Figure 3-5.



Figure 3-5: Categories of issues addressed in problem statements



Identify Mitigation Actions

As part of the MJHMP planning process, the Planning Committee reviewed and analyzed the status of the mitigation actions identified in the 2014 HMP. The Consultant Team and Planning Committee then worked together to identify and develop new mitigation actions with implementation elements. The Planning Committee prioritized and further detailed the implementation strategies during Planning Committee Meeting #3. Additional detail on these mitigation actions is provided in Section 5.3.

Mitigation Action Support Tool (MAST)

Hazard problem statements and mitigation activities are presented and will be updated through a web interface application developed specifically for participating jurisdictions, creating a living document that can continue to be a valuable resource into the future. The Mitigation Action Support Tool (MAST) is accessible through www.mitigatehazards.com

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides planning partners and plan reviewers (California Office of Emergency Services (Cal OES) and FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Planning partners can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction's ability to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.

County Planning Processes Library

Mendocino County has completed the MJHMP planning process as per FEMA guidelines. This process is detailed in this section, and it consists of the following elements:

- **Risk Assessment:** the risk assessment measures the potential impact to life, property, and the economy resulting from natural hazards. The intent of the Risk Assessment is to identify the vulnerabilities of a community to the greatest extent possible given available data. The risk assessment increases understanding of natural hazard impacts to the community and provides a foundation to develop and prioritize mitigation actions.
 - Mendocino County: [View Maps](#) / [Download Maps](#)
 - Fort Bragg: [View Maps](#) / [Download Maps](#)
 - Ukiah: [View Maps](#) / [Download Maps](#)
 - Willits: [View Maps](#) / [Download Maps](#)
 - Point Arena: [View Maps](#) / [Download Maps](#)
 - County Office of Education: [View Maps](#) / [Download Maps](#)



- **Hazard Prioritization:** the MJHMP Planning Team considered and screened a broad set of hazards presented in relevant local, regional, and statewide hazard planning documents. The crosswalk of documents reviewed and the results of screening the relevant hazards to be reviewed are outlined in Section 4.1.1. The MJHMP then considered past hazard events in Mendocino County to help prioritize hazards to be evaluated in this document, as outlined in Section 4.1.2.d
 - Mendocino County: [View Risk Matrix](#)
 - Fort Bragg: [View Risk Matrix](#)
 - Ukiah: [View Risk Matrix](#)
 - Willits: [View Risk Matrix](#)
 - Point Arena: [View Risk Matrix](#)
 - County Office of Education: [View Risk Matrix](#)
- **Areas of Concern:** the MJHMP Planning Committee identified the areas of concern and potential impacts of each of the identified hazards on the community. Developing these “problem statements” for areas of concern, which describe the nature of the consequences or effects of a hazard occurrence on the community and its assets, ensures the identified mitigation actions are tailored to the specific problems created by various hazard scenarios and are specific to each participating jurisdiction.
 - Mendocino County: [View Problem Statements](#)
 - Fort Bragg: [View Problem Statements](#)
 - Ukiah: [View Problem Statements](#)
 - Willits: [View Problem Statements](#)
 - Point Arena: [View Problem Statements](#)
 - County Office of Education: [View Problem Statements](#)
- **Capability Assessments:** A capabilities assessment consists of an analysis of the existing planning and regulatory capabilities of the County. Planning and regulatory tools typically used by local jurisdictions to implement hazard mitigation activities are building codes, zoning regulations, floodplain management policies, and other municipal planning documents.
 - Mendocino County: [View Capability Assessment](#)
 - Fort Bragg: [View Capabilities Assessment](#)
 - Ukiah: View [Capabilities Assessment](#)
 - Willits: View [Capabilities Assessment](#)
 - Point Arena: [View Capabilities Assessment](#)
 - County Office of Education: [View Capabilities Assessment](#)



Multi-Jurisdiction Planning Process

Multi-jurisdiction hazard mitigation planning offers many benefits, such as increased coordination and efficiency in planning and implementation efforts. At the same time, each jurisdiction has specific hazards and specific mitigation actions that must be addressed individually. The MJHMP balances the benefits of a comprehensive, coordinated approach to hazard mitigation with the specific realities of individual participating jurisdictions. Multi-jurisdiction plans are contemplated under FEMA regulations at 44 C.F.R. § 201.6(4).

Volume 2 of this MJHMP documents each jurisdiction's HMP resources. Each participating jurisdiction individually assessed hazards, explored hazard vulnerability, developed mitigation strategies, and followed the same planning process as Mendocino County to create annexes. Volume 2 provides each participating jurisdiction's stand-alone annex.

STEP 4: Adopt and Implement the Plan

Once the risk assessment and mitigation strategy were completed, information, data, and associated narratives were compiled into the MJHMP. Section 2 provides detailed information on new and updated elements of the MJHMP.

Plan Review and Revision

Once the *Draft* MJHMP Update was completed, a public and government review period was established for official review and revision. Public comments were accepted, reviewed, and incorporated into this update. Applicable comments from the public have been received and addressed prior to the *"authorization to submit"* to FEMA and Cal OES. The notice of the public comment period is included in Appendix B.

Plan Adoption and Submittal

This plan has been submitted and approved by FEMA and adopted by the County. Copies of the resolutions are provided in forward of this document. ***NOTE: adoption proceedings will be completed after approval by Cal OES and FEMA.***

Implement, Evaluate, and Revise the Plan

The true worth of any mitigation plan is its implementation and success under FEMA's grant programs. This MJHMP has been assembled to reduce the risk of natural hazards, and also to meet the requirements of the DMA 2000 and maintain eligibility under FEMA's Hazard Mitigation Assistance (HMA) grant programs.

FEMA administers three programs that provide funding for local agencies with approved mitigation plans:



- **Hazard Mitigation Grant Program (HMGP)**, which assists in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration.
- **Building Resilient Infrastructure and Communities (BRIC)**, which provides funds for hazard mitigation planning and projects on an annual basis.
- **Flood Mitigation Assistance (FMA)**, which provides funds for planning and projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP) on an annual basis.

For more information about FEMA HMA, visit: <https://www.fema.gov/hazard-mitigation-assistance>.

Plan Maintenance

The County will update and monitor this plan in accordance with all FEMA requirements in order maintain eligibility for FEMA HMA. Evaluation and revision procedures for this plan are detailed in Section 6.

Section 6 includes the measures Mendocino County and planning partners will take to ensure the MJHMP's continuous long-term implementation, including MJHMP monitoring, reporting, evaluation, maintenance, and updating. Most of this implementation and maintenance will be done through MAST. Figure 3-6 demonstrates how MAST information will translate into Cal OES NOIs and grant Sub application requests. Section 6 also contains specifics on integrating mitigation with day-to-day decision making.



MAST Mitigation Strategy Details

Grant Application Information



Figure 3-6: MAST elements and Cal OES Grant Applications



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Section 4. Risk Assessment

The risk assessment measures the potential impact on life, property, and the economy resulting from natural hazards. The intent of the Risk Assessment is to identify the qualitative and quantitative vulnerabilities of a community to the greatest extent possible given available data. The risk assessment increases understanding of natural hazard impacts to the community and provides a foundation to develop and prioritize mitigation actions. In turn, mitigation actions reduce damage from natural disasters through increased preparedness and focus resources to areas of greatest vulnerability.

This risk assessment section evaluates potential loss from a hazard event by assessing the vulnerability of buildings, infrastructure, and people. It identifies the characteristics and potential consequences of hazards, explores how much of the County could be affected by a hazard, and assesses the impact on County assets. The risk assessment approach consists of three components:

- **HAZARD IDENTIFICATION AND SCREENING**
Identification and screening of hazards (Section 4.1)
- **HAZARD PRIORITIZATION**
Identifying “priority hazards” for each participating jurisdiction to be profiled in more detail (Section 4.1.3)
- **VULNERABILITY ASSESSMENT**
Determination of potential losses or impacts to buildings, infrastructure, and population
This section contains HAZARD PROFILES for individual priority hazards (Section 4.5)

Other sections provide background and context for the risk assessment. Section 4.3 provides a geographic and demographic overview of Mendocino County. Section 4.4 explains in-depth the methods applied to the risk assessment.

4.1 Hazard Identification and Screening

Per FEMA Guidance, the first step in developing the risk assessment is identifying the hazards. This step includes two parts. First, the MJHMP Planning Team considered and screened a broad set of hazards presented in relevant local, regional, and statewide hazard planning documents. The crosswalk of documents reviewed and the results of screening the relevant hazards to be reviewed are outlined in Section 4.1.1. Second, the MJHMP considered past hazard events in Mendocino County to help prioritize hazards to be evaluated in this document, as outlined in Section 4.1.2.



4.1.1 Hazard Screening

The County's MJHMP Planning Team first reviewed previously-prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect the County and the nearby region. Table 4-1 provides a crosswalk of hazards identified in the 2014 Mendocino County MJHMP, 2009 Mendocino County General Plan, and the 2018 California State Hazard Mitigation Plan. Eighteen different hazards were identified based on a thorough document review. The crosswalk was used to develop a preliminary hazards list, providing a framework for MJHMP Planning Team members to evaluate which hazards were truly relevant to planning partners and which ones were not. For example, volcanoes were considered to have no relevance to the County, while earthquake, flood, dam failure, landslide, and wildfire were indicated in every hazard document.

Table 4-1: Document Review Crosswalk

Hazards	2014 Mendocino County MJHMP	2009 Mendocino County General Plan	2018 California State HMP
Agricultural Pests	■		■
Climate Change		■	■
Dam Failure	■	■	■
Drought	■	■	■
Earthquake	■	■	■
Flood	■	■	■
Insect Hazards	■		
Landslide		■	■
Levee Failure	■*		■
Manmade Hazards		■	■
Pandemic Disease	■		■
Sea-level rise			■
Severe Weather			■
Soil Hazards	■**		
Terrorism & Tech Hazards			■
Tsunami	■	■	■
Volcano			■
Wildfire	■***	■	■

* included as part of dam failure

** included naturally occurring asbestos

*** included urban conflagration

The crosswalk provided the basis for prioritizing hazards to be profiled, displayed in Table 4-2. The prioritized hazards have detailed hazard profiles in Section 4.5, the Vulnerability Assessment.



Table 4-2: Hazard prioritization

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	High priority county-wide, profiled hazard.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Severe Weather.
Insect Hazards	While hazardous insects exist in Mendocino County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	High priority county-wide, profiled hazard.
Severe Weather, including:	High priority county-wide for heavy wind and heavy rain.
Extreme Heat	Not a priority as extreme weather event, discussed as climate change impact.
Hail	Hail events are rare in Mendocino County and not profiled in this plan.
High Wind	Profiled as part of Severe Weather hazard.
Heavy Rain	Profiled as part of Severe Weather hazard.
Fog	While fog events do occur within Mendocino County, they are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.
Winter Storm / Extreme Cold/ Freeze Events	While winter storms are present in Mendocino County, they were not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	High priority county-wide, profiled hazard (includes erosion and naturally-occurring asbestos).
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.



4.1.2 Past Major Hazard Events

One important consideration in identifying and prioritizing hazards is past major hazard events, especially those that triggered federal or state disaster declarations. The MJHMP Planning Team reviewed and considered past major hazard events in Mendocino County as part of the screening and identification process.

Most available information on major past hazard events comes from federal or state disaster declarations. These declarations may be granted when the severity and magnitude of an event surpasses the ability of the local government to respond and recover. Additional federal or state disaster funding (or both) is generally available in response to a disaster declaration. State funding assistance is provided when a local government's capacity to respond to the disaster is exceeded. Should the disaster be so severe that both the local and state governments' capacities are exceeded, a federal emergency or disaster declaration may be issued, allowing for the provision of federal assistance.

The federal government may issue a disaster declaration through FEMA, the U.S. Department of Agriculture (USDA), and the Small Business Administration (SBA). FEMA also issues emergency declarations, which are more limited in scope and do not include the long-term federal recovery programs that accompany major disaster declarations. Quantity and types of damage are the determining factors.

Mendocino County has received 27 federal disaster declarations¹ since 1953, some of which were statewide, including:

	4	Wildfires		8	Floods
	8	Severe Weather Events		1	Drought

Severe weather and flooding events are most likely to occur in the winter months, with 25 of the 54 federally-declared disasters occurring in January and February. Wildfires have typically occurred in late summer and fall, with 170 wildfire declarations from July through October. Table 4-3 lists federal disaster declarations in Mendocino County since 1953.

¹ Officially, 28 disasters have been declared, as California was declared as part of Hurricane Katrina evacuation; however, no disaster occurred in California.



Table 4-3: Disaster Declarations in Mendocino County 1953- present

Year	Incident Description	Disaster Number
2020	COVID-19	EM-3428
2020	COVID-19 Pandemic	DR-4482
2019	Severe Winter Storms, Flooding, Landslides, And Mudslides	DR-4434
2019	Severe Winter Storms, Flooding, Landslides, And Mudslides	DR-4431
2018	Mendocino Fire Complex	FM-5262
2017	Redwood Valley Fire	FM-5219
2017	Severe Winter Storms, Flooding, And Mudslides	DR-4305
2017	Severe Winter Storms, Flooding, And Mudslides	DR-4301
2017	Wildfires	DR-4344
2008	Wildfires	EM-3287
2006	Severe Rain Storms, Flooding, Mudslides, And Landslides	DR-1628
2005	Hurricane Katrina Evacuation (National)	EM-3248
1998	Severe Winter Storms and Flooding	DR-1203
1997	Severe Rain Storms, Flooding, Mud And Landslides	DR-1155
1995	Severe Winter Storms, Flooding, Landslides, Mud Flow	DR-1046
1995	Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044
1994	The El Nino (The Salmon Industry)	DR-1038
1993	Severe Winter Storm, Mud & Land Slides, & Flooding	DR-979
1991	Severe Freeze	DR-894
1986	Severe Rain Storms & Flooding	DR-758
1983	Coastal Rain Storms, Floods, Slides & Tornadoes	DR-677
1977	Drought	EM-3023
1974	Severe Rain Storms & Flooding	DR-432
1974	Severe Rain Storms & Flooding	DR-412
1970	Severe Rain Storms & Flooding	DR-283
1969	Severe Rain Storms & Flooding	DR-253
1964	Heavy Rains & Flooding	DR-183

Source: FEMA Disaster Database via <http://mitigatehazards.com/hazard-mapping/>, accessed 06/30/2020.

Drought declarations may also occur through the United States Department of Agriculture (USDA), as agricultural areas such as Mendocino County can be particularly impacted by drought. A USDA disaster declaration certifies that the affected county has suffered at least a 30-percent loss in one or more crop or livestock areas and provides affected producers with access to low-interest loans and other programs to help mitigate the impact of the drought. Importantly, all counties neighboring those receiving disaster declarations are eligible for the same assistance.



Hazard events occurring outside County boundaries also can directly and indirectly impact Mendocino County. For instance, dam failures and wildfires may occur outside Mendocino County but affect watersheds that drain into the County and result in flooding and other impacts related to watershed health. Power supply also could be interrupted by hazard occurrences outside of the County.

4.1.3 Compounding Hazard Events

This MJHMP examines the vulnerabilities of hazard events in Mendocino County, generally taken individually; however, hazards occur in combination as well. Often another hazard occurs as a secondary hazard, such as an earthquake causing a landslide or tsunami or a wildfire and severe rain events causing debris flow. Other events are compounded by outside factors, such as wildfire evacuations occurring during Public Safety Power Shutoff (PSPS) events. This hazard mitigation plan highlights multiple hazard risks within the hazard profiles by highlighting secondary hazards and, for wildfire in particular, highlighting local compounding conditions that accelerate wildfire impacts such as PSPS. See Section 4.5.10.1.

Of particular concern in this 2020 MJHMP Update is the pairing of a hazard event and need for evacuation or response in light of the ongoing COVID-19 pandemic. Local governments are actively considering response and mitigation needs that can help mitigate the impacts of a multiple-hazard event that include pandemic and another hazard such as flood, earthquake, or wildfire. Many of the problems and mitigation actions explored herein take this emerging issue into consideration. For more on pandemic and its impact on other hazards, see Section 4.5.5.6.

4.2 Hazard Prioritization

The Planning Committee's hazard prioritization process combines historical data, local knowledge, and consensus opinions to produce a matrix that illustrates whether each profiled hazard is an extreme, high, or medium priority. The criteria below were used to evaluate hazards and identify the highest risk hazard in Mendocino County. The results of the prioritization process for Mendocino County are shown in Figure 4-1.

Each participating jurisdiction also completed the hazard prioritization process specifically for the jurisdiction, and this important initial stage informed the rest of the planning process for each jurisdiction. Individual prioritization matrices are available in Volume 2 of this MJHMP.

The following questions and guidance shaped the ranking on the matrices:



Probability

What is the likelihood of a hazard event occurring in a given year?

- **Unlikely-** less than 1% annual probability or occurs rarely in the region or community
- **Possible-** 1%-10% annual probability or could occur. Uncommon in the region or community
- **Likely-** 10%- 100% annual probability or recurrent. Not frequent in the region or community
- **Highly likely-** 100% annual probability or occurs frequently in the region or community

Impact

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?

- **Minor-** very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.
- **Limited-** minor injuries only. 10%-25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- **Critical-** multiple deaths or injuries possible. 25%-50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- **Catastrophic-** high number of deaths or injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.			
Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.			
Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.			
Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.			

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in **Vol. 1** of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



Climate Change impacts will be addressed at the end of each hazard section within the 2020 plan update and as a stand alone section for each jurisdiction...



For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above. Pandemic will be profiled for every jurisdiction.

Mendocino County Risk Matrix

PROBABILITY	IMPACT			
	Minor	Limited	Critical	Catastrophic
	Highly Likely	Medium DROUGHT SLOPE FAILURE FLOOD	Extreme EARTHQUAKE	Extreme WILDFIRE
	Likely	Medium SOIL HAZARD EXTREME WEATHER	High	Extreme
	Possible	Low	Medium	High
Unlikely	Low	Low	Medium DAM FAILURE	Medium

Figure 4-1: Prioritized Hazard Assessment Matrix for Mendocino County



4.3 Mendocino County Geographic and Demographic Profile

The geographic and demographic profile for Mendocino County and planning partners sets the stage for the vulnerabilities assessment. Pairing the vulnerabilities assessment and regional profile can help guide jurisdictions' resources to key populations and geographic areas.

4.3.1 Geography

Mendocino County is located along the coast of Northern California. It is bordered by Humboldt and Trinity counties to the north; Tehama, Glenn, and Lake counties to the East; Sonoma County to the south; and the Pacific Ocean to the west. The county lies 176 miles from San Francisco at its northernmost point. At its southernmost point, the county is 437 miles north of Los Angeles. The county occupies 3,510 square miles (2,246,000 acres) and has 129 miles of coastline. Elevations in the county range from sea level at the Pacific Ocean to 6,954 feet atop Anthony Peak. Mendocino County features subregions characterized by either large tracts of timberland, agriculture, and coastal mountain. (Mendocino County MJHMP, 2014)

The County features beautiful stands of redwoods and Douglas firs which tower down from the Pacific Coast Range. Numerous mountain peaks over 6,000 feet grace the northeastern portion of the county; their peaks retain snow caps until early summer. Much of the forest contains iconic coastal redwoods and sequoias. Oak woodlands are scattered throughout the rolling hills of the county. The county is characterized by steep slopes, with the main ridges oriented north-northwest to south-southeast. Rivers and streams are abundant, some flowing year-round and others drying up in the summer. The Eel River drains to the north and the Russian River to the south. Other rivers drain the west side of the coastal mountains to the ocean, including from south to north: the Gualala River North Fork, Garcia, Navarro, Albion, Big, Noyo, and Ten Mile Rivers. (Mendocino Fire Safe Council, 2019)

Groundwater is a main source for municipal and individual domestic water use in incorporated areas of County outside of the Ukiah Valley. It also contributes significantly to irrigation needs. Groundwater wells throughout the County are used for domestic, commercial, industrial, agricultural, and for fire protection needs. (Mendocino County General Plan, 2009)

Groundwater in the County is sourced from two unique geologic settings, which include inland valleys and mountainous areas. Mountainous areas are underlain by consolidated rocks of the Franciscan Complex. Interior valleys are underlain by thick deposits of valley fill. There are six primary groundwater basins in Mendocino County which include: Round Valley, Little Lake Valley (Willits Valley), Ukiah Valley, Laytonville Valley, Potter Valley, and Anderson Valley. (*Id*)

Surface water is utilized as well. Water supply in the remainder of the County, primarily unincorporated areas, is generally supplied by onsite methods such as wells or springs. These supply sources are recharged annually by winter precipitation. Van Arsdale Reservoir and Lake Mendocino are two notable surface water storage facilities in the County. Smaller reservoirs and ponds are also prevalent. (*Id*)

Figure 4-2 displays a geographic overview of Mendocino County.



4.3.2 Climate

Mendocino County's climate is generally mild and can be characterized by moist, cool winters and warm dry summers. Inland temperature extremes range from lows of 5 degrees Fahrenheit to highs over 110 degrees Fahrenheit, while coastal areas experience less extreme temperatures ranging from 20 to 80 degrees Fahrenheit. (Mendocino County MJHMP, 2014)

Mendocino County receives precipitation as both rain and snow. The average annual rainfall in Mendocino County ranges from slightly less than 35 inches in the Ukiah area to more than 80 inches near Branscomb. Snowfall is constrained to higher elevations, and most rainfall occurs during storms originating off the coast northwest of the County, which predominate in the winter months. There is very little rainfall during the summer months. (Mendocino County General Plan, 2009)



Figure 4-2: Mendocino County Geographic Overview



4.3.3 Demographics and Vulnerable Populations

Population information directly relates to the impact of hazards and to other community needs such as housing, industry, stores, public facilities and services, and transportation. Knowledge of the composition of the population, how it has changed, and how it may change in the future helps with future decision making.

This overview of regional demographics comes primarily from the United States Census Bureau's five-year estimate period from 2013-2017. The United States Census Bureau estimated Mendocino County's population to be 87,497 for the 2013-2017 5-year estimate period. Respectively, there is a total population of 58,995 for the unincorporated Mendocino County, 7,269 for the City of Fort Bragg, 15,917 for the City of Ukiah, 4,844 for the City of Willits, and 472 for the City of Point Arena. (American Community Survey, 2017)

Important note:

The demographics information contained herein has been post-processed based on the United States Census Bureau's five-year estimate period from 2013-2017 and will not necessarily match other demographics-based regional studies or plans. In order to examine geometries not available in census reports, including unincorporated County areas, a weighted GIS analysis combined and redistributed block groups. Inherently, the margin of error for this data can be high especially in more rural areas.

This section provides a generalized approximation of specific demographics, reported by various planning study areas. It is not meant to provide any definitive information, but merely to suggest larger trends in the region.

4.3.3.1 Introduction to Vulnerable Populations

Importantly, demographics help identify which populations may be particularly vulnerable to hazard events. Some populations are at greater risk because of age, resources, physical abilities, or other factors. Vulnerability in the face of a hazard event is not a fixed characteristic; the same person may be at risk for some hazards but not at risk for others. For example, a low-income family without a car may be at risk for a wildfire or flood if a quick evacuation is necessary but prepared in the event of an earthquake. Some individuals are highly and permanently vulnerable to many hazards, such as the frail elderly, people living with chronic sensory, mobility, or cognitive impairments, and individuals dependent upon assistive devices or complex medical regimens in order to survive. (National Center for Disaster Preparedness, 2020) Vulnerable populations also may be living in hazard-prone areas, compounding their risk.

In the context of all-hazards preparedness and response planning, **at-risk individuals** (often used interchangeably with "**vulnerable populations**") are defined federally as "children, pregnant women, senior citizens, and other individuals who have access or functional needs in the event of a public health emergency." (42 U.S.C. § 2802(b)(4)(B)(2019)) Examples of these populations may include, but are not limited to, individuals with disabilities, individuals who live in institutional settings, individuals from diverse cultures, individuals who have limited English proficiency or are non-English speaking, individuals who



are transportation-disadvantaged, individuals experiencing homelessness, individuals who have chronic medical disorders, and individuals who have pharmacological dependency.

Natural resource managers may be able to reduce the vulnerability of certain populations by increasing the adaptive capacity of affected communities. Examples include cost-sharing to reduce fuels, stabilize structures, or implement flood-reducing measures or educational programs offered in English and Spanish and targeted to specific populations. Specifically, planning for vulnerable populations in hazard mitigation can help prioritize resources where they will be the most effective.

This section explores the various demographic and economic circumstances surrounding common vulnerable populations.

4.3.3.2 Income & Housing

Income or wealth is one of the most important factors in natural hazard vulnerability. First, low income populations are less able to afford housing and other infrastructure that can withstand extreme events. , Low income populations typically occupy more poorly-built and inadequately-maintained housing. For example, mobile or modular homes are more susceptible to damage in earthquakes and floods than other types of housing. In urban areas, low income populations often live in older houses and apartment complexes, which are more likely to be made of un-reinforced masonry. This building type is particularly susceptible to damage during earthquakes.

Second, low income populations are less able to purchase resources needed for disaster response. In the United States, individual households are expected to use private resources to prepare for, respond to, and recover from disasters to a large extent. This means that households living in poverty and minorities are disadvantaged when confronting hazards. The more affluent are able to relocate to safer areas or rebuild following a hazard event. Moreover, individuals who do not own cars or who cannot afford gas for their cars will likely decide not to evacuate. (Krause & Reeves, 2017)

Furthermore, residents below the poverty level are less likely to have insurance to compensate for losses incurred from natural disasters. This means that residents below the poverty level have a great deal to lose during an event and are the least prepared to deal with potential losses. Hurricane events such as Harvey, Irma, and Katrina demonstrate that low-income and minority communities are more vulnerable to hazard events, and they struggle to recover the most. (*Id.*)

Figure 4-3 shows the median household income distribution for Mendocino County. The “median” is the value that divides the distribution of household income into two equal parts (e.g., the middle). The median household income in Mendocino County in 2017 (in 2017 dollars) was estimated to be \$50,833, compared to \$61,372 across the U.S. (United States Census Bureau, 2018)



4.3.3.3 Age

Children and the elderly may be more vulnerable during an extreme hazard event.

Specific planning attention for the elderly is an important consideration, especially given the current aging of the American population. Elderly vulnerability can vary significantly based on health, age, and economic security. However, as a group, the elderly more often lack physical and economic resources necessary for response to hazard events and are more likely to suffer health-related consequences that can slow recovery. They are more likely to be vision, hearing, or mobility impaired and more likely to experience mental impairment or dementia.

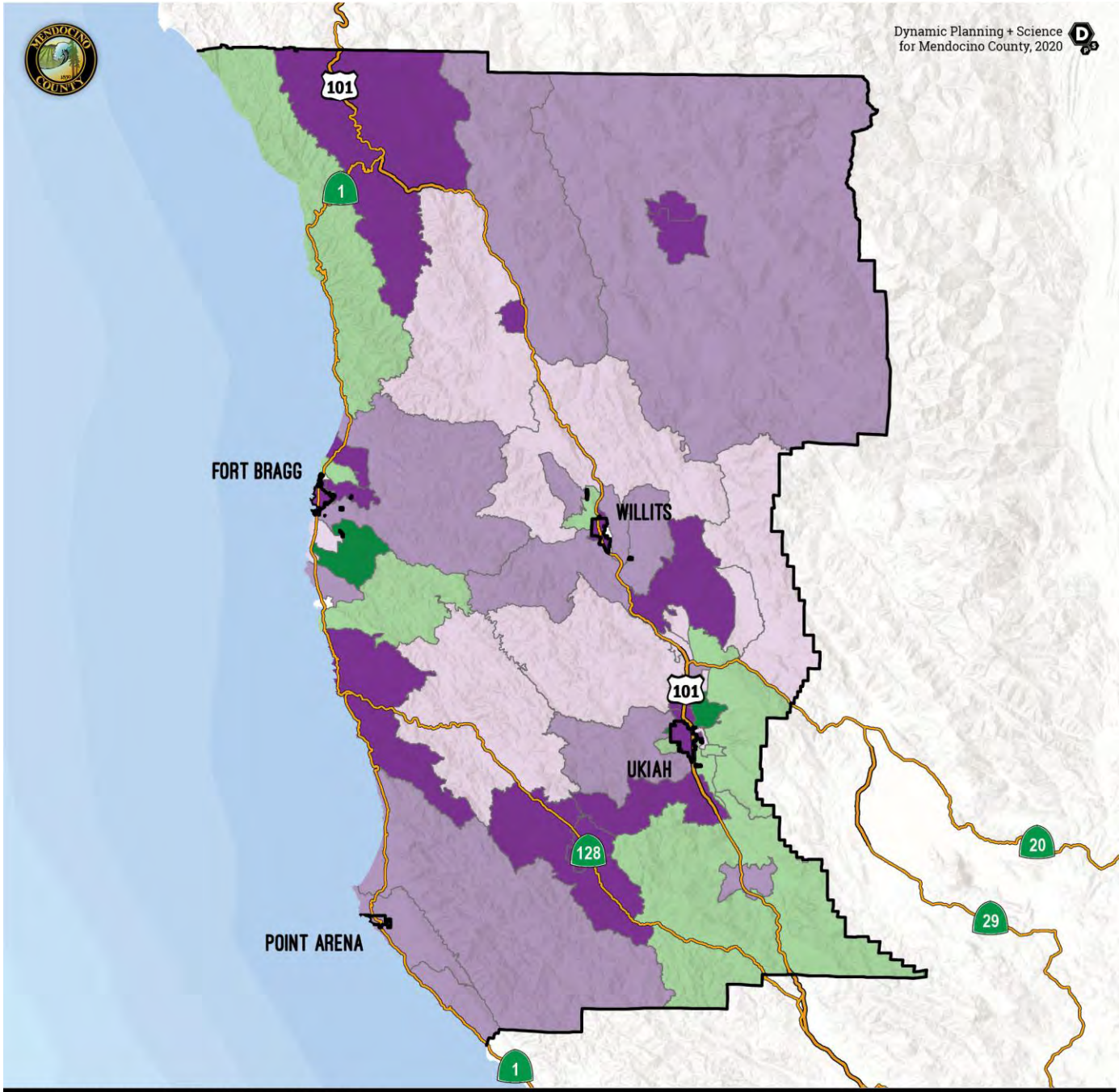
Additionally, elderly persons are more likely to live in assisted-living facilities where emergency preparedness occurs at the discretion of facility operators. These facilities are typically identified as “critical facilities” by emergency managers because they require extra notice to implement evacuation. Elderly residents living in their own homes may have more difficulty evacuating and could be stranded in dangerous situations.

Lower-income elderly populations are less likely to have access to medical care due to financial hardship and are more likely to need special medical attention, which may not be readily available during natural disasters.

In many cases, both children and the elderly depend on others to care for them during day-to-day life. Very young children and the elderly may be vulnerable to injury or sickness; this vulnerability can be worsened during a natural disaster because they may not understand the measures that need to be taken to protect themselves from hazards. They also may be weaker and less able to survive a hazard event even as children often bounce back from illness faster than older populations.

Finally, both children and the elderly have fewer financial resources and are frequently dependent on others for survival. For these populations to remain resilient before and after a natural hazard event, it may be necessary to assist residents with resources provided by the County, Cities, State, and Federal emergency management agencies and organizations.

Based on 2013-2017 American Community Survey 5-year estimates, 84% of Mendocino County households include elderly individuals. The overall age distribution for Mendocino County is illustrated in Figure 4-4 for the population under 18 and Figure 4-5 for population over 65. Figure 4-5 shows that the highest urban concentrations of people under the age of 18 occur in Point Arena, with a significant rural center near the City of Willits.



MEDIAN HOUSEHOLD INCOME MENDOCINO COUNTY

*Data sources: Census ACS 2017 5-year estimates, percentage of total population, quantile classification from countywide sampling.

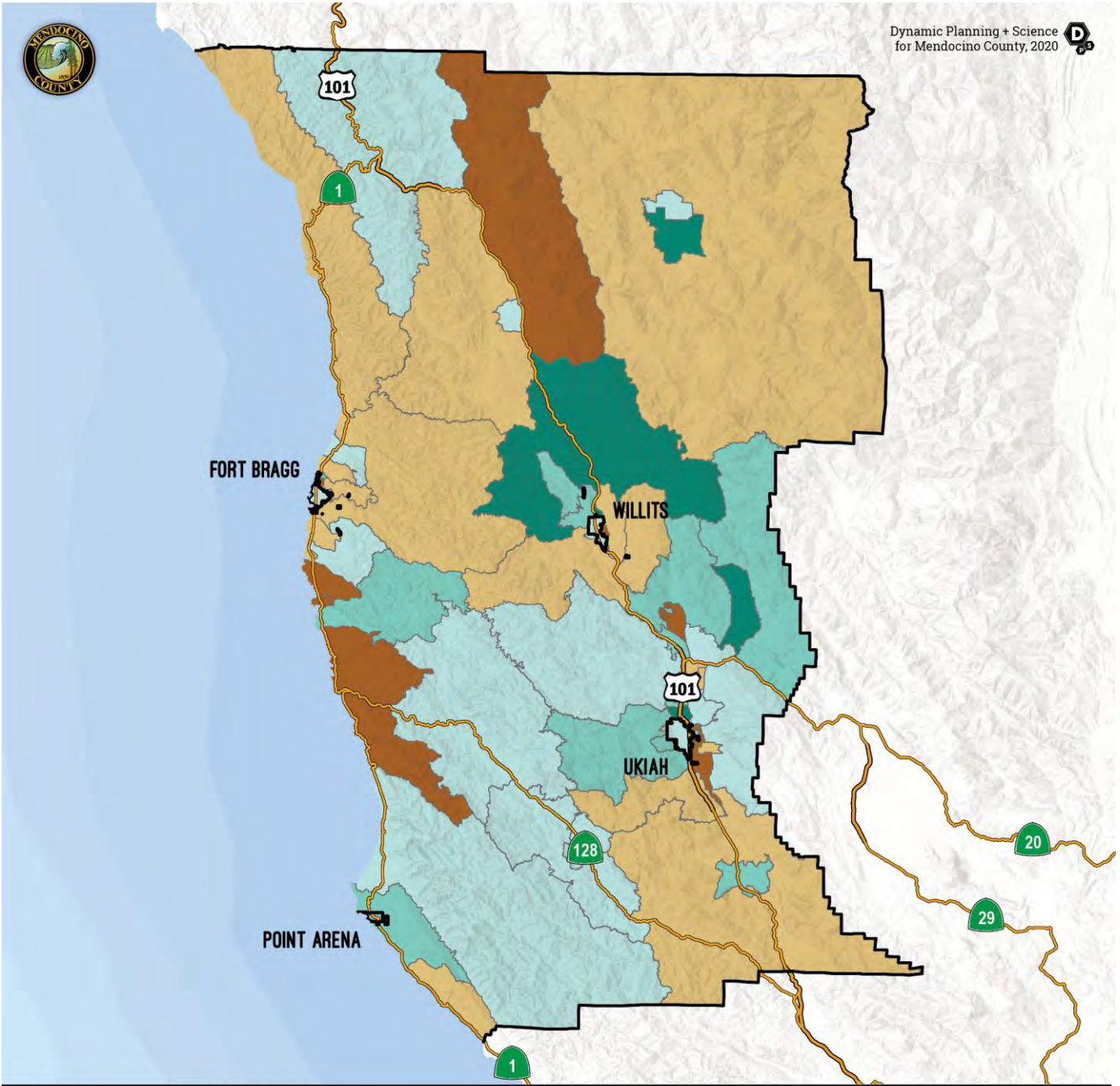
MAP LEGEND



Figure 4-3: Median Household Income Distribution



Dynamic Planning + Science
for Mendocino County, 2020



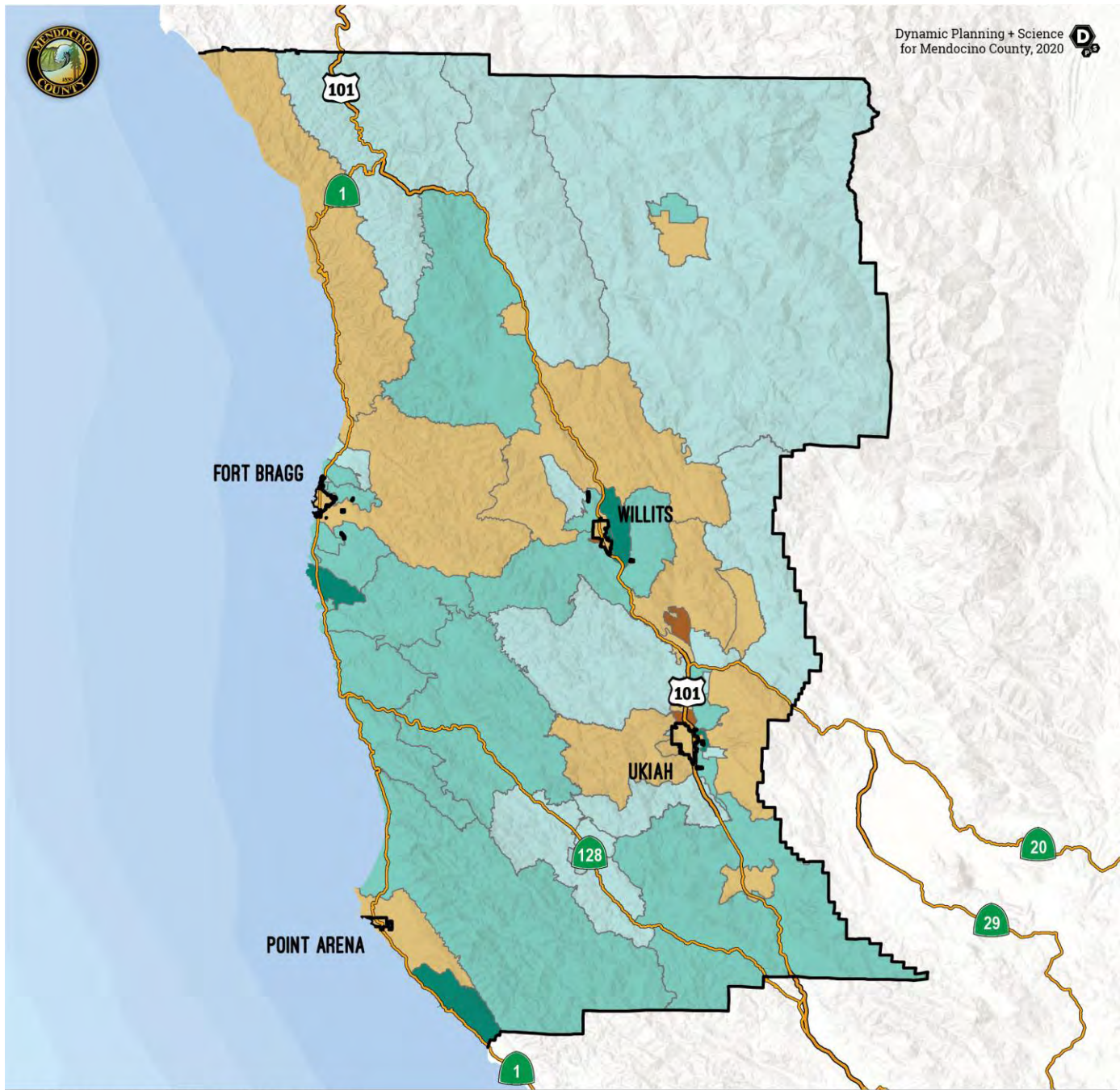
POPULATION UNDER 18 MENDOCINO COUNTY

*Data sources: Census ACS 2017 5-year estimates, percentage of total population, quantile classification from countywide sampling.

MAP LEGEND

10% OR LESS	10.1% — 18%	18.1% — 26%	26.1% — 33%	33.1% OR MORE
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Figure 4-4: Population Under Age 18



POPULATION 65 AND OVER MENDOCINO COUNTY

*Data sources: Census ACS 2017 5-year estimates, percentage of total population, quantile classification from countywide sampling.

MAP LEGEND

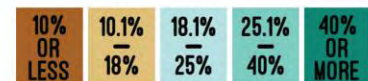


Figure 4-5: Population Over Age 65



4.3.3.4 Race, Ethnicity, and Language

Non-English or limited-English speakers may have difficulty understanding emergency information as a result of language and literacy barriers. Non-white communities in fire-prone areas appear from research to be less able to adapt to a wildfire event. (Levin, Phil; Davies, Ian, 2019) Another study found that Non-white communities lose up to \$29,000 on average in personal wealth following events like hurricanes and wildfires. (Mandel, 2018) Since higher proportions of non-white persons live below the poverty line than the majority white population, and low income can compound vulnerability. Farmworkers may be particularly vulnerable during a hazard event, especially those non-English speaking and those living in temporary worker housing. (California Employment Development Department, 2019) (U.S. Dep't of Ag, 2017)

According to the 2013-2017 American Community Survey estimates, at least 16% of total households speak Spanish, with 3% speaking limited English. Figure 4-6 depicts the non-English-speaking language distribution for Mendocino County for 2013-2017.

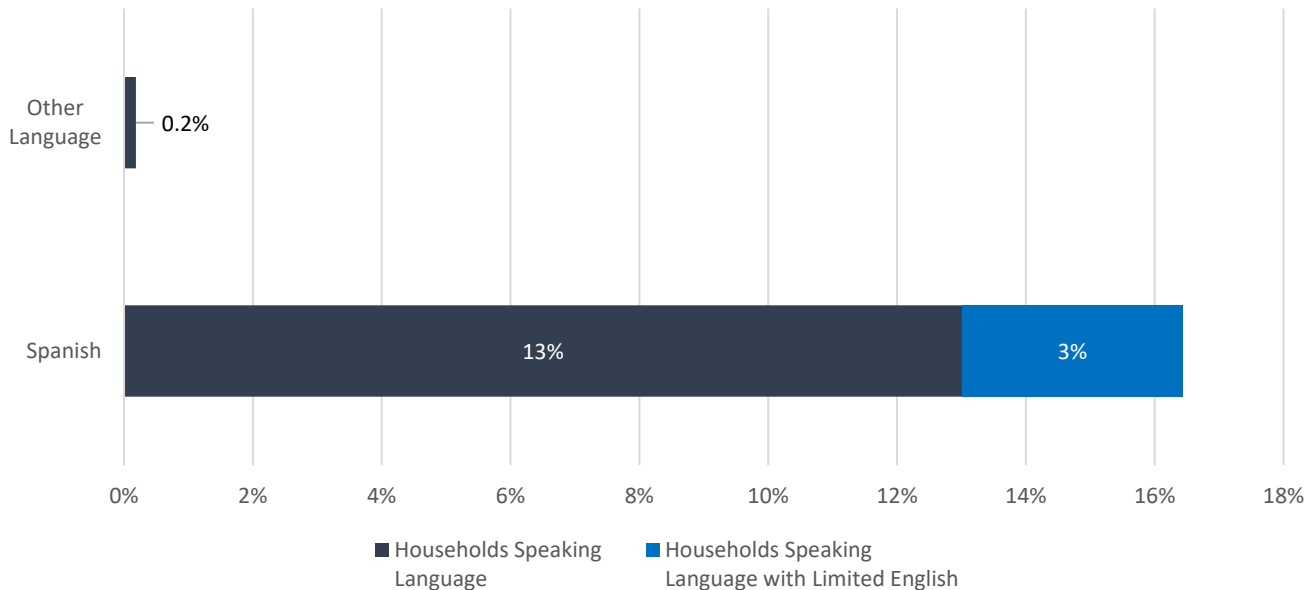


Figure 4-6: Non-English Household Language
Source: 2013-2017 American Community Survey 5-Year Estimates



According to the 2013-2017 American Community Survey estimates, Mendocino County is predominately white, at 87% of the total population. The largest minority population is Hispanic, at 25% of the total county population. Figure 4-7 shows the racial distribution within Mendocino County.

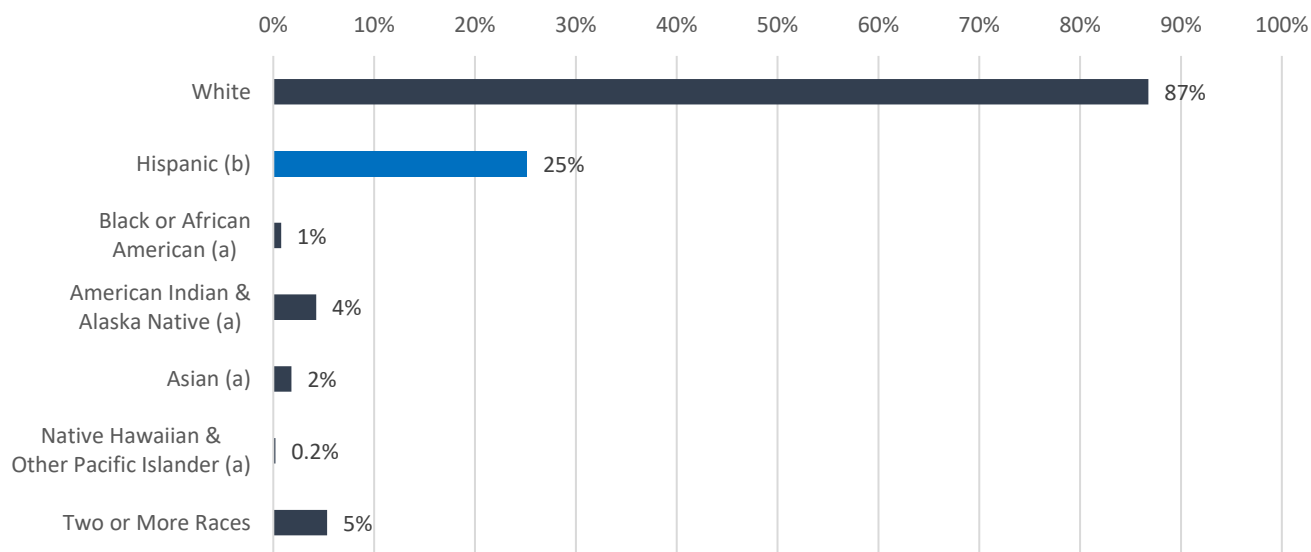


Figure 4-7: Mendocino County Race Distribution in 2013-2017

Source: 2013-2017 American Community Survey 5-Year Estimates

Note: Hispanics may be of any race, so they are included in applicable race categories. This has the effect of influencing the total population percentage. (a) Includes persons reporting only one race. (b) Hispanics may be of any race, so also are included in applicable race categories

4.3.3.5 At-risk Individuals with Access and Functional Needs

Access and functional needs may interfere with the ability to access or receive medical care before, during, or after a disaster or emergency. Irrespective of a specific diagnosis, status, or label, the term “access and functional needs” refers to a broad set of cross-cutting access and function-based needs, generally distinguished into **access-based** or **function-based** needs according to the following:

- **Access-based needs** require that resources are accessible to all individuals, such as social services, accommodations, information, transportation, and medications to maintain health.
- **Function-based needs** refer to restrictions or limitations an individual may have that requires assistance before, during, and after a disaster or public health emergency.

At-risk individuals may have additional needs that must be considered in planning for, responding to, and recovering from a disaster or emergency. A recommended approach for integrating the access and functional needs of these individuals is to consider elements based on the following framework, referred to a CMIST:

- **Communication** – Individuals who may have limitations that interfere with the receipt of and response to information require information to be provided in an appropriate and accessible



format. This can include individuals who are deaf or hard of hearing, individuals who speak American Sign Language, individuals who have limited or no English proficiency, individuals who are blind or have low vision, and individuals who have cognitive or physiological limitations.

- **Maintaining Health** – Individuals who may require Personal Assistance Services (or personal care assistance) in maintaining their activities of daily living such as eating, dressing, grooming, transferring, and toileting.
- **Independence** – Includes individuals who function independently if they have their assistive devices, such as consumable medical supplies (diapers, formula, bandages, ostomy supplies, etc.), durable medical equipment (wheelchairs, walkers, scooters, etc.), and/or service animals.
- **Services and Support** – Includes support for individuals with behavioral health needs, those who have psychiatric conditions (such as dementia, Alzheimer's disease, Schizophrenia, severe mental illness), pregnant women, nursing mothers, infants, and children.
- **Transportation** – Includes individuals with transportation needs because of age, disability, temporary injury, poverty, addiction, legal restriction, or those who do not have access to a vehicle. This requires coordination to ensure access to mass transit and accessible vehicles such as para-transit. (U.S. Department of Health & Human Services, 2016)

While most individuals with access and functional needs do not have acute medical needs requiring the support of trained medical professionals, many will require assistance to maintain health and minimize preventable medical conditions. These individuals may require more time and assistance during an evacuation. It is estimated that at least 9.7% of the population between the ages of 18 and 64 have some form of disability, and about 8.1% of people over age 65 have some form of disability, as shown in Table 4-4. (United States Census Bureau, 2013-2017) There is overlap between some of these population subsets and carless and transit-dependent populations.

Of the County's total number of households, approximately 6.1% are households with no vehicle available. Vulnerable populations without private transit may be at increased risk during emergencies due to lack of rapid access to medical services and or limited ability to rapidly evacuate an at-risk area. These numbers warrant special attention from planners and emergency managers. Additionally, where cell reception services are limited, individuals may need alternate means of transportation to ensure adequate information communication services. Likewise, in addition to preemptively improving cellular service reliability, disseminating maps which indicate the locations of superior cell reception may aid individuals seeking better information communication access in an emergency.



Table 4-4: Disability Status of Non-Institutionalized Population in Mendocino County in 2013-2017

Jurisdiction	Total Population	Persons with a Disability	Persons with a Disability		
			Under 18	18-64	65+
Unincorporated Mendocino County	58,995	11,516 (13.2%)	610 (0.7%)	5,766 (6.6%)	5,141 (5.9%)
City of Fort Bragg	7,269	1,547 (1.8%)	124 (0.1%)	867 (1.0%)	556 (0.6%)
City of Ukiah	15,917	2,249 (2.6%)	208 (0.2%)	1,153 (1.3%)	888 (1.0%)
City of Willits	4,844	1,229 (1.4%)	145 (0.2%)	645 (0.7%)	439 (0.5%)
City of Point Arena	472	58 (0.1%)	6 (0.0%)	24 (0.0%)	28 (0.0%)
Total County Area	87,497	16,599 (19.0%)	1,093 (1.2%)	8,455 (9.7%)	7,052 (8.1%)

Source: 2013-2017 American Community Survey (5 year estimates)
Age ranges are sums of multiple male/female and age range fields

4.3.4 Economy

Timber and agriculture were the mainstays of Mendocino's economy in the 20th century. However, their traditional roles have shifted in notable ways. The region is now known for its beautiful forests and lush vineyards, which attract visitors from around the country and abroad. While timber is still an important part of the economy, tourism and agriculture have become the leading producers. Agriculture has increased as the burgeoning California wine industry has taken off in Mendocino County. Mendocino's agriculture base has changed from historic crops such as pears, apples, prunes, and livestock to the production of premium quality grapes. (Mendocino County MJHMP, 2014)

This shift from the traditional economic base is typified by the growing importance of tourism for the County. The Mendocino County 2018-19 Economic Assessment report records the gross revenue for tourism in the County at \$482 million dollars in 2018. (Mendocino County 2018-2019 Economic Assessment, 2019) This is compared to agricultural production, which was recorded at \$320.8 million in 2018, and timber, which totaled \$132.5 million in the same year. The top leading agricultural commodities now include livestock production (7%), nursery production (1%), vegetable production (1%), field crops (7%), and fruits and nuts (84%). (County of Mendocino Department of Agriculture, 2018)

The labor force in Mendocino County has historically experienced a decrease in size due to a mixture of higher housing costs and an aging population. However, employment has experienced a more recent period of growth. The labor force decreased by 7.5 percent from 2007 to 2016, and employment decreased between 2007 and 2011 before entering a period of slow growth after 2011. There are seasonal changes in employment, with general a trend towards higher employment during the months of June, August, and October. (Mendocino County Economic and Demographic Profile, 2018) Industry employment displays a mixed trend. Mining and logging, manufacturing, and information are all sectors that have experienced a greater than 40% percent decrease in change from 1998-2018. However, education and health services, retail, and leisure and hospitality experienced significant employment growth. (*Id.*)



Mendocino County's economy and workforce are changing. In the past, county residents have counted on seasonal crops, the timber and fishing industries, and tourism for most of their jobs. With the significant decline in natural resource extraction over recent years, the county workforce responded by becoming increasingly more diversified. Large employers are management, business, science, and arts occupations, as well as sales and office occupations. According to the United States Census Bureau, for the 2018 5-year estimates, there were 21,627 jobs in all sectors in Mendocino County. Table 4-5 shows the number of jobs by major sector in the County in 2018.

Table 4-5: Occupation for Full-Time, Year-Round, Civilian-Employed Population 16 Years and Over

Occupation	Total	Percent of total employment (in %)
Full-time, year-round, civilian-employed population 16 years and over	21,627	100
Management, business, science, and arts occupations	7,449	34
Sales and office occupations	4,492	21
Service occupations	3,610	17
Natural resources, construction, and maintenance occupations	3,382	16
Production, transportation, and material moving occupations	2,694	12

Source: United States Census Bureau, American Community Survey, 2018 5-Year Estimates, https://data.census.gov/cedsci/table?q=0500000US06045&tid=ACST5Y2018.S2402&hidePreview=false&vintage=2018&layer=VT_2018_05_00_PY_D1&cid=DP05_0001E.

4.3.5 Past and Future Trends in Development

Early development patterns in Mendocino County were dispersed, reflecting the County's timber and agricultural resources. Communities and economies focused on the timber industry included Willits, Fort Bragg, Mendocino, Covelo, and Philo. Much of the historical timber industry has been in decline since the 1950s. Timber mills have been replaced by increased acreage dedicated to vineyards, a trend which continues today. (Mendocino County General Plan, 2009) During the 1980s and 1990s, a number of major subdivisions were developed in the Ukiah Valley. The net annual average of parcels created between 1981 and 1989 (142) decreased to 70 per year between 1990 and 2001. Data on building permits issued between 1991 and 2001 show that the greatest commercial development in the County occurred in the Fort Bragg and Ukiah Valley areas, followed by the community of Mendocino and in areas along the South Coast. Between 1991 and 2001 the Ukiah Valley exceeded the industrial valuation of all other areas combined. (*Id.*) Past practices relating to timber production may not always have appreciated the secondary effects of this kind of development. Such effects could have exacerbated natural hazards such as flooding or soil instability.

Past development that most increased the risk of hazards in the County happened many decades and even more than a century ago. The County and other participating jurisdictions are well aware of areas of increased hazard risk from older development.



More recently, development in the last few decades has occurred with minimized hazard risk because of the existing overlay of federal, state, and local regulation. First, the County and its municipal planning partners all adopt general plans (GPs) which serve as blueprints for establishing long-range development policies, as directed with California's General Planning Law. A GP provides a basis for private development proposals and public projects to remain consistent with existing city, regional and state policies. The GP is designed to help the County and participating jurisdictions address issues related to land use, circulation (traffic), housing, open space, conservation, noise, and safety. The Land Use portion of the plan helps guide the County and participating jurisdictions in determining the location of future development(s), to include possible future annexations for municipal jurisdictions. The Safety Element of the GP serves to decrease risk of impact from natural hazards through multiple required elements and subsection most importantly through the health and safety as required by the California State Law.

All planning partners reviewed their general plans under the capability assessments undertaken for this hazard mitigation plan. Deficiencies revealed by these reviews are identified as mitigation actions to decrease risks to move beyond past trends.

Moreover, while past development has occurred in hazard areas to some degree, increasing hazard risks, development standards, and performance measures, oftentimes incorporated into specific plans, policy plans, and master plans, are employed to reduce risk. These development standards are continually improving and will continue to strengthen in the future.

General trends in current development and predictions for future development indicate shifts in business size. For instance, between 2007-2017, there was a shift from larger to smaller employers. (Mendocino County 2018-2019 Economic Assessment, 2019) The Mendocino County Tourism Commission 2016-17 Marketing Plan (Marketing Plan) was created by the Commission in order to "establish Mendocino County as a premier destination featuring quaint and charming villages, towering redwood forests and intimate and unique wineries resulting in a high return on investment and increased room nights." The Marketing Plan describes projected economic trends as contingent on low gas prices and surplus consumer funds, which encourage spending on leisure and hospitality. The report includes promising statistics on decreased unemployment rates and increased personal income growth from 2012 through 2017. If this trend continues, it is predicted that tourism will continue to increase and stimulate the economy. This trend is exemplified by an increase of \$71 million dollars in visitor spending from 2000 to 2015. (Mendocino County Tourism Commission 2016-2017 Marketing Plan, 2017)

Participating jurisdictions have gone to great lengths to ensure future development within hazard areas is minimized and mitigated to the greatest extent possible. The County's Capabilities Assessment, Section 5.3, and each jurisdiction's capabilities assessment in Volume 2 of this MJHMP explain those proactive steps in greater detail. Buildings are increasingly more resilient to hazards through California's building codes, some of the strongest in the country. Nationally, building codes have continually improved disaster resilience, and since 1990 those great improvements have added approximately 1% to construction costs. (National Institute of Building Sciences, 2019)



4.4 Vulnerability Assessment Methods

This section provides an overview of the methods used in the vulnerability assessments in Section 4.5. Vulnerabilities to each hazard are assessed in a two-step process, as outlined in this section. First, population, critical facilities, and county parcels are inventoried to develop a “lay of the land.” Second, the inventories are used to calculate estimated exposure and damage from hazards at various levels of severity. A more detailed explanation of the methodology is included in Appendix A.

The vulnerability assessment utilizes geospatial data along with local knowledge of past events. Geospatial data is essential in determining population and assets exposed to hazards identified in this plan. Geospatial analysis can be conducted if a natural hazard has a spatial footprint that can be analyzed against the locations of people and assets. In Mendocino County, dam failure, flooding, sea-level rise, landslide, soil hazards, earthquake, naturally occurring asbestos, and wildfire have identifiable geographic extents and corresponding spatial information about each hazard.

Figure 4-8 illustrates the data inputs and outputs used to create the vulnerability analyses for each hazard in Section 4.5.

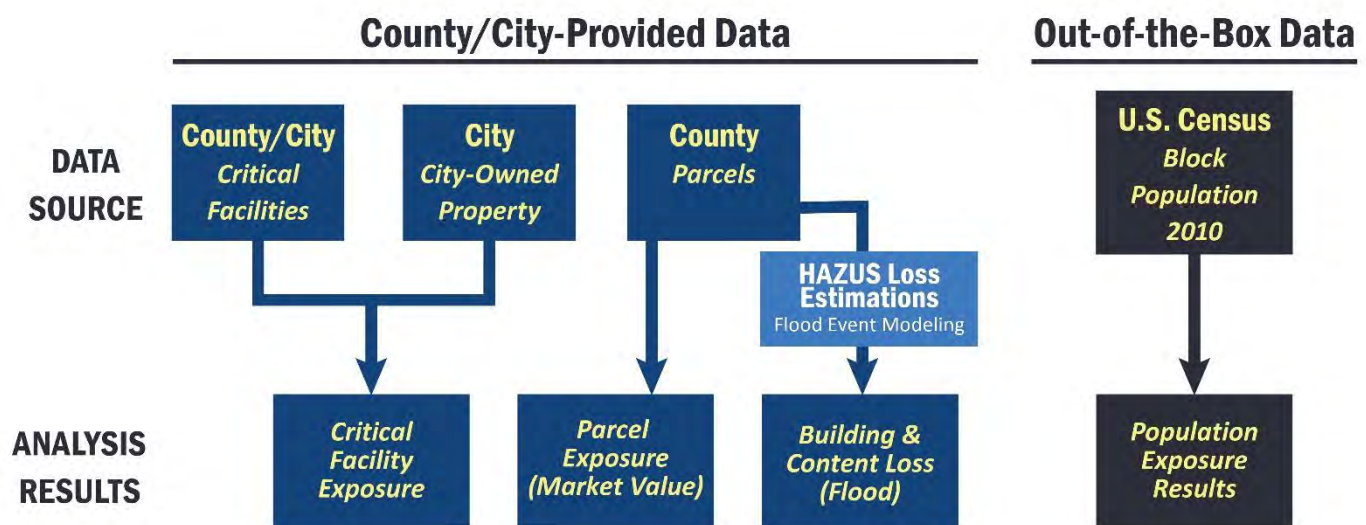


Figure 4-8: Data Source and Method

4.4.1 Population and Asset Inventory

To describe vulnerability for each hazard, it is important to first understand the total population and total assets at risk. Population and asset inventories provide a baseline to measure the vulnerability to people and assets for natural hazard events. Asset inventories can also be used to estimate damages and losses expected during a “worst-case scenario” event for each hazard. The following describes the total population, critical facilities, and parcel inventory inputs.



4.4.1.1 Population

An initial step in producing the hazard-specific vulnerability assessments is to determine the population near each natural hazard. Each natural hazard scenario affects the County residents differently depending on the location of the hazard and the population density of where the hazard event could occur. For hazards that potentially affect the whole county such as earthquake or drought, the vulnerability assessment assumes 87,732 persons or 100% of the County's population is exposed.² Vulnerability assessments presented in Section 4.5 summarize the population exposure for each natural hazard if available.

4.4.1.2 Critical Facilities Inventory

Critical facilities are of particular concern when planning to mitigate hazards. A critical facility is a structure or other improvement that, because of its function, size, service area, or uniqueness, has the potential to cause disruption of vital socioeconomic activities if it is destroyed, damaged, or functionally impaired.

Critical facilities inventory data was developed from a combination of datasets, including from county, city, special purpose district, state, federal, and private industry. A critical infrastructure spatial database was developed to translate critical facilities information into georeferenced³ points and lifelines.

Critical facility points include facilities such as police stations, fire stations, hospitals, elder care facilities, daycare facilities, schools, transportation infrastructure, utilities, and government buildings. **Lifelines** include facilities related to communication, electric power, liquid fuel, natural gas, and transportation routes. A current representation of the critical facility points and lifelines are provided in Figure 4-9. Some critical facility information may have been omitted from this document due to national security purposes. For additional information on included critical facilities, see Appendix A.

Critical facilities and transportation and lifeline data came from a collection of sources, including but not limited to Mendocino County, California Department of Social Services (CDSS), California Energy Commission (CEC), Federal Communications Commission (FCC), Hazus, U.S. Army Corps of Engineers (USACE), FEMA, and National Park Service (NPS). All data sources have a level of accuracy acceptable for planning purposes. Due to the sensitivity of this information, a detailed list of facilities is not provided. The list is on file with each planning partner. The risk assessment for each hazard qualitatively discusses critical facilities with regard to that hazard.

² Population estimates were derived from 2013-2017 Census American Community Survey 5-Year (ACS) information.

³ To georeference something means to define its existence in physical space. That is, establishing its location in terms of map projections or coordinate systems. The term is used both when establishing the relation between raster or vector images and coordinates, and when determining the spatial location of other geographical features.



4.4.1.3 Parcel Value Inventory

The Mendocino County Assessor's data is essential to developing parcel values exposed to each hazard and includes the current fair market value of at-risk assets. Mendocino County Parcel Value Inventory is summarized in Table 4-6. This table only includes parcels that are located in unincorporated Mendocino County. The Parcel Value Inventory includes the market value,⁴ content replacement value, and total assessed value ("total value"), and each hazard profile outlines predicted impacts to this inventory for each hazard's geographic extent. These elements are called out in the table because, in the event of a disaster, the value of the infrastructure or improvements to the land is usually the focus of concern. Generally, the land is not a total loss, and structures can be rebuilt or contents replaced.

"Total market value" as presented in this plan reflect Mendocino County Assessor data including fair market value where available. If no fair market value was available for a given property, the value reflects the assessed improvement value.

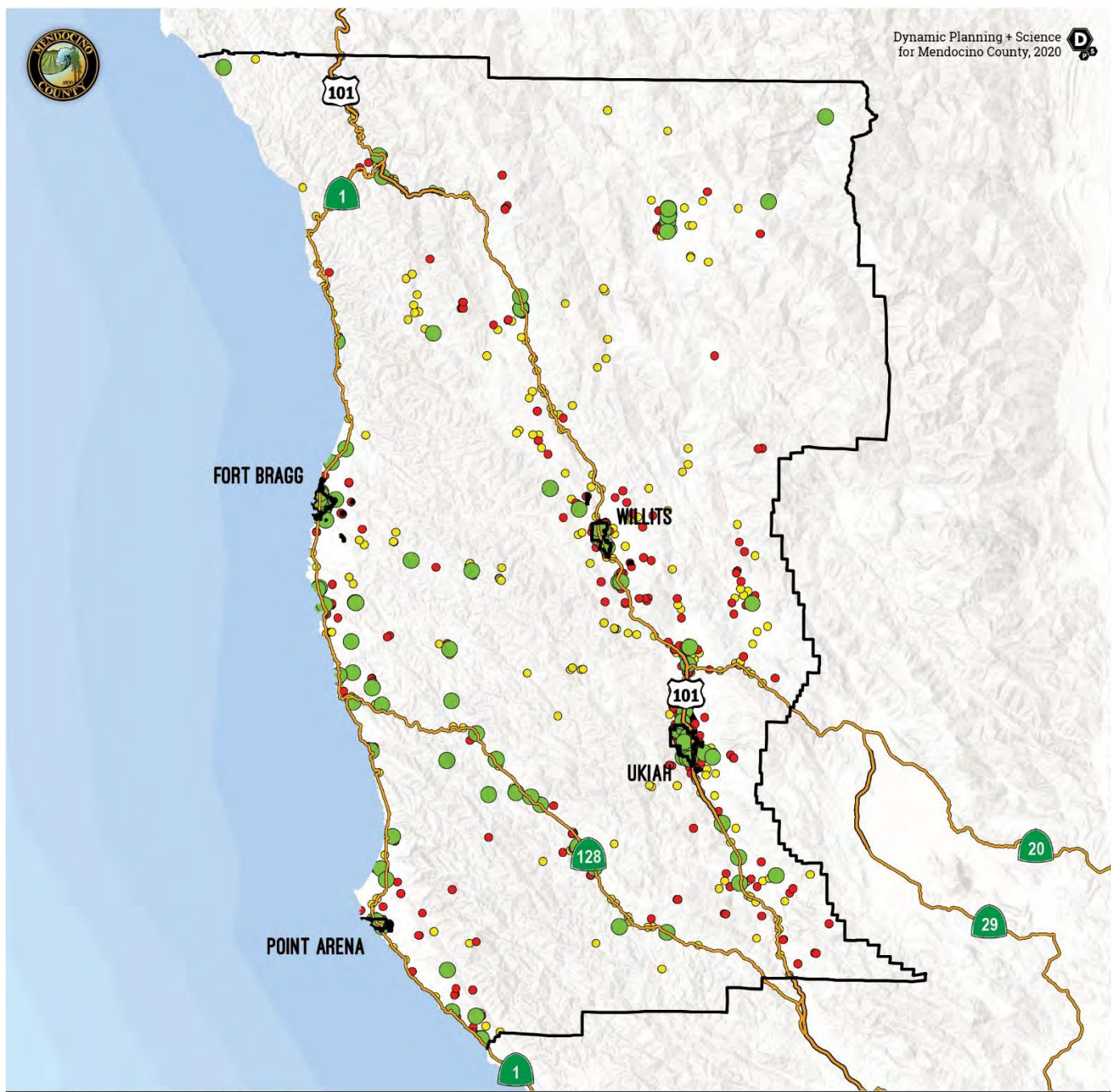
"Total content value" was calculated based on the assessor's use codes, translated to occupancy-based multipliers. Each occupancy class prescribes a specific content cost multiplier used to calculate the content cost values shown in the summary and in the hazard profiles in Section 4.5. Occupancy-based content cost multipliers used in this plan reflect those found in the FEMA Hazus-MH 4.2 technical manuals.

Table 4-6: Unincorporated Mendocino County Parcel Counts and Value

	Total Parcels	Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)
Unincorporated County	24,371	\$ 4,544,212,021	\$ 2,693,943,855	\$ 7,238,155,876

Total market value as provided by County Assessor's Office. Content value calculated using content multipliers per Hazus occupancy classes per county land use designation. Total value is the sum of total market value and total content value. Improved Parcels Only.

⁴ Market Value includes a long-term asset which indicates the cost of the constructed improvements to land, such as buildings, driveways, walkways, lighting, and parking lots.



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for Mendocino County, 2020



CRITICAL FACILITIES MENDOCINO COUNTY

*Data sources: CDSS, USACE, OSM, NBI, FCC, FEMA, CEC, HAZUS, NPS,
CDE Mendocino County..

MAP LEGEND



ESSENTIAL FACILITIES

TRANSPORTATION AND LIFELINE



HIGH POTENTIAL LOSS

Figure 4-9: Critical Facilities



4.4.2 Hazard Exposure and Damage Estimation

The population and inventory information are used to generate specific exposure and damage estimations based on the severity of specific hazard events. The hazards in Mendocino County which have known geographic extents and corresponding spatial information, and thus have exposure and damage estimations, are:

- earthquake,
- flooding,
- sea-level rise,
- slope failure,
- soil hazards,
- tsunami run-up,
- dam failure, and
- wildfire.

Population and Asset Exposure

“Exposure” of assets and population refers to the total counts of parcels, people, facilities, and assets within the planning area in which a hazard event may occur. A natural hazards overlay was developed to reflect the combination of many known natural hazard spatial footprints. The spatial overlay method enables summarization of building values, parcel counts, population exposure, and critical facility exposure within a hazard’s geographic extents. Figure 4-10 illustrates hypothetical flooding exposure. Exposure numbers were generated using Mendocino County Assessor data, address point, and parcel data for replacement and content cost estimates.



Figure 4-10: Hazard Exposure Explanation Graphic



Damage Estimation

For flood and earthquake, detailed damage estimations were conducted through FEMA's Hazus software. Hazus is a nationally applicable, standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. Hazus uses Geographic Information Systems (GIS) technology to estimate the physical, economic, and social impacts of disasters. . The estimated damage and losses provided by the Hazus Software is based upon chosen severity of events and provides the ability to understand possible widescale damage to buildings and facilities.

In the hypothetical geography shown in Figure 4-11, even though both structures are exposed to flooding, it is expected that the structure with a first-floor height below the depth of flooding will receive significantly more damage than the structure with a first-floor height above the expected water depth. For a more detailed explanation of risk assessment methods, see Appendix A.

At-risk populations, critical infrastructure, improved parcels, and loss results for each hazard category are provided in bar chart summary tables in Section 4.5 to evaluate the percentage of assets exposed to different types of hazards. The side-by-side comparison allows planning partners to evaluate the impacts of potential hazards to prioritize hazard mitigation energy and resources.

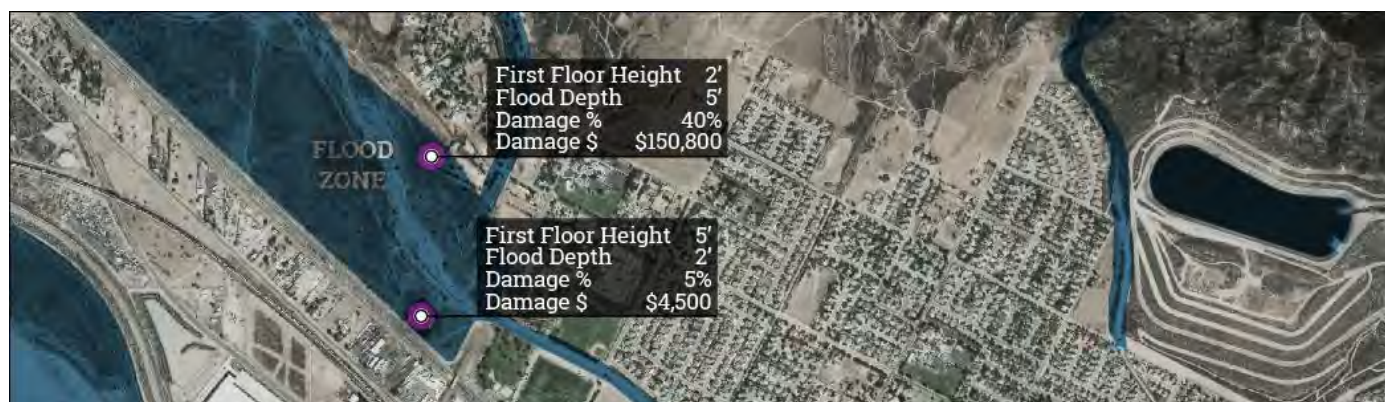


Figure 4-11: Hazus Damage Estimation Example



4.5 Vulnerability to Specific Hazards

This section introduces prevalent hazards within the unincorporated portions of Mendocino County and analyzes how each may affect populations, property, and critical facilities within the County's jurisdiction. Importantly, the hazard mitigation strategy presented in Section 5 is informed by, and responds to, the particular vulnerabilities outlined in this section. The mitigation strategy provides prescriptions or actions to achieve the greatest reduction of vulnerability based on this section, which results in saved lives, reduced injuries, reduced property damage, and protection for the environment in the event of a natural hazard. Methods for calculating exposure and loss estimates are described in Section 4.4 and Appendix A.

This section provides quantifiable exposures to people and property and damage and loss estimates for the unincorporated portions of the County for the below-prioritized hazards. Participating Jurisdiction Annexes in Volume 2 of this Plan contain jurisdiction-specific vulnerabilities to hazards.

Dam Failure
SECTION 4.5.1



Pandemic
SECTION 4.5.5



Slope Failure
SECTION 4.5.8



Drought
SECTION 4.5.2



Flood
SECTION 4.5.6



Soil Hazards
SECTION 4.5.9



Climate Change
SECTION 4.5.3



Severe Weather
SECTION 4.5.7



Wildfire
SECTION 4.5.10



Earthquake
SECTION 4.5.4





4.5.1 Dam Failure Hazard Profile

Dam failures in the United States typically occur in one of four ways:

- Overtopping of the primary dam structure, which accounts for 34 percent of all dam failures, can occur due to inadequate spillway design, settlement of the dam crest, blockage of spillways, and other factors.
- Foundation defects due to differential settlement, slides, slope instability, uplift pressures, and foundation seepage can also cause dam failure. These account for 30 percent of all dam failures.
- Failure due to piping and seepage accounts for 20 percent of all failures. These are caused by internal erosion due to piping and seepage, erosion along hydraulic structures such as spillways, erosion due to animal burrows, and cracks in the dam structure.
- Failure due to problems with conduits and valves, typically caused by the piping of embankment material into conduits through joints or cracks, constitutes 10 percent of all failures. (Federal Emergency Management Agency, 2019)



Many dam failures in the United States have been secondary results of other disasters, such as earthquakes, landslides, extreme storms, massive snowmelt, equipment malfunction, structural damage, foundation failures, and sabotage. Poor construction, lack of maintenance and repair, and deficient operational procedures are preventable or correctable by a program of regular inspections. Terrorism and vandalism are serious concerns that all operators of public facilities must plan for; these threats are under continuous review by public safety agencies. (*Id.*)

Lake Mendocino

Lake Mendocino covers 1,922 square acres is a reservoir created by the construction of Coyote Dam, which was built by the U.S. Army Corps of Engineers on the East Fork of the Russian River in 1958. Lake Mendocino water is a combination of imported Eel River water and East Fork Russian River water, and it has a maximum storage capacity of 122,400 acre-feet, with 70,000 acre-feet allocated to water supply. It is located approximately 3 miles northeast of Ukiah in the Coast Range near the headwaters of the Russian River. The dam is 160 feet high and spans a range of 3,500 feet. It provides flood damage reduction, water conservation, and recreation opportunities like hiking, water skiing, and boating, and it is capable of producing up to 3 MW of electricity. (Mendocino County General Plan, 2009)

4.5.1.1 Plans, Policies, and Regulatory Environment

1972 National Dam Safety Act

The potential for catastrophic flooding due to dam failures led to the passage of the 1972 National Dam Safety Act, Pub. Law No. 92-367. The National Dam Safety Program requires a periodic engineering analysis of every major dam in the country. The goal of this FEMA-monitored effort is to identify and mitigate the risk of dam failure so as to protect the public lives and property.



FERC Dam Safety Program

The Federal Energy Regulatory Commission (FERC) has the largest dam safety program in the United States. FERC cooperates with a large number of federal and state agencies to ensure and promote dam safety and, more recently, homeland security. There are 3,036 dams that are part of regulated hydroelectric projects in the FERC program. Two-thirds of these are more than 50 years old. (Federal Energy Regulatory Commission, 2011) As dams age, concern about their safety and integrity grows, so oversight and regular inspection are important. FERC staff inspects hydroelectric projects on an unscheduled basis to investigate the following:

- Potential dam safety problems
- Complaints about constructing and operating a project
- Safety concerns related to natural disasters
- Issues concerning compliance with the terms and conditions of a license.

Every five years, an independent consulting engineer, approved by the FERC, must inspect and evaluate projects with dams higher than 10 meters (32.8 feet), or with a total storage capacity of more than 2,000 acre-feet. (*Id.*)

FERC staff monitors and evaluates seismic research in geographic areas where there are concerns about seismic activity. This information is applied in investigating and performing structural analyses of hydroelectric projects in these areas. FERC staff also evaluates the effects of potential and actual large floods on the safety of dams. During and following floods, FERC staff visits dams and licensed projects, determines the extent of damage, if any, and directs any necessary studies or remedial measures the licensee must undertake. The FERC publication *Engineering Guidelines for the Evaluation of Hydropower Projects* guides the FERC engineering staff and licensees in evaluating dam safety. The publication is frequently revised to reflect current information and methodologies.

The FERC requires licensees to prepare emergency action plans and conducts training sessions on how to develop and test these plans. The plans outline an early warning system if there is an actual or potential sudden release of water from a dam due to failure. The plans include operational procedures that may be used, such as reducing reservoir levels and reducing downstream flows, as well as procedures for notifying affected residents and agencies responsible for emergency management. These plans are frequently updated and tested to ensure that everyone knows what to do in emergency situations. (*Id.*)

U.S. Army Corps of Engineers Dam Safety Program

The U.S. Army Corps of Engineers ("Corps") is responsible for safety inspections of some federal and non-federal dams in the United States that meet the size and storage limitations specified in the National Dam Safety Act. The Corps has inventoried such dams and surveyed each state and federal agency's capabilities, practices, and regulations regarding design, construction, operation, and maintenance of the dams. The Corps develops guidelines for inspection and evaluation of dam safety. (United States Army Corps of Engineers, n.d.)



California Division of Safety of Dams

California's Division of Safety of Dams, a division of the Department of Water Resources, monitors the dam safety program at the state level. When a new dam is proposed, Division staff inspects the site. The Division reviews dam applications and building plans to ensure that the dam is designed to meet minimum requirements and that the design is appropriate for known geologic conditions. It also inspects construction to ensure that the work is done in accordance with the approved plans. The Division inspects constructed dams on an annual basis to ensure that it is performing as intended and is not developing problems. Roughly a third of these inspections include in-depth instrumentation reviews. The Division periodically reviews the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California. (Cal. Dep't of Water Resources, 2019)

Senate Bill 92: Dam Safety

Senate Bill 92 (2017) provides new requirements focused on dam safety. Specifically, it requires dam owners to submit inundation maps to the Department of Water Resources. After they have been approved, the dam owner must then submit an **Emergency Action Plan (EAP)** to Cal OES. These need to be approved by Cal OES and resubmitted every 10 years. (California Office of Emergency Services, 2020)

Mendocino County General Plan

The Mendocino County 2009 General Plan includes the following policies the Development Element to mitigate the effects of dam failure:

Development Element

Policy DE-194: To the maximum extent practical, avoid constructing critical facilities within the designated 100-year flood plain areas or areas potentially subject to inundation by dam failures (or other water impoundment facilities) or seiches.

Permit Requirements for Grading in Mendocino County Code, § 18.70

The Mendocino County Code contains specifications for how construction and material requirements for grading planning purposes are to be designed, as well as what they should include. The plans are required to provide, in part, detailed explanations of all surface and subsurface drainage devices, cribbing, walls, dams, and other protective devices which are to be constructed in tandem to, or as part of, the proposed work in combination with a map depicting the drainage area and the estimated runoff of the area served by any drains.



4.5.1.2 Past Events

There have been several recent occurrences of near dam failure in Mendocino. As the risk assessment for Mendocino County illustrates, the chances of a dam failure are low, but the consequences of such are quite severe.

During a significant winter storm on New Year's Eve 2005-2006, storm runoff was so high that it spilled over the entire crest of the Mendocino 3 Upper Dam, even while the standpipe and filter valves were open.



Figure 4-12: Pudding Creek Dam Overflow

Source: Fort Bragg Advocate News <https://www.advocate-news.com/2016/12/21/storm-flow-erodes-pudding-creek-dam/>

In December of 2016, an atmospheric river brought widespread rainfall to the Northern Coast of California. The Pudding Creek Dam overtopped resulting in damage to the dam and a primary water main for the city of Fort Bragg.

The most memorable recent event concerning dam failure in California was the 2017 collapse of a spillway on the Oroville Dam in Butte County, California. Oroville Dam is the largest facility within the State Water Project in California; the dam stores 3.5 million acre-feet of water, and serves as important flood control for the Feather River. In 2017, after substantial runoff from the Sierra Nevadas, Lake Oroville was full, and the spillway was opened to release extra water downstream.

"Spillways" are dam safety features that allow water to overtop the dam if the reservoir fills too quickly. Spillway overflow events, often referred to as "design failures," result in increased discharges downstream and increased flooding potential.

The force of the release gouged a large crater in the concrete spillway and required the California Department of Water Resources (DWR) to halt water releases via that conduit. The high lake level then created fear that erosion would compromise the integrity of the auxiliary spillway and flood the city of Oroville and surrounding communities. Thousands were evacuated, and eventually, runoff receded without further issue. Ultimately, an independent analysis concluded that poor design and construction and inadequate state oversight contributed to the collapse of the concrete spillway. (Water Education Foundation, 2020)

The Oroville Dam spillway failure triggered an inspection of 93 dam spillways across California through the new Spillway Re-evaluation Program. (Cal. Dep't of Water Resources, 2019)



4.5.1.3 Location

According to California Department of Water Resources (DWR) Division of Safety of Dams (DSOD) and USACE National Inventory of Dams (NID), there are 30 dams in Mendocino County, shown in Table 4-8. Figure 4-13 shows Cal OES and DSOD inundation zones for the dams in Mendocino County. Areas of the County most threatened by dam inundation are those inland areas within the Ukiah Valley.

Dams listed below are classified by FEMA according to their hazard potential. Table 4-7 explains the classifications of low, significant, and high. California DWR Division of Safety of Dams (DSOD) includes a fourth category "Extremely High." Table 4-8 then lists all dams in Mendocino County, including their hazard classification that corresponds with Table 4-7.

Table 4-7: FEMA Hazard Potential Classification

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
Low	None expected	Low and generally limited to owner
Significant	None expected	Yes
High	Probable. One or more expected	Yes (but not necessary for this classification)
Extremely High	One or more and inundating an area of 1,000+ population	Inundation of facilities/infrastructure, posing significant threat to public safety determined case-by-case by DSOD

Source: Federal Guidelines for Dam Safety- Hazard Potential Classification Systems for Dams, April 2004, DSOD Jurisdictional Dams

Table 4-8: Dams in Mendocino County

DWR ID	NID ID	Dam Name	Owner	Year Built	Hazard Class
No. 1089-0	CA00001	Mendocino Middle	County of Mendocino	1907	S
No. 1089-2	CA00002	Mendocino 3 Upper	County of Mendocino	1929	L
No. 97-102	CA00399	Van Arsdale	Pacific Gas and Electric Company	1955	H
No. 2036-0	CA00406	Morris	City of Willits	1964	H
No. 382-0	CA00560	Ridgewood	Walker Lake Association	1908	H
No. 384-0	CA00561	Mcnab	Fetzer Vineyards	1971	S
No. 387-0	CA00562	Bevans Creek	Private Entity	1965	L
No. 389-0	CA00563	Lake Winawa	Boy Scouts of America San Francisco Bay Area Council	1974	S
No. 1038-0	CA00871	Lake Ada Rose	Brooktrails Township Community Services District	1927	H
No. 1038-3	CA00872	Brooktrails 3 North	Brooktrails Township Community Services District	1999	H



DWR ID	NID ID	Dam Name	Owner	Year Built	Hazard Class
No. 1380-0	CA00972	Mast	Private Entity	1980	L
No. 1381-0	CA00973	Williams Valley	Private Entity	1985	L
No. 1382-0	CA00974	Round Mountain	Round Mountain Cooperative Community, Inc.	Unknown	S
No. 1089-3	CA00975	Chinquapin	County of Mendocino	Unknown	S
No. 274-3	CA00976	Mcguire	Soper-Wheeler Compant	Unknown	L
No. 1387-0	CA00977	Crawford Ranch	McDowell Valley Farming Company, LLC	1915	H
No. 1385-0	CA01118	Cornett	Locavore, LLC	1927	H
No. 2381-0	CA01139	Mill Pond	Georgia-Pacific Corporation	1947	S
No. 2036-2	CA01246	Centennial	City of Willits	1964	H
No. 2382-0	CA01261	Perry Gulch	Perry Gulch Ranch	1970	H
No. 2385-0	CA01262	Jayne'S Lake	Eden Valley Ranch, LLC	1965	L
No. 2388-0	CA01263	Bradford	Fountain Ranch, LLC	1971	S
No. 2383-0	CA01323	Schwindt	Private Entity	1972	H
No. 2380-0	CA01423	Lolonis Vineyards	Lolonis Family Vineyards and Winery, Inc.	1885	L
No. 1306-0	CA01438	Hooper No. 1	Private Entity	1980	L
No. 1307-0	CA01439	Hooper No. 2	Private Entity	1985	H
No. 7000-104	CA01479	Johnson Ranch	Beckstoffer Vineyards	1999	H
No. 7000-132	CA01610	Feliz North Lake	Brutocao Vineyards	Unknown	S
	CA10201	Coyote Valley Dam	CESPN	Unknown	S
No. 3383-0	CA10385	Codding Reservoir	Private Entity	1959	H

Note: Hazard Definitions: L – Low; S – Significant; H – High; H+ – Extremely High

Source: *DWR Jurisdictional Dams & USACE National Inventory of Dams*

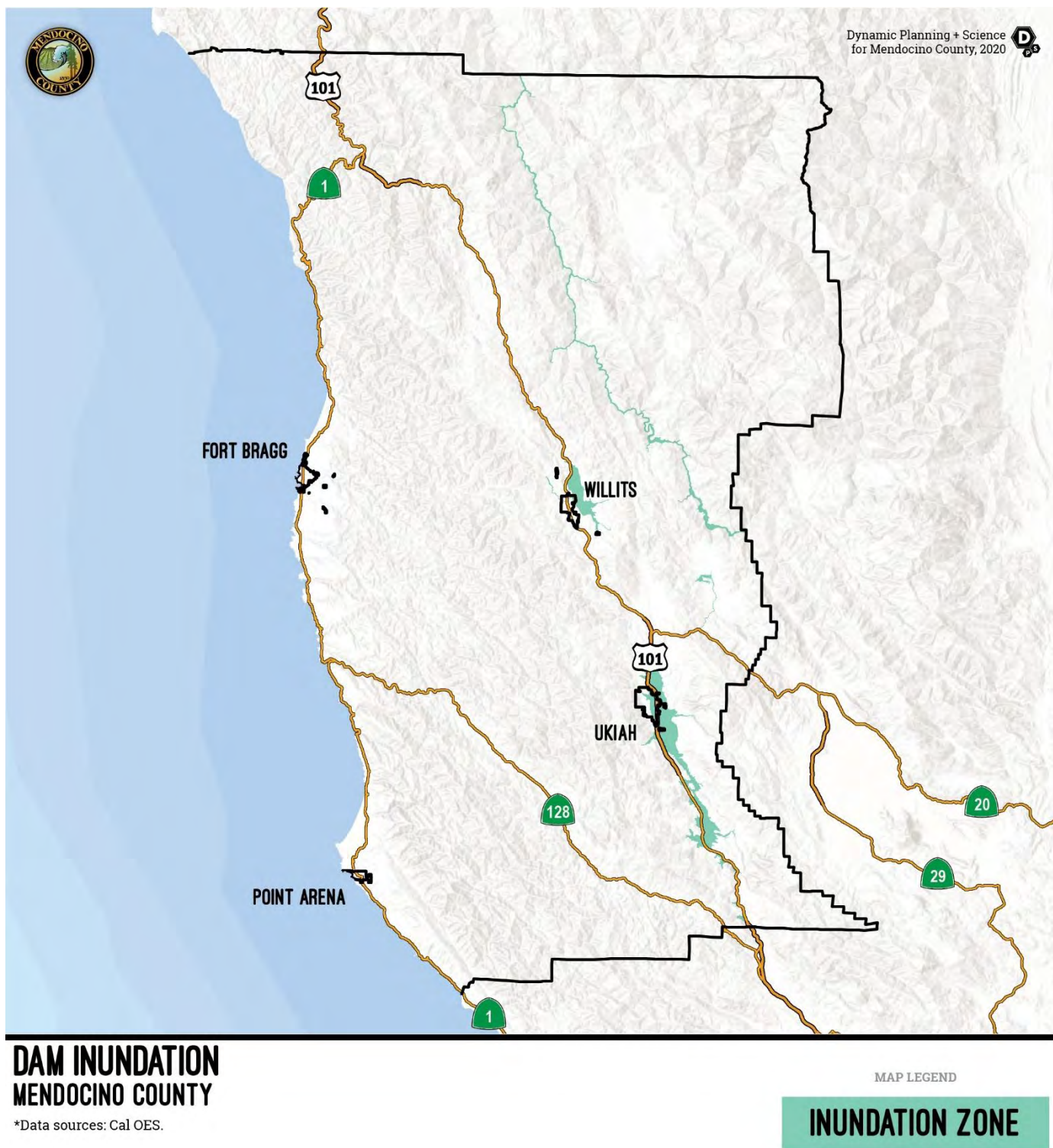


Figure 4-13: Dam Inundation Exposure



4.5.1.4 Severity and Extent

Dam failure can be catastrophic to all life and property downstream. Table 4-8 lists dams in Mendocino County and shows their hazard classification as designated by FEMA and DSOD.

This hazard potential classification system categorizes dams based on the probable loss of human life and the impacts on economic, environmental, and lifeline interests. Improbable loss of life exists where persons are only temporarily in the potential inundation area. For instance, this hazard potential classification system does not contemplate the improbable loss of life of the occasional recreational user of the river and downstream lands, passer-by, or non-overnight outdoor user of downstream lands. In any classification system, all possibilities cannot be defined. High usage areas of any type should be considered appropriately. Judgment and common sense must ultimately be a part of any decision on classification. Further, no allowances for evacuation or other emergency actions by the population should be considered because emergency procedures should not be a substitute for appropriate design, construction, and maintenance of dam structures.

While there are no extremely high hazard dams listed in the County, there are 13 high hazard dams in the County. See Table 4-7 for explanation of these categories.

4.5.1.5 Frequency/ Probability of Future Occurrences

The probability of any type of dam failure is low in today's regulatory and dam safety oversight environment. Dam failure events usually coincide with events such as earthquakes, landslides, and excessive rainfall and snowmelt.

4.5.1.6 Warning Time

Warning time for dam failure depends on the cause of failure. In the event of extreme precipitation or massive snowmelt, evacuations can be planned with sufficient time. In the event of a structural failure due to earthquake, there may be no warning time. A dam's structural type also affects warning time. Earthen dams do not tend to fail instantaneously. Once a breach is initiated, discharging water erodes the breach until the reservoir water is depleted, or the breach resists further erosion. Concrete gravity dams also tend to have an initial partial breach. The time of breach formation ranges from a few minutes to a few hours. Several planning partners have established protocols in their emergency operations plans for warning and response to imminent dam failure within the flood warning. These protocols are tied to emergency action plans created by the dam owner.

Starting in 2017, California now requires the development of Emergency Action Plans (EAPs) for high and significant hazard dams. Dams have EAPs in various states of completion as of 2020.

Developing EAPs for all high and significant hazard potential dams for Mendocino County is critical to reducing the risks of loss of life and property damage from dam failures. The EAP contains procedures and information to assist the dam owner in issuing early warning and notification messages to emergency



management authorities. The EAP also contains inundation maps to identify the areas subject to flooding in the unlikely event of dam failure.

EAPs are critical in identifying areas downstream from dams requiring warning and evacuation in the event of dam failure. Documented cases have demonstrated that warning and evacuation time for EAPs can dramatically influence the loss of life. Loss of life can vary from 0.02 percent of the persons-at-risk when the warning time is 90 minutes to 50 percent when less than 15 minutes, (Graham, 1988) One USGS report states that the average number of fatalities per dam failure is 19 times greater when there is little to no warning. (U.S. Geological Survey, 1985) Dam breach inundation studies usually assume one of two failure scenarios:

- Flows from a dam failure during “fair weather” or “sunny day” conditions with the reservoir at the normal pool level and receiving normal inflow (usually insignificant). A fair weather failure is generally considered to have the most potential for loss of human life, primarily due to the element of surprise.
- Flows from a dam failure during flood conditions or the inflow design flood. Failure during flood conditions is considered to show the upper limit of inundation and to have less potential for loss of human life because the downstream population is “on alert.” The flood conditions scenario is more expensive to analyze due to the additional cost for the necessary watershed and spillway studies.

Inundation mapping shows a continuous “line of inundation” identifying the area potentially at risk in the event of dam failure. It starts at the dam and continues downstream to a point where the breach flood no longer poses a risk to life and property damage, such as a large river or reservoir with the capacity of storing the floodwaters. The need to consider the “domino effect” should be made on a case-by-case basis if the assumed failure of a dam would cause the failure of any downstream dams.

4.5.1.7 Secondary Hazards

Dam failure can cause severe downstream flooding, depending on the magnitude of the failure. Other potential secondary hazards of dam failure are landslides around the reservoir perimeter, bank erosion on the rivers, and destruction of downstream habitat.



4.5.1.8 Dam Failure Vulnerability Assessment

The primary danger associated with dam failure is high-velocity flooding downstream of the dam and limited warning times for evacuation. Vulnerability varies by community and depends on the particular dam profile and the nature and extent of the failure. Vulnerable populations are present directly below the dam and may include those incapable of escaping the area within the allowable time frame. This population includes the elderly and young, who may be unable to self-evacuate from the inundation area. Vulnerable populations also include those who would not have adequate warning from a television or radio emergency warning system. Dam inundation zones as provided by the Cal. Division of Water Resources were used in conjunction with the inventory listed in Table 4-8 to identify at-risk populations and loss estimations for dam failure.

Note that DWR dam inundation data is used for the damage estimation, while Cal OES data is used for the exposure analysis and to map the dam inundation zones in Figure 4-13 and Figure 4-15. The DWR inundation data is more recently developed and more detailed than Cal OES inundation zones, which are being updated since SB 92 passed in 2017. The DWR data also includes only those dams rated extremely high, high, or significant risk. DWR data is also the only generally-available data set with a depth grid, as defined by emergency action plan (EAP) submittals from dam owners, as required for Hazus. Therefore, while the population exposure utilizes the Cal OES data set, the damage estimation through Hazus utilizes the narrower DWR data set. Figure 4-14 illustrates a sample difference between inundation areas used in the exposure analysis and the inundation depths used in the damage assessment.

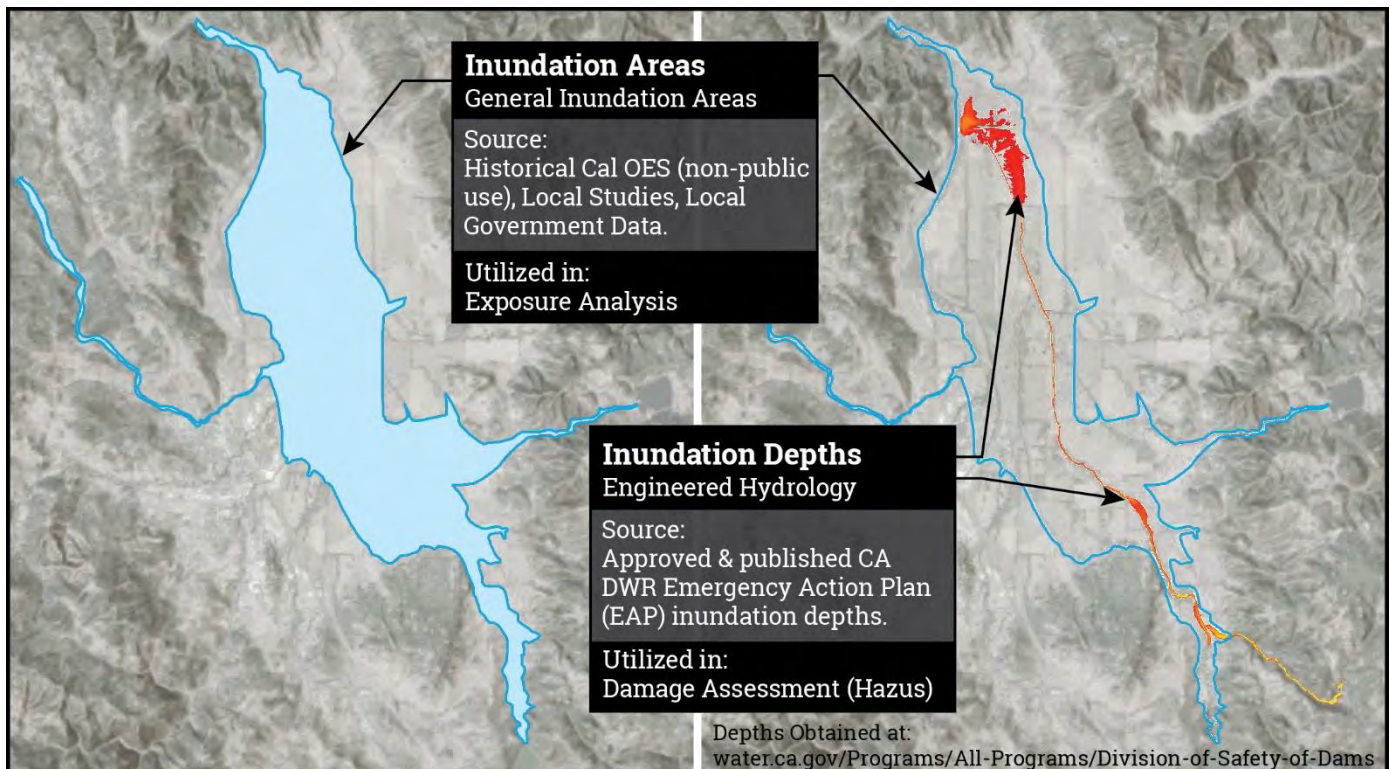


Figure 4-14: Dam Inundation Sample Area Compared to Hazus Depths



4.5.1.8.1 Dam Failure Exposure

Population

Vulnerable populations are all populations downstream from dam failures that are incapable of escaping the area within the allowable time frame. This population includes the elderly and young who may be unable to get themselves out of the inundation area. The vulnerable population also includes those who would not have adequate warning from a television, radio emergency warning system, have not registered with reverse 911, or do not have cell phones that can receive amber alerts. The potential for loss of life is affected by the capacity and number of evacuation routes available to populations living in areas of potential inundation. The entire population in a dam failure inundation zone is exposed to the risk of a dam failure. The estimated population exposed to dam inundation is summarized in Figure 4-15 and Table 4-9.

Property

Vulnerable properties are those closest to the dam inundation area. These properties would experience the largest, most destructive surge of water. Low-lying areas where water would collect are also vulnerable. Transportation routes, discussed below, are also vulnerable to dam inundation and have the potential to be eliminated or compromised, creating isolation issues. Vulnerable populations may not be able to withstand a large water surge. Utilities such as overhead power, cable, and phone lines could also be vulnerable. Loss of these utilities could create additional isolation issues for the inundation areas. Table 4-10 displays parcel values exposed to dam inundation. Figure 4-15 illustrates the amount of population living in a dam inundation zone according to zone.



DAM INUNDATION EXPOSURE SNAPSHOT

MENDOCINO COUNTY

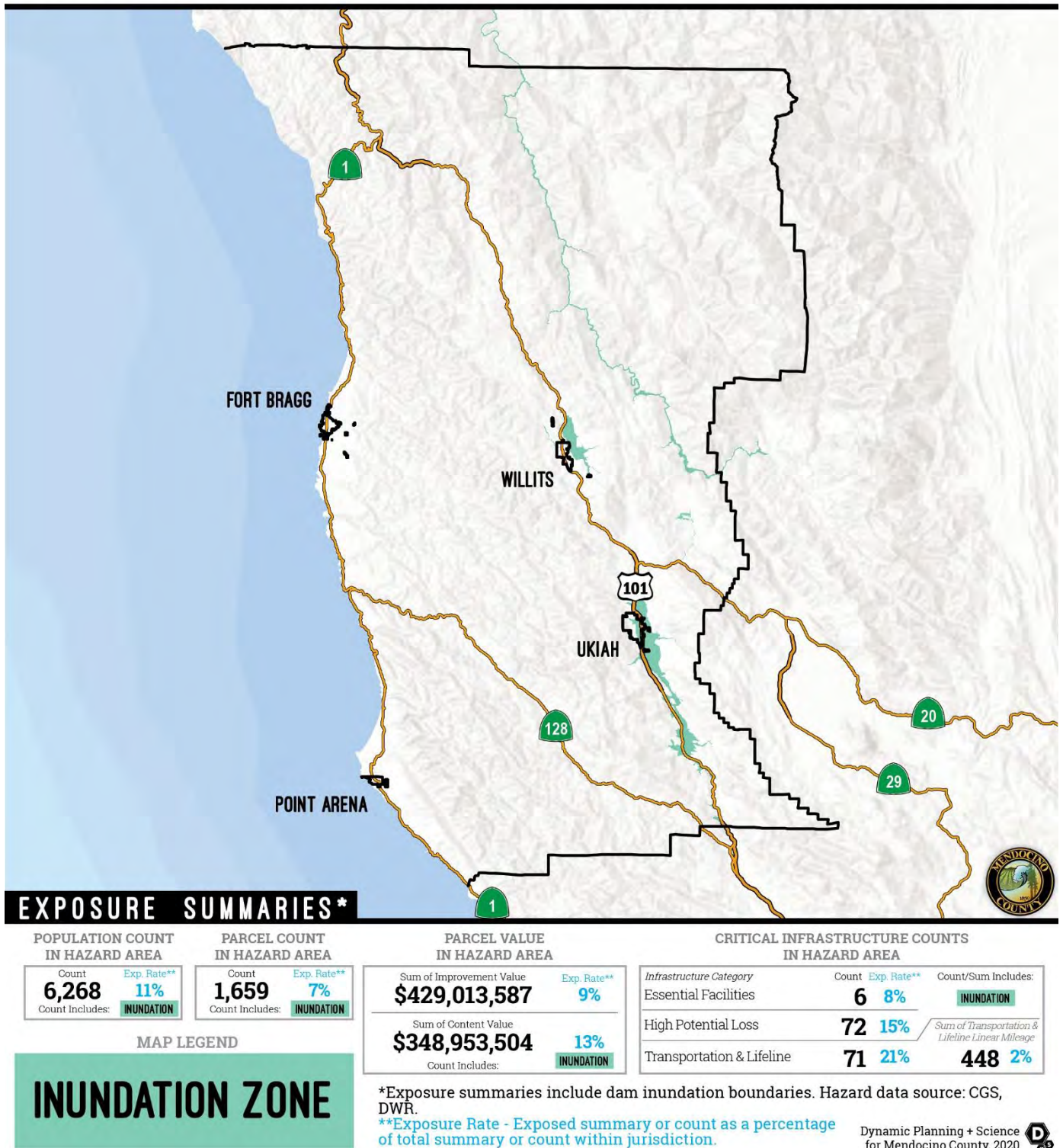


Figure 4-15: Dam Failure Vulnerability Snapshot Map



Table 4-9: Population Exposure to Dam Failure (Unincorporated County)

	Total Population
Unincorporated County	58,995

Dam Inundation Zone	Population Count	% of Total
Bevans Creek (DWR)	35	0.06%
Bradford (DWR)	2	0.00%
Brooktrails	36	0.06%
Chinquapin (DWR)	4	0.01%
Crawford Ranch (DWR)	40	0.07%
Feliz North Lake (DWR)	13	0.02%
Lake Mendocino	5,750	9.75%
Mendocino 3 Upper (DWR)	121	0.21%
Mendocino Middle (DWR)	27	0.05%
Morris/Centennial	322	0.55%
Round Mountain	5	0.01%
Scott	27	0.05%
Scott (DWR)	24	0.04%
Scott 2 (DWR)	24	0.04%
Scott Spillway (DWR)	16	0.03%
Scout Lake	76	0.13%
Total*	6,268	10.62%

*Total population is not equal to sum of all dam inundation zones due to dissolved overlapping inundation areas.

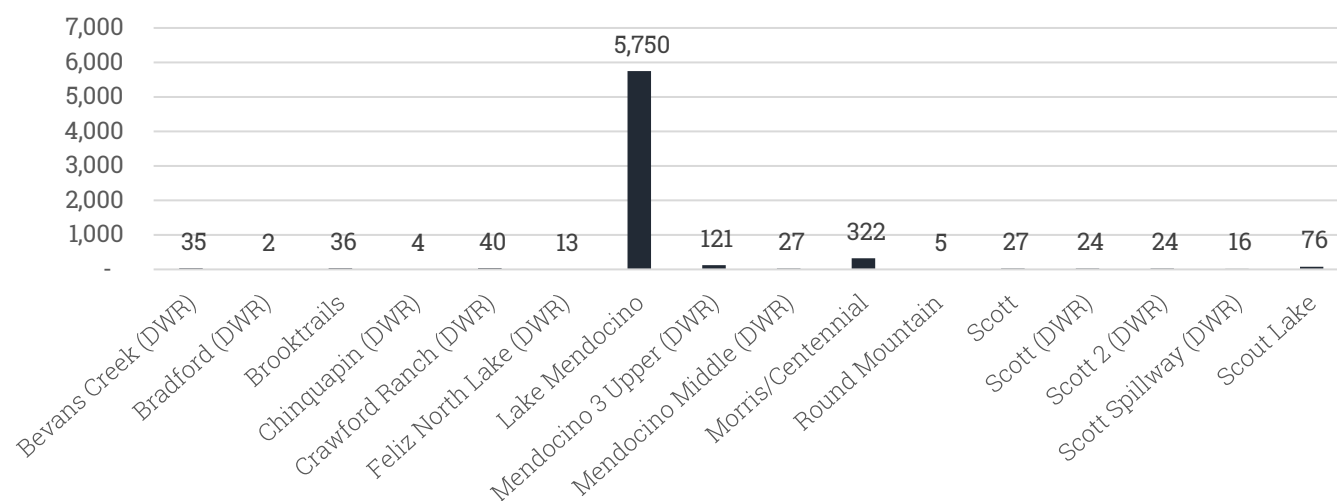


Figure 4-16: Population Exposure to Dam Inundation by Zone



Table 4-10: Parcel Values at Risk from Dam Inundation (Unincorporated County)

	Total Parcels	Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)
Unincorporated County	24,371	\$ 4,544,212,021	\$2,693,943,855	\$ 7,238,155,876

Dam Inundation Zone	Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
Bevans Creek (DWR)	9	0.0%	\$ 1,648,185	\$ 1,304,651	\$2,952,836	0.0%
Bradford (DWR)	1	0.0%	\$ 112,977	\$112,977	\$ 225,954	0.0%
Brooktrails	11	0.0%	\$ 1,152,540	\$583,414	\$ 1,735,954	0.0%
Chinquapin (DWR)	-	0.0%	\$ -	\$ -	\$-	0.0%
Crawford Ranch (DWR)	26	0.1%	\$ 1,762,290	\$ 1,499,852	\$3,262,142	0.0%
Feliz North Lake (DWR)	-	0.0%	\$ -	\$ -	\$-	0.0%
Lake Mendocino	1,463	6.0%	\$ 405,933,507	\$ 335,185,604	\$ 741,119,111	10.2%
Mendocino 3 Upper (DWR)	55	0.2%	\$ 6,943,682	\$ 4,292,319	\$ 11,236,001	0.2%
Mendocino Middle (DWR)	12	0.0%	\$1,231,617	\$615,809	\$1,847,426	0.0%
Morris/Centennial	83	0.3%	\$ 8,688,359	\$ 5,263,117	\$ 13,951,476	0.2%
Round Mountain	-	0.0%	\$ -	\$ -	\$-	0.0%
Scott	59	0.2%	\$ 5,707,208	\$ 2,952,310	\$8,659,518	0.1%
Scott (DWR)	52	0.2%	\$ 4,679,480	\$ 2,392,991	\$7,072,471	0.1%
Scott 2 (DWR)	52	0.2%	\$ 4,679,480	\$ 2,392,991	\$7,072,471	0.1%
Scott Spillway (DWR)	34	0.1%	\$3,568,111	\$ 1,792,290	\$5,360,401	0.1%
Scout Lake	36	0.1%	\$ 4,886,613	\$ 2,521,276	\$ 7,407,889	0.1%
Dam Inundation Area*	1,659	6.8%	\$ 429,013,587	\$ 348,953,504	\$ 777,967,091	10.7%

*Totals are not equal to sum of all dam inundation zones due to dissolved overlapping inundation areas.

Critical Facilities & Lifelines

Low-lying areas are vulnerable to dam inundation, especially transportation routes. This includes all roads, railroads, and bridges in the flow path of water, which could be eliminated or compromised in a dam inundation event. The most vulnerable critical facilities are those in poor condition that would have difficulty withstanding a large surge of water. Utilities such as overhead power lines and communication lines could also be vulnerable. Loss of these utilities could create additional compounding issues for emergency management officials attempting to conduct evacuation and response actions. Table 4-11 and Table 4-12 summarizes critical infrastructure exposed to dam failure in Mendocino County.

Table 4-11: Critical Infrastructure Points in Dam Inundation Zones (Unincorporated County)

Infrastructure Type	TOTAL FEATURE COUNT	Bevans Creek (DWR)	Bradford (DWR)	Brooktrails	Chinquapin (DWR)	Crawford Ranch (DWR)	Feliz North Lake (DWR)	Lake Mendocino	Mendocino 3 Upper (DWR)	Mendocino Middle (DWR)	Morris/Centennial	Round Mountain	Scott	Scott (DWR)	Scott 2 (DWR)	Scott Spillway (DWR)	Scout Lake
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MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Essential Facility	6	-	-	1	-	-	-	5	-	-	-	-	-	-	-	-	-
EOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fire Station	6	-	-	1	-	-	-	5	-	-	-	-	-	-	-	-	-
Law Enforcement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
High Potential Loss	72	-	-	-	-	-	-	69	-	-	1	-	1	1	1	1	1
Adult Residential Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alternative Education Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Animal Control	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Child Care Center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Communication Tower	3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
Community Center	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Courthouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dam	3	-	-	-	-	-	-	1	-	-	-	-	1	1	1	1	1
Detention Center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fairground	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Family Child Care Home	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Foster Family Agency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic Building	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic Site	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Library	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Museum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Office	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
Park and Recreation	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Power Plant	5	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
Real Property Asset*	42	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
Residential Child Care	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Elder Care Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
School	4	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-



Shop	3	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
Storage	6	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
Wastewater Treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and Lifeline	71	-	-	2	1	1	-	55	-	-	6	-	7	5	5	1	1
Airport	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge	63	-	-	2	1	1	-	49	-	-	4	-	7	5	5	1	1
Bus Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corp Yard	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
NG Station	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Substation	5	-	-	-	-	-	-	4	-	-	1	-	-	-	-	-	-
Transfer Station	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Hazmat	13	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-
Hazmat	13	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-
Grand Total	162	-	-	3	1	1	-	142	-	-	7	-	8	6	6	2	2

**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*



Table 4-12: Miles of Critical Infrastructure (Linear) in Dam Inundation Zones (Unincorporated County)

Infrastructure Type (linear)	TOTAL DAM EXPOSURE	Bevans Creek (DWR)	Bradford (DWR)	Brooktrails	Chinquapin (DWR)	Crawford Ranch (DWR)	Feliz North Lake (DWR)	Lake Mendocino	Mendocino 3 Upper (DWR)	Mendocino Middle (DWR)	Morris/Centennial	Round Mountain	Scott	Scott (DWR)	Scott 2 (DWR)	Scott Spillway (DWR)	Scout Lake
Levee	1.0	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-
NG Pipeline	12.9	-	-	-	0.	-	0.	12.4	-	-	0.5	-	-	-	-	-	-
Railroad	37.5	-	0.1	-	-	-	0.	23.5	-	-	0.2	-	9.4	8.8	8.8	0.1	-
Street	189.0	0.7	0.4	0.8	0.1	1.6	0.4	149.	9	2.1	0.3	7.0	0.2	27.	20.	20.	10.
4WD trail	2.8	-	-	-	0.	-	-	0.0	-	-	0.6	-	2.0	1.7	1.7	0.6	-
4WD trail, major	0.1	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.0	-
Alley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cul-de-sac	0.1	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Driveway	15.5	0.1	-	-	0.	0.	-	14.1	4	0	1.0	-	-	-	-	-	0.
Interstate	14.3	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-	-	-
Local road	94.1	0.5	0.4	0.8	0.0	0.6	0.3	71.1	1.5	0.3	2.0	0.2	17.5	12.9	12.9	8.4	0.9
Local road, major	1.7	-	-	-	-	-	-	0.9	-	-	-	-	0.7	0.7	0.7	0.7	-
Primary highway	17.5	-	0.	-	-	0.1	0.	17.5	-	-	0.1	-	-	-	-	-	-
Ramp	4.1	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-	-
Road, parking area	0.2	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-
State/county highway	38.6	0.1	0.	-	0.	0.	0.	27.5	0.3	0	3.3	-	6.6	4.9	4.9	0.5	1.3
Thoroughfare, major	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Traffic circle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Walkway	0.1	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Transmission Line	11.4	0.1	-	-	0.	3	-	6.7	0.2	0.1	3.8	-	0.2	0.2	0.2	0.1	1.0
Grand Total	251.8	0.8	0.6	0.8	0.4	1.9	0.4	193.	4	2.3	0.4	5	0.2	36.	29.	29.	10.
																	3.4



4.5.1.8.2 Damage Estimations

Hazus calculates losses to structures from flooding by analyzing the depth of flooding and type of structure. Using historical flood insurance claim data, Hazus estimates the percentage of damage to structures and their contents by applying established damage functions to an inventory. For this analysis, dam inundation depth grids are reported. Damage is indicated by depth and velocity. Return intervals, utilized in the damage estimation for flood, are omitted here due to relevance. This analysis uses data from the Department of Water Resources and has only been conducted for Mendocino County dams for which there are existing inundation studies. Table 4-13 reports damage to parcel and government property loss.

Damage Estimation Improved Parcel and Government Property Loss

Department of Water Resources data were used to estimate the loss potential to residential properties and Government service facilities exposed to dam inundation. Hazus reports the damage potential and loss potential from a given dam failure scenario in four categories: slight damage, moderate damage, extensive damage, and economic loss. Economic loss consists of estimations on the cost of repair and replacement to damaged or destroyed buildings and contents, relocation expenses, capital-related income, wage losses, and rental income losses. The results shown in Table 4-13 summarize improved parcel and government property loss.

Table 4-13: Improved Parcel and Government Property Loss Estimations

Building Type	Building Damage (\$)	Building Damage (% of total loss)	Content Damage (\$)	Content Damage (% of total loss)	Total Damage (\$)	Proportion of Loss (%)
Agriculture	\$ 185,640	3.7%	\$ 594,892	11.9%	\$ 780,532	16%
Commercial	\$ 18,007	0.4%	\$ 127,347	2.6%	\$ 145,354	3%
Education	\$ 27,429	0.6%	\$ 148,117	3.0%	\$ 175,546	4%
Emergency	-	0.0%	-	0.0%	-	0%
Government	-	0.0%	-	0.0%	-	0%
Industrial	\$ 746	0.0%	\$ 1,050	0.0%	\$ 1,796	0%
Religion	-	0.0%	-	0.0%	-	0%
Residential	\$2,947,065	59.2%	\$ 928,982	18.7%	\$3,876,047	78%
Total	\$ 3,178,887	64%	\$1,800,387	36%	\$4,979,275	

Note: Total Inventory Values
1 - Building Replacement Costs = \$6,607,442,042
2 - Content Replacement Costs = \$3,951,409,020
3 - Total Value = \$10,558,851,062



Damage Estimation for County Owned Property

Hazus 4.2 was used to estimate the loss potential to county facilities exposed to dam failure in the County. Hazus reports the damage potential and loss potential from a given dam failure scenario in four categories: slight damage, moderate damage, extensive damage, and economic loss. Economic loss consists of estimations on the cost of repair and replacement to damaged or destroyed buildings and contents, relocation expenses, capital-related income, wage losses, and rental income losses.

County insurance data was obtained and formatted for use in Hazus for a detailed damage estimation. This dataset has additional information including the number of floors, building value, content value, and construction type that greatly enhances results from the default Hazus database. While the County does have facilities within the dam inundation zone, those facilities do not experience damage in the inundation depths modeled through Hazus.

4.5.1.8.3 Future Trends in Development

Flooding due to a dam failure event is likely to exceed the special flood hazard areas regulated through local floodplain ordinances. The County and planning partners should consider the dam failure hazard when permitting development in mapped dam inundation zones and downstream of high hazard and significant hazard dams in the County. Low hazard dams could become significant or high hazard dams if development occurs below them.

4.5.1.9 Dam Failure Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Dam failure hazard problem statements are listed in Table 4-14; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee to understand the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-6 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-14 and Table 5-6.



Table 4-14: Dam Failure Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-DF-MC-56	Dam Failure	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	The following critical infrastructure is located in a dam inundation zone: 5 substations, 5 power plants, 4 schools, 6 Fire Dept. Facilities, 3 communication towers, and 1 community center	ma-DF-MC-199
ps-DF-MC-57	Dam Failure	Victim	PE&A - Public Education & Awareness	Mendocino County	6,024 live within a dam inundation zone in Mendocino County	ma-DF-MC-199



4.5.2 Drought Hazard Profile

California's water resources have been stressed by periodic drought cycles and in some places overuse, creating the need for unprecedented state and local restrictions in water use. Climate change is expected to increase drought and extreme weather. While the duration and severity of drought is always in question, it is certain that California and Mendocino County will continue to be impacted by drought. (California Drought Contingency Plan, 2010)



4.5.2.1 Drought in California

Drought has impacted almost every county in California at one time or another, causing more than \$2.6 million in damage. Droughts exceeding three years are relatively rare in northern California, the source of much of the state's water supply. The 1929-1934 drought established the criteria commonly used in designing storage capacity and yield for large northern California reservoirs. The driest single year in California's measured hydrologic history was 1977. (California Department of Water Resources, 2015)

Drought impacts in California are felt first by those most dependent on annual rainfall, including agencies fighting wildfires, ranchers engaged in dryland grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable water source. (*Id.*)

Most of California's precipitation comes from storms moving across the Pacific Ocean. The path followed by the storms is determined by the position of an atmospheric high-pressure belt that normally shifts southward during the winter, allowing low-pressure systems to move into the state. On average, 75 percent of California's annual precipitation occurs between November and March, with 50 percent occurring between December and February. If a persistent Pacific high-pressure zone takes hold over California mid-winter, the water year tends to be dry. (Western Regional Climate Center, 2020)

A typical water year produces about 100 inches of rainfall over the North Coast and 50 inches of precipitation (a combination of rain and snow) over the Northern Sierra compared to 18 inches in the Sacramento area and 15 inches in the Los Angeles area. In extremely dry years, these annual totals can fall to as little as one half or one third of these amounts. (*Id.*)

In incorporated areas of Mendocino County, water supply is sourced primarily from groundwater resources. Groundwater wells throughout the County are used for domestic, commercial, industrial, agricultural, and for fire protection needs. (Mendocino County General Plan, 2009)

Groundwater in the County is sourced from two unique geologic settings, which include inland valleys and mountainous areas. Mountainous areas are underlain by consolidated rocks of the Franciscan Complex. Interior valleys are underlain by thick deposits of valley fill. There are six primary groundwater basins in Mendocino County which include: Round Valley, Little Lake Valley (Willits Valley), Ukiah Valley, Laytonville Valley, Potter Valley, and Anderson Valley. (*Id.*)



Some areas of the County rely primarily on surface water supplies. Van Arsdale Reservoir and Lake Mendocino are the two most notable surface water resources in the County. Smaller reservoirs and ponds are also prevalent, and some jurisdictions pull water directly from rivers and streams. (*Id.*)

4.5.2.2 Plans, Policies, and Regulatory Environment

California Sustainable Groundwater Management Act

On September 16, 2014, Governor Brown signed into law a package of bills (SB1168, AB1739 and SB1319) collectively called the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that date will be 2040. For the remaining high and medium priority basins, 2042 is the deadline.

Statewide Emergency Water Conservation Regulations

In 2016, the State Water Resources Control Board (Water Board) adjusted emergency water conservation regulations in recognition of the differing water supply conditions and ongoing drought across the state to comply with an Executive Order from the California Governor declaring a drought emergency. Executive Order B-37-16 Making Water Conservation a California Way of Life updates temporary emergency water restrictions and transitions to permanent, long-term improvements in water use by:

- providing for wiser water use
- eliminating water waste
- strengthening local drought resilience
- improving agricultural water use efficiency and drought planning

In April of 2017, a new Executive Order lifted the drought emergency but retained many of the conservation requirements. Most regulations are still in effect with the exception of water supply “stress test” requirements and conservation standards for urban water suppliers. The temporary restrictions established a baseline of the types of benefits that are possible from water conservation requirements. The Executive Orders are found at:

https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/executive_orders.html

California Water Plan

The California Water Plan presents strategic plan elements, including a vision, mission, goals, guiding principles, and recommendations for current water conditions, challenges, and activities. The plan includes future uncertainties and climate change impacts, scenarios for 2050, and a roadmap for improving data and analytical tools needed for integrated water management and sustainability. The California Water Plan was updated most recently in 2018. See: <https://water.ca.gov/Programs/California-Water-Plan>.



Mendocino County General Plan

The Mendocino County 2009 General Plan includes the following policies the Development Element to mitigate the effects of drought:

Development Element

Policy DE-81: Encourage that landscaping of new residential subdivisions, mobile home parks, and commercial and industrial uses is adequate to enhance the site and reflects the local climate and drought tolerance in the choice of plant materials.

Policy DE-91: Encourage all new developments to include tree-lined streets and/or other vegetative treatments (consistent with other considerations, such as drought tolerance, fire safety and solar access) that enhance the visual or environmental aspects of the development. Promote the introduction of similar elements into existing communities where feasible.

Emergency Water Conservation Rules and Regulations in Mendocino County Code, § 7.10

The Mendocino County Code includes provisions for any future drought emergency declaration within the County. These provisions apply to all water users in order to achieve necessary water conservation goals in the Mendocino County portion of the Russian River drainage. The provisions were initially intended to meet the immediate action necessary to avoid depleting Lake Mendocino storage and to consequently avoid the indirect costs to public health and safety, and economic losses to the County's residents. However, they also apply to future drought emergencies.

The regulations contain three provisions a conservation requirement that all water users within the County reduce their water use by 20%, in addition to all local water suppliers being requested to implement their local water shortage contingency plans, along with reporting and enforcement requirements.

4.5.2.3 Past Events

California experienced massive changes over the course of the twentieth century as evidenced by dramatic population increases and land use conversion. (Cal. Dep't of Water Resources, 2015) The driest single year in California's measured hydrologic history is 1977. This drought period began in November 1975. It first drained the State's reservoirs, which then lead to widespread water shortages in 1977. Additionally, 1976 is on record as the fourth driest year for California. During this period 47 of the 58 California counties declared emergencies.

The most extreme drought conditions in Mendocino County's more recent history were experienced in 1991. This was part of a drought period that for much of California lasted for six years, from 1987 to 1992. By the end of 1991 23 counties had declared local drought emergencies, including Mendocino County. (Mendocino 2014 MJHMP, 2014) Additionally, The California Department of Water Resources has state hydrologic data back to the early 1900s. The hydrologic data show multi-year droughts from 1912 to 1913,



1918 to 1920, 1922 to 1924, 1929-1934, 1976-1977, 1987-1992, 2007-2009, and 2012 to 2016. (Department of Water Resources, 2020)

The most recent major drought in California spanned 2014-2017. With California facing water shortfalls in the driest year in recorded state history, California State Governor Jerry Brown declared a drought state of emergency on January 17, 2014. In the state of emergency declaration, Governor Brown directed state officials to assist farmers and communities that are economically impacted by dry conditions and to ensure the state can respond if Californians face drinking water shortages. The Governor also directed state agencies to use less water and hire more firefighters and initiated a greatly expanded water conservation public awareness campaign. Figure 4-17 shows drought-impacted Lake Mendocino in 2014. On April 17, 2017, Brown issued Executive Order B-40-17, officially ending the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne.

The National Drought Monitor provides drought data and maps nationally and on a localized, watershed scale. The National Drought Monitor is the product of eleven agencies, from the NDMC, NOAA and USDA, and is available at <http://droughtmonitor.unl.edu/>. The National Drought Monitor categorizes the level of drought from D0 through D4, with D4 being the highest "exceptional drought." Table 4-15 depicts drought classifications and impacts from the level of drought occurrence in California.



Figure 4-17: Drought-lowered Lake Mendocino in 2014.
Source: Photo by Rich Pedroncelli, Associated Press

Figure 4-18 shows a time series of the level of drought in Mendocino County from 2000 to 2020 according to the National Drought Monitor as well as the watersheds in Mendocino County. The National Drought Monitor also classifies drought on a watershed scale (according to hydrologic units established by the US Geological Survey). The participating jurisdiction annexes for those jurisdictions that prioritized drought hazards depict the past twenty years of droughts within applicable watersheds.



Table 4-15: Drought Classifications and Impacts for California

Category	Description	Possible Impacts
D0	Abnormally Dry	- Soil is dry; irrigation deliver begins early - Dryland crop germination is stunted - Active fire season begins - Winter resort visitation is low; snowpack is minimal
D1	Moderate Drought	- Dryland pasture growth is stunted; producers give supplemental feed to cattle - Landscaping and gardens need irrigation earlier; wildlife patters begin to change - Stock ponds and creeks are lower than usual
D2	Severe Drought	- Producers increase water efficiency methods and drought-resistant crops; - Grazing land inadequate - Fire season is longer, with high burn intensity, dry fuels, and large fire spatial extent; more fire crews on staff - Lake- and river-based tourism declines; boat ramps close - Trees are stressed; plants increase reproductive mechanisms; wildlife diseases increase - Water temperatures increase; programs to divert water to protect fish begin - River flows decrease; reservoir levels are low and banks are exposed
D3	Extreme Drought	- Livestock need expensive supplemental feed, cattle and horses are sold; little pasture remains - Fruit trees bud early; producers begin irrigating in winter - Federal water not adequate to meet irrigation contracts, extracting supplemental groundwater is expensive - Dairy operations close - Fire season lasts year-round; fires occur in typically wet parts of the state; burn bans are implemented - Ski and rafting business is low, mountain communities suffer - Orchard removal and will drilling company business increase; panning for gold increases - Low water levels impede fish migration and cause lower survival rates - Wildlife encroach on developed areas; little native food and water is available for bears, which hibernate less - Water sanitation is a concern, reservoir levels drop significantly, surface water is nearly dry, flows are very low; water theft occurs - Well and aquifer levels decrease; homeowners drill new wells
D4	Exceptional Drought	- Fields are left fallow; orchards are removed; vegetable yields are low; honey harvest is small; agricultural unemployment is high, food aid is needed - Fire season is very costly; number of fires and areas burned are extensive - Many recreational activities are affected - Fish rescue and relocation begins; pine beetle infestation occurs; forest mortality is high; wetlands dry up; survival of native plants and animals is low; fewer wildflowers bloom; wildlife death is widespread; algae blooms appear - Poor air quality affects health; greenhouse gas emissions increase as hydropower production decreases; West Nile outbreaks rise - Water shortages are widespread; surface water is depleted; federal irrigation water deliveries are curtailed; water prices are extremely high; wells are dry, more and deeper wells are drilled; water quality is poor

Adapted from U.S. Drought Monitor Drought Classifications and Impacts.

<https://droughtmonitor.unl.edu/Data/StateImpacts.aspx>



DROUGHT SEVERITY TIMELINE

MENDOCINO COUNTY

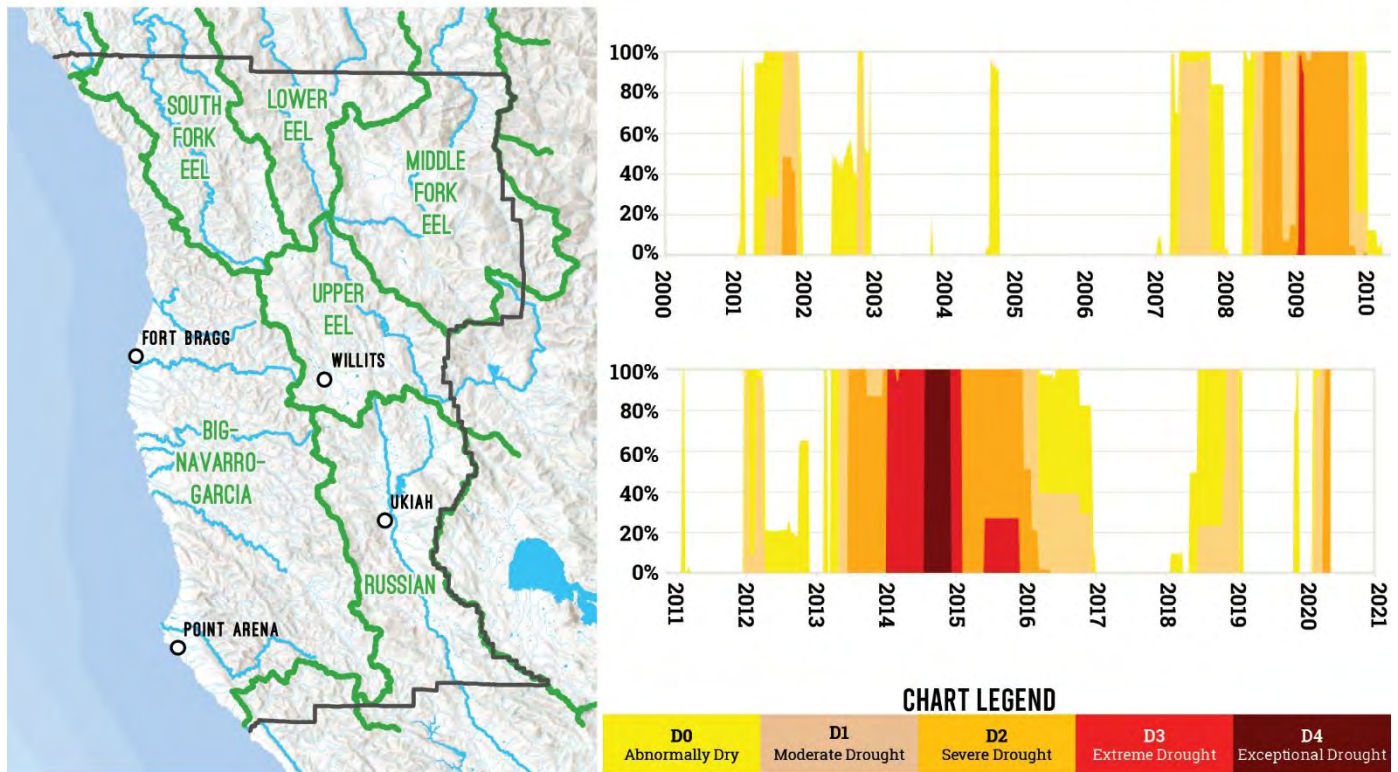


Figure 4-18: Mendocino County Drought Severity Timeline 2000-2021

4.5.2.4 Location

Drought is one of the few hazards with the potential to impact the entire population of Mendocino County directly or indirectly through water restrictions, higher water and food prices, reduced air or water quality, or restricted access to recreational areas. No portion of the County is immune from drought conditions.

Lack of winter snowfall in the mountains can eventually lead to agricultural impacts due to decreased stream flows. Reduced base flows may introduce additional challenges for communities that depend on direct drinking water supplies from rivers and tributaries. Droughts of just a few weeks during critical periods of plant development can have disastrous effects on agriculture production. Reduced reservoir storage from decreased runoff in the mountains can lead to water shortages. Droughts that occur in populated areas may not have direct effects on the residents but may increase the threat of wildfire in the wildland-urban interface areas.



4.5.2.5 Frequency/Probability of Future Occurrences

Predicting the precise probability of future drought depends on comprehensive and reliable data. Cal-Adapt, an authority on climate variance in California, projects an extended period of drought over a 20-year period. (Cal-Adapt, 2020) Empirical studies conducted over the past century have shown that meteorological drought is never the result of a single cause. It is the result of many causes, often synergistic in nature; these include global weather patterns that produce persistent, upper-level high-pressure systems along the West Coast with warm, dry air, resulting in less precipitation.

According to the results of the risk factor exercises for the participating jurisdictions, the probability of drought occurring in Mendocino County is highly likely (100% annual probability). Figure 4-18 provides a time series from the National Drought Monitor that shows Mendocino County has been in some form of drought for much of the period from 2000 to 2020.

4.5.2.6 Severity and Extent

The severity and extent of a drought depends on the degree of moisture deficiency, the duration, and the size and location of the affected area. The longer the duration of the drought and the larger the area impacted, the more severe the potential impacts. Droughts are not usually associated with direct impacts on people or property, but they can have significant impacts on agriculture, which can impact people indirectly.

Unlike most disasters, droughts normally occur slowly but last a long time. On average, the nationwide annual impacts of drought are greater than the impacts of any other natural hazard. They are estimated to be between \$6 billion and \$8 billion annually in the United States and occur primarily in the agriculture, transportation, recreation and tourism, forestry, and energy sectors. Social and environmental impacts are also significant, although it is difficult to put a precise cost on these impacts.

Drought eventually affects groundwater sources but generally not as quickly as surface water supplies; groundwater supplies generally take longer to recover. Reduced precipitation during a drought means that groundwater supplies are not replenished at a normal rate. This can lead to a reduction in groundwater levels and problems such as reduced pumping capacity or wells going dry. Shallow wells are more susceptible than deep wells. Reduced replenishment of groundwater affects streams. Much of the flow in streams comes from groundwater, especially during the summer when there is less precipitation and after snowmelt ends. Reduced groundwater levels mean that even less water will enter streams when stream flows are lowest.

A drought directly or indirectly impacts all people in affected areas. A drought can result in farmers not being able to plant crops or the failure of planted crops. This results in loss of work for farm workers and those in food processing and winemaking jobs. Other water-dependent industries are commonly forced to shut down all or a portion of their facilities, resulting in further layoffs. A drought can harm recreational companies that use water (e.g., swimming pools, water parks, and river rafting companies) as well as



landscape and nursery businesses because people will not invest in new plants if water is not available to sustain them.

Table 4-15 describes the impacts of the various severity levels of drought in California according to the National Drought Monitor classifications.

4.5.2.7 Warning Time

Droughts are climatic patterns that occur over long periods of time. Only generalized warning can take place due to the numerous variables that scientists have not pieced together well enough to make accurate and precise predictions. Predicting drought depends on the ability to forecast precipitation and temperature. Anomalies of precipitation and temperature may last from several months to several decades. How long they last depends on interactions between the atmosphere and the oceans, soil moisture and land surface processes, topography, internal dynamics, and the accumulated influence of weather systems on a global scale. (National Institute of Water and Atmospheric Research, 2016)

4.5.2.8 Secondary Hazards

The secondary hazard most associated with drought is wildfire. A prolonged lack of precipitation dries out vegetation, which becomes increasingly susceptible to ignition as the duration of the drought extends. The Rush Fire and the Rough Fires are examples of how drought conditions, combined with increased fuel loads, can cause more frequent and intense wildfires. (Syphard, 2019)



4.5.2.9 Climate Change Impacts

The long-term effects of climate change on regional water resources are less known, but globally, water resources are already stressed from a growing population, poor water quality, groundwater overdrafts, and aging urban water infrastructure. Climate change will likely exacerbate many of these stresses.

With a warmer climate, droughts are projected to increase in severity, frequency, and duration. The associated costs from diminished water resources will also be significant. According to the UC Davis Center for Watershed Sciences, water shortages in 2016 were projected to cost the agricultural industry a total of \$550 million in direct costs and 1,815 in lost jobs. More frequent extreme events such as droughts could end up being more cause for concern than the long-term change in temperature and precipitation averages. (University of California, Davis Center for Watershed Sciences, 2020) According to California's Fourth Climate Change Assessment, variances in precipitation trends towards shorter winters and prolonged dry seasons in addition to increased frequency of drought, could limit water supplies from more local sources. (Grantham, 2018)



4.5.2.10 Drought Vulnerability Analysis

All people, property, and environments in the County planning area would be exposed to the impacts of moderate to extreme drought conditions to some degree.

Drought produces a complex web of impacts that spans many sectors of the economy and reaches well beyond the area experiencing physical drought. This complexity exists because water is integral to the ability to produce goods and provide services. Drought vulnerability of an activity usually depends on its water demand, how the demand is met, and what water supplies are available to meet the demand. California's 2018 Water Plan indicates that water demand in the state will continue to increase.

4.5.2.10.1 Population

The residents of the county rely on healthy watersheds to provide adequate water for domestic and agricultural purposes. Mendocino County has experienced population growth and is projected to continue growing, with Ukiah being one of the fastest-growing cities in the County. No significant life or health impacts are anticipated as a result of drought within the planning area.

4.5.2.10.2 Property

During drought years, property owners with shallow wells can be impacted by drought with increased demand on groundwater resources. Surface water supplies are often lower, which can reduce available supplies and increase cost. This sometimes encourages growers who historically use surface water to switch to groundwater, which has a permanent impact on those reliant on groundwater.

No structures will be directly affected by drought conditions, though some structures may become vulnerable to wildfires, which are more likely following years of drought. Droughts can also have significant impacts on landscapes, which could cause a financial burden to property owners. However, these impacts are not considered critical in planning for impacts from the drought hazard.

The agricultural sector is particularly susceptible to drought impacts. Agricultural drought impacts are normally felt earliest by those relying on unmanaged water supplies: entities carrying out dryland grazing and non-irrigated crop production, usually grain crops. Impacts on irrigated agriculture depend on the source and nature of the irrigation water supply, whether it be local groundwater, local surface water, or imported surface water, and any water rights or contractual provisions that may be associated with the source. The extent to which producers may mitigate water shortage impacts depends on multiple factors but is heavily influenced by economic considerations. Factors involved in making decisions about mitigating irrigation water shortages include availability and costs of pumping groundwater, price of alternative surface water sources, capital investments associated with maintaining permanent plantings, and status of international crop markets. (California Drought Contingency Plan, 2010)



4.5.2.10.3 Critical Facilities

Critical facilities, as defined for this plan, will continue to be operational during a drought. Critical facility elements such as landscaping may not be maintained due to limited resources, but the risk to the planning area's critical facilities inventory will be largely aesthetic. For example, when water conservation measures are in place, landscaped areas will not be watered and may die. These aesthetic impacts are not considered significant.

4.5.2.11 Future Trends in Development

The County will face challenges in providing sufficient water supplies in the future due to climate change effects, coupled with an increasing population (i.e., mostly in the incorporated areas) and increasing water demand. While the County has already taken steps towards achieving long-term groundwater sustainability, there is still a possibility that water supply availability may change in the future and will need to be further addressed.

The Russian River Watershed Association of Mendocino County exists to inform and educate the public and water community about water issues in Mendocino County. They are a resource for information on water issues in Mendocino County and provide tips for water conservation.

Each participating jurisdiction has an established General Plan that includes policies directing land use and dealing with issues of water supply and the protection of water resources. These plans provide the capability at the local level to protect future development from the impacts of drought. All participating jurisdictions reviewed their general plans as part of their hazard mitigation capability assessments. Deficiencies identified by these reviews can be identified as mitigation actions to increase the capability to deal with future trends in development.

4.5.2.12 Drought Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Drought hazard problem statements for the County are listed in Table 4-16; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee to understand the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-6 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-16 and Table 5-6.



Table 4-16: Drought Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-DR-MC-18	Drought	Impact	PRV - Prevention , PE&A - Public Education & Awareness , NRP - Natural Resource Protection	Mendocino County	Groundwater pumping and well construction during drought years can contribute to aquifer overdraft	ma-DR-MC-196, ma-DR-MC-150
ps-DR-MC-19	Drought	Impact	NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	Water wells are risk of running dry in late fall months, especially during drought years	ma-DR-MC-196, ma-DR-MC-150
ps-DR-MC-20	Drought	Threat	PRV - Prevention , NRP - Natural Resource Protection	Mendocino County	County buildings and facilities have irrigated landscaping including turf grass	ma-DR-MC-198
ps-DR-MC-21	Drought	Threat	PRV - Prevention , NRP - Natural Resource Protection	Mendocino County	There is an opportunity to update the County's land use code to include additional incentives for new development to implement drought tolerant landscaping that requires less water, provides more shade, and lessens the urban heat island effect	ma-DR-MC-197



4.5.3 Climate Change Hazard Profile

Climate change refers to any distinct change in measures of climate lasting for a long period of time, more specifically major changes in temperature, rainfall, snow, or wind patterns. Climate change may be limited to a specific region or may occur across the whole Earth. Climate change may result from:



- Natural factors, such as changes in the sun's energy or slow changes in the Earth's orbit around the sun;
- Natural processes within the climate system, such as changes in ocean circulation, or
- Human activities that change the atmosphere's make-up, and the land surface, such as burning fossil fuels, cutting down forests, planting trees, or building developments in cities and suburbs.

Changes in extreme weather and climate events, such as heatwaves and droughts, are the primary way that most people experience climate change. Human-induced climate change has already increased the number and strength of these extreme events. Over the last 50 years, much of the U.S. has seen increases in prolonged periods of excessively high temperatures, heavy downpours, and in some regions, severe floods, and droughts. (National Climate Assessment, 2014)

The effects of climate change are varied and include extremes in precipitation and temperature. Slower average increases in temperature, precipitation, and sea-level rise can result in compounding impacts such as ocean acidification, increasing insect outbreaks, and shifts in biological patterns, to name a few. (Food and Agriculture Organization of the United Nations, 2014) Table 4-17 is a list of localized climate change impacts relevant to California's northern coastline and the reference to where it is addressed in this MJHMP.

Table 4-17: Climate change-related hazards and cross-references in MJHMP

Climate change hazard	Reference in MJHMP
Agriculture and Forestry Pests and Diseases	Section 4.5.10 (Sudden Oak Death in Wildfire Profile)
Dune and Bluff Erosion	Section 4.5.9 (Soil Hazard Profile)
Drought	Section 4.5.2 (Drought Hazard Profile)
Extreme Heat	Section 4.5.3.5 (Climate Change Severity & Extent)
Fog	Section 4.5.3 (Climate Change Hazard Profile)
Human Hazards	Section 4.5.5 (Pandemic Hazard Profile)
Inland and Shoreline Flooding	Section 4.5.6 (Flood Hazard Profile)
Landslides and Debris Flows	Section 4.5.8 (Slope Hazard Profile)
Sea-level rise	Section 4.5.3 (Sea-level rise)
Severe Weather	Section 4.5.7 (Severe Weather Hazard Profile)
Wildfire	Section 4.5.10 (Wildfire Hazard Profile)



California is already experiencing the impacts of climate change, including prolonged drought, increased coastal flooding and erosion, and tree mortality. The state has also seen increased average temperatures, more extreme heat days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, a decreased summertime fog of 33%, and both snowmelt and rainwater running off sooner in the year. (Cal OES, 2018) Long term trends in fog depict a decline of some 12 to 20% in California from 1900 through 2070. Climate experts suggest that warmer temperatures resulting from climate change create conditions where air fails to reach cool enough temperatures necessary for the production of fog. Warmer temperatures are simultaneously able to evaporate any fog which is able to form. (Grantham, Theodore; University of California, Berkeley, 2018)

The intensity of extreme weather events is also increasing. Extreme weather events and resulting hazards, such as heatwaves, wildfires, droughts, and floods are already being experienced. (United States Geological Survey, n.d.) The vulnerability analysis herein touches on extreme weather impacts from climate change; more detail on extreme weather is included in the County's 2020 Climate Vulnerability Assessment.

Sea-level rise

This climate change hazard profile focuses in large part on sea-level rise, as it has delineated hazard boundaries and quantifiable exposure and damage estimations. Sea-level rise is called out within each subsection of this climate change hazard profile.

Sea-level rise, a direct result of climate change, affects communities in the Northern California Coastal Area. Sea-level rise has the potential to inundate homes, businesses, and infrastructure located near the shorelines, as well as cause erosion of coastal lands over time. The sea level rose during the 20th century, and observations and projections suggest that it will rise at a higher rate during the 21st century. Rising seas increase the risk of coastal flooding, storm surge inundation, coastal erosion and shoreline retreat, and wetland loss. The cities and infrastructure that line many coasts are already vulnerable to damage from storms, which is likely to increase as sea level continues to rise and inundate areas further inland.

This HMP highlights sea-level rise within the climate change section because this hazard has delineated hazard boundaries and quantifiable exposure and damage estimations directly related to climate change.

4.5.3.1 Policies, Plans, and Regulatory Environment

Successful efforts to address the challenges of climate change begin at the local level and include the implementation of environmentally sustainable practices designed to meet present and future energy needs.

California Assembly Bill 2516: Database for Sea-level rise Planning

AB2516 was passed in 2014 and called the Natural Resources Agency, in collaboration with the Ocean Protection Council, to conduct biannual surveys of sea-level rise planning information to catalog California's efforts to prepare for rising sea levels. The resources collected in service to this task include



studies, vulnerability assessments, and local coastal programs. The future collection of AB2516 resources will be stored in the Adaption Clearinghouse.

2016 California Green Building Standards

The County has adopted the 2019 California Green Building Standards, also known as CALGreen Code. CALGreen Code establishes regulations for green building, nonresidential and residential buildings. Topics covered in the regulations include planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency and environmental quality. The code also includes voluntary measures for residential, nonresidential and health facilities.

California Sustainable Communities and Climate Protection Act of 2008

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) looks to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Regional targets are established for GHG emissions reductions from passenger vehicle use by the sustainable communities strategy (SCS) established by each metropolitan planning organization (MPO). The SCS is an integral part of regional transportation plans (RTP) and contains land use, housing, and transportation strategies to meet GHG reductions targets.

2018 California Coastal Commission Sea Level Rise Policy Guidance

The 2018 California Coastal Commission Sea Level Rise Policy Guidance document provides an overview of the best available science on sea level rise for California and recommended methodology for addressing sea level rise in Coastal Commission planning and regulatory actions. It is intended to serve as a multi-purpose resource for a variety of audiences and includes a high level of detail on many subjects.

2018 California's Fourth Climate Change Assessment

California's Fourth Climate Change Assessment promotes actionable science that serves the growing needs of state and local-level decision-makers from a diverse number of sectors. The Fourth Assessment provides information in a number of ways. Regional reports summarize climate impacts and adaptation needs around the state, at a resolution useful for local decision-makers. Statewide impacts are summarized in the Statewide Summary Report, as well as reports on Tribal and Indigenous Communities, Climate Justice, and California's Ocean and Coast. The Technical Reports are the foundation of the Fourth Assessment and include climate projections and analyses of expected impacts in various sectors across the state.

2020 California Adaptation Planning Guide (APG)

California has been taking action to address climate change for over 20 years, focusing on both greenhouse gas emissions reduction and adaptation. The California Adaptation Planning Guide (APG) provides



guidance and support for communities addressing the unavoidable consequences of climate change. The 2020 APG presents an updated, step-by-step process that communities can use to plan for climate change.

California Senate Bill 379: General Plan Safety Element and Climate Adaption

California SB 379 requires all cities and counties to include climate adaptation and resiliency strategies in the Safety Elements of their General Plans upon the next revision beginning January 1, 2017. The bill requires the climate adaptation update to include a set of goals, policies, and objectives for their communities based on the vulnerability assessment, as well as implementation measures, including the conservation and implementation of natural infrastructure that may be used in adaptation projects.

California Senate Bill 1000: General Plan Safety and Environmental Justice Elements

Senate Bill 1000 requires local governments to include an Environmental Justice element in General Plans. SB 1000 has four basic requirements, whether those requirements are combined into a single environmental justice element or distributed throughout other existing elements, including:

- identifying disadvantaged communities,
- incorporating policies to reduce the environmental health impacts that adversely affect residents in disadvantaged communities,
- incorporating policies to include residents of disadvantaged communities in decision-making processes, and
- incorporating policies that prioritize improvements and projects in disadvantaged communities.

Mendocino County 2020 Climate Vulnerability Assessment.

In tandem with this 2020 HMP Update, the County's 2020 Climate Vulnerability Assessment was developed to determine how climate change will likely affect the County's population and assets. The Assessment provides detailed analysis of how a range of climate impacts can harm people, physical structures, and other community assets throughout Mendocino County and will enable these jurisdictions to identify and take action to address dangerous conditions from climate change hazards before they develop or become more intense and frequent. This HMP Vulnerability Assessment does not supersede, but rather compliments, the County's 2020 Climate Vulnerability Assessment.

Mendocino County General Plan

The 2009 Mendocino County General Plan Resource Management Element includes guidance for local efforts at climate change mitigation and adaptation, focused both on policies that guide the County in combating climate change through measures like greenhouse gas reductions as well as policies that encourage adaptation to future climate changes. Examples include:

- Reduce vehicle travel by focusing new developing around existing community areas. (Policy RM-44)



- Require the incorporation of energy conservation and renewable energy sources for public, residential, educational, institutional, commercial, and industrial facilities and uses. (Policy RM-53)

The County is currently developing a 2020 Safety Element and will incorporate this 2020 MJHMP Update and the 2020 Climate Vulnerability Assessment.

4.5.3.2 Past Events

Climate change has never been directly responsible for any declared disasters. Past flooding, wildfire, levee failure, and drought disasters may have been exacerbated by climate change, but it is difficult to make direct connections to individual disasters. In addition, unlike earthquake and floods that occur over a finite time period, climate change is an on-going hazard, and many communities are already experiencing the effects. Other effects may not be seriously experienced for decades or may be avoided altogether by mitigation actions taken today.

Sea-level Rise

Historic records from the San Francisco tidal gage, CA Station ID: 9414290, show that the sea level in the San Francisco Bay has risen eight inches from 1897 to 2006. Similarly, water level measurements from the tidal gage at Port Chicago, CA Station ID: 9415144, show an increase in mean sea level of 2.08 millimeters a year, which is equivalent to a change of 8.6 inches in 100 years.

4.5.3.3 Location

The effects of climate change are not limited by geographical borders. Mendocino County, the State of California, the United States, and the rest of the world are all at risk of climate change. As such, the entire County is at risk to the effects of climate change.

Sea-level Rise

Sea-level rise varies greatly depending on a number of factors, and the Pacific coast of Mendocino County may not see as great an impact of sea-level rise as other regions nationally or globally. Globally, sea level is rising primarily because global temperatures are rising, causing ocean water to expand and land ice to melt. However, sea-level rise varies from place to place. Sea-level rise along the Pacific coast depends on the global mean sea-level rise and also on regional factors such as ocean and atmospheric circulation patterns in the northern Pacific Ocean, gravitational and deformational effects of land ice mass changes, and tectonics along the coast. The impacts of sea-level rise in areas with elevated cliffs are also ameliorated to some degree. In California, cliffs and bluffs made of sedimentary rocks typically erode at rates of 15 to 30 centimeters per year. The comparative importance of these factors determines whether local sea level is higher or lower than the global mean, and how fast it is changing, which has enormous implications for coastal planning. (National Research Council, 2012)

Sea-level rise within the Western Pacific is different than the global average. In some places within the Western Pacific, sea-level rise has been greater than 10 mm per year. In other places, such as in the Eastern Pacific, sea-level rise has been much less. The differences in rate and region are primarily associated with



multi-decadal fluctuations which are associated with the Pacific Decadal Oscillation (PDO), which has appeared to switch phases in the last couple of years. A PDO phase switch could signal the start of higher amounts of relative sea-level rise along the U.S. West Coast within the coming decades. This is a trend similar to the higher relative sea-level rise rates which have occurred in this region during portions of the last century. (NOAA, 2017)

Sea level rise will primarily affect the coastal regions and municipalities. Volume 1 herein described sea-level rise, while annexes for Fort Bragg and Point Arena include problem statements and mitigation actions related to sea-level rise. The unincorporated areas of the County do not have significant critical facility or population vulnerabilities to sea-level rise except through secondary impacts like coastal erosion, included in Section 4.5.8.

4.5.3.4 Frequency/ Probability of Future Occurrences

Climate change is one of the few natural hazards where the probability of occurrence is influenced by human action. In addition, unlike earthquake and floods that occur over a finite time period, climate change is an ongoing hazard.

Temperature related impacts are the most likely near-term climate change exposure facing the County and should be addressed and prioritized in future adaptation planning efforts. While sea-level rise has a high certainty rating and is already occurring, its onset is not expected to occur until closer to the end of the century in terms of changes in areas already vulnerable to flooding or causing permanent inundation in tidally-influenced areas of the County. (National Oceanic and Atmospheric Administration, n.d.)

California's Fourth Climate Change Assessment from 2018, delineated how climate change may impact and exacerbate natural hazards in the future, including wildfires, extreme heat, floods, drought, and levee failure:

- Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in Mendocino County and the rest of California, which are likely to increase the risk of mortality and morbidity due to heat-related illness and exacerbation of existing chronic health conditions. Those most at risk and vulnerable to climate-related illness are the elderly, individuals with chronic conditions such as heart and lung disease, diabetes, and mental illnesses, infants, the socially or economically disadvantaged, and those who work outdoors.
- Higher temperatures will melt the Sierra snowpack earlier and drive the snowline higher, resulting in less snowpack to supply water to California users.
- Droughts are likely to become more frequent and persistent in the 21st century.
- Intense rainfall events, periodically ones with larger than historical runoff, will continue to affect California with more frequent and/or more extensive flooding.



- Storms and snowmelt may coincide and produce higher winter runoff from the landward side, while accelerating sea-level rise will produce higher storm surges during coastal storms. (California's Fourth Climate Change Assessment, 2018)

Warmer weather, reduced snowpack, and earlier snowmelt can be expected to increase wildfire through fuel hazards and ignition risks. These changes can also increase plant moisture stress and insect populations, both of which affect forest health and reduce forest resilience to wildfires. An increase in wildfire intensity and extent will increase public safety risks, property damage, fire suppression and emergency response costs to government, watershed and water quality impacts, vegetation conversions, and habitat fragmentation.

Sea-level Rise

NOAA sea level rise scenario planning helps reveal the range of possible sea-level rise in Mendocino County. There are six representative scenarios for global mean sea level rise, influenced by what is called Representative Concentration Pathways (RCPs). These six scenarios range from a low of .3-meter global mean sea level rise to the highest 2.5-meter global mean sea level rise. NOAA utilizes three RCPs, each representing potential underlying socioeconomic conditions and technological considerations that influence the six scenarios. These include a low-end range (RCP 2.6), which projects strong measures, a moderate (RCP 4.5) range, which requires stabilizing mitigation measures through 2050, and a high-end (RCP 8.5), which maintains a fossil fuel-intensive, business as usual emission scenario. (*Id.*) The six scenarios and three RCPs are depicted in Table 4-18, which indicates the probability of exceeding global mean sea level rise for each scenario by 2100.

Mapping in this HMP uses the moderate range RCP 4.5, as this mapping looks at projected sea level rise outcomes in the later half of the century with an adaptive lens. *See* (OPR Planning and Investing for a Resilient California, p. 19) Note that the County's 2020 Climate Vulnerability Analysis utilizes RCP 8.5.

The exposure and damage estimations for sea-level rise for Mendocino County are discussed further in the Vulnerability Assessment, Section 4.5.3.8.

Table 4-18: Probability of Exceeding Global Mean Sea-level rise (Median Value) Scenarios in 2100

GMSL rise Scenario	RCP 2.6	RCP 4.5	RCP 8.5
Low (0.3 m)	94%	98%	100%
Intermediate-Low (0.5 m)	49%	73%	96%
Intermediate (1.0 m)	2%	3%	17%
Intermediate-High (1.5 m)	0.4%	0.5%	1.3%
High (2.0 m)	0.1%	0.1%	0.3%
Extreme (2.5 m)	0.05%	0.05%	0.1%

Source: National Oceanic and Atmospheric Administration (based upon Kopp et al. 2014).

4.5.3.5 Severity and Extent



Climate change severity and extent in Mendocino County is varied and can generally be categorized into several key effects. These effects are identified in the North Coast Region⁵ Report from California's Fourth Climate Change Assessment (2018). General climate change impacts for this North Coast Region include:

- Predicted annual maximum temperatures are increasing by 5-9°F by the end of the 21st century. See Figure 4-22 and Figure 4-23 to compare current annual maximum temperatures with predicted for Mendocino County.
- Annual precipitation is likely to be delivered in more intense storms, with shorter wet seasons and prolonged dry seasons. Less precipitation will fall as snow with increased temperatures.
- An "average" rainfall year will become less common with a higher occurrence of extreme wet and dry years.
- Increased extreme weather events will increase the severity and extent of flooding.
- Streamflows in the summer dry season are predicted to decline, and peak flows in the wetter winter months are likely to increase.
- Sea-level rise, while not significantly impacts the whole of the Mendocino County coastline, is predicted to impact key areas such as Arena Cove in Point Arena.
- Wildfires will continue, with projections for a longer wildfire season, increased frequency, and expansion of the area susceptible to fire. (Grantham, 2018)
- Frost occurrences may become longer and more frequent. In February 2018, for example, grape growers prepared for extended frost threat, while coping with a lack of rainfall during what are typically the wettest months of the year. As climate change continues, bud break or the appearance of shoots that will eventually yield grapes will begin sooner, leaving the delicate new growth exposed to the hazards of frost and rain for a longer stretch of the growing season. (Lutz, 2018)

These impacts are predicted to significantly impact communities through habitat loss, including cold-water fish species such as salmon, increased flood and landslide risks to critical infrastructure, increased public health risks from wildfire, floods, heatwaves, and disease vectors. (*Id.*)

Note: Mapping in this HMP uses the moderate range RCP 4.5, as HMP mapping depicts projected sea-level rise and temperature increases in the later half of the century with an adaptive lens. See (OPR Planning and Investing for a Resilient California, p. 19) Note that the County's 2020 Climate Vulnerability Analysis utilizes RCP 8.5.

Sea-level Rise

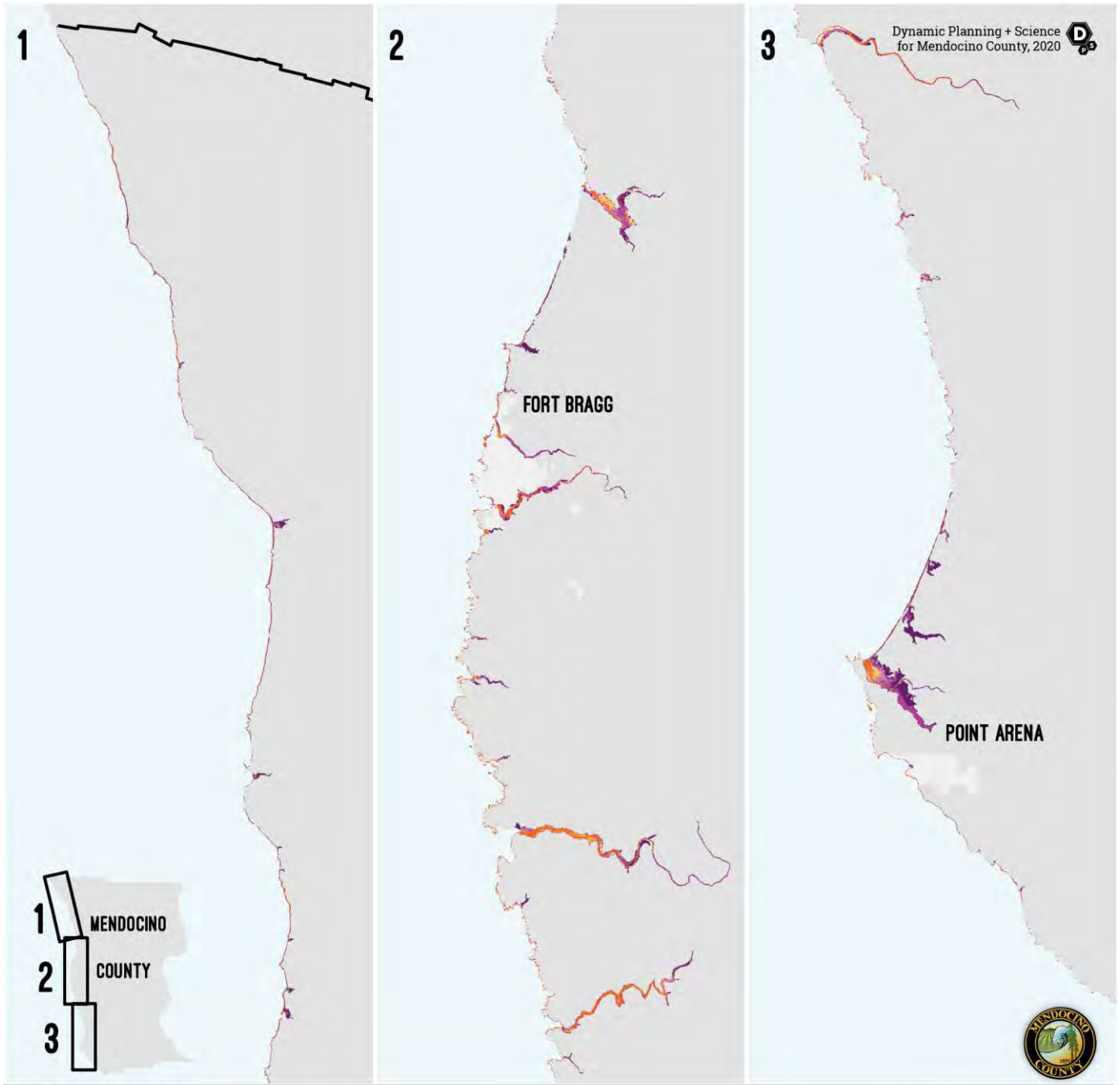
Generally, some level of sea-level rise is projected for the whole coastline of Mendocino County. The severity and extent of sea-level rise depends greatly on the future pathways for emission levels and how far into the future the analysis looks. Figure 4-19 shows predicted sea-level rise in Mendocino County based on the moderate RCP 4.5 emission level. *See Section 4.5.3.4 for an overview of frequency and probability of occurrence, which plays directly into the severity and extent of sea-level rise.*

⁵ The North Coast Region for California's Fourth Climate Change Assessment includes Mendocino, Humboldt, Del Norte, Lake, Trinity and Siskiyou Counties.



Current Departures from Average for Temperature and Precipitation

Parts of Mendocino County are already experiencing departures from historic average temperatures and historic average amounts of precipitation. See Figure 4-20 (temperature departure from average) and Figure 4-21 (precipitation departure from average). Southeastern portions of the county, including the City of Ukiah, are experiencing the most significant departures from normal currently.



SEA LEVEL RISE MENDOCINO COUNTY

*Data sources: NOAA - Classified by scenarios low rise to extreme rise..

MAP LEGEND			
AMOUNT OF RISE			
EXTREME (2.5M)	INTERMEDIATE (1.0M)		
HIGH (2.0M)	INTERMEDIATE LOW (0.5M)		
INTERMEDIATE HIGH (1.5M)	LOW (0.3M)		

Figure 4-19: Sea-level Rise Potential

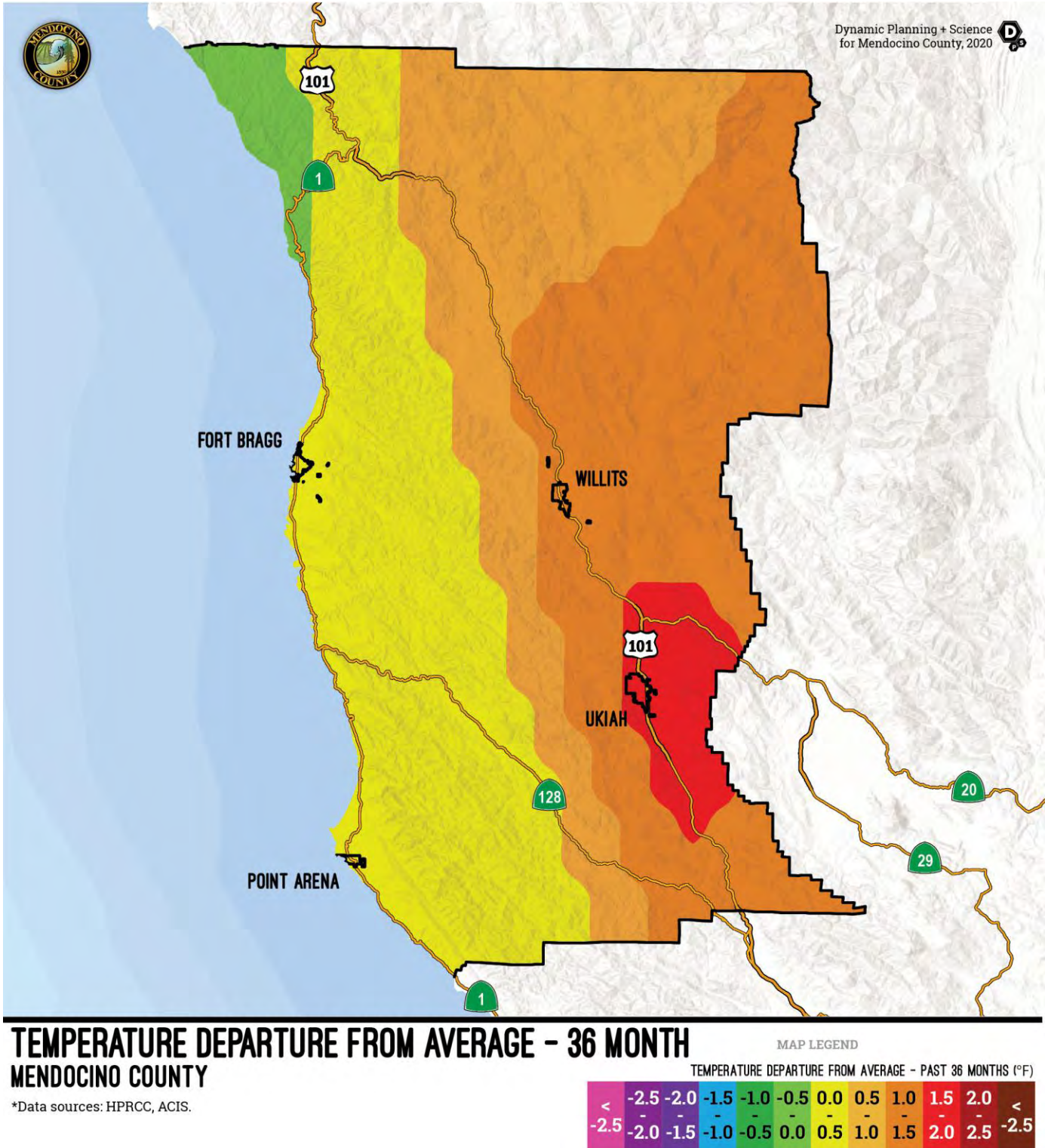


Figure 4-20: Temperature Departure From Average – 36 Month



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PRECIPITATION DEPARTURE FROM AVERAGE - 60 MONTH MENDOCINO COUNTY

*Data sources: HPRCC, ACIS.

MAP LEGEND

PRECIPITATION DEPARTURE FROM AVERAGE - PAST 60 MONTHS (IN.)

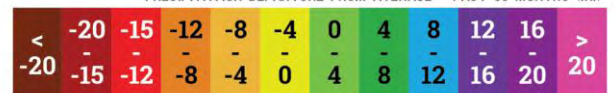


Figure 4-21: Precipitation Departure From Average – 60 Month



Average Maximum Temperature Increases

Overall temperatures are projected to rise by 5-9°F by the end of this century. Table 4-19 shows annual averages of observed and projected Maximum Temperature values for the Mendocino County Climate Region under the RCP 4.5 emissions scenario. These projections differ depending on the time of year and the type of measurement (highs vs. lows), all of which have different potential effects to the County's ecosystem health, agricultural production, water use and availability, and energy demand.

Figure 4-22 and Figure 4-23 compare current average maximum annual temperatures for Mendocino County (Figure 4-22) and predicted annual maximum temperatures utilizing moderate emissions scenarios from RCP 4.5 (Figure 4-23).

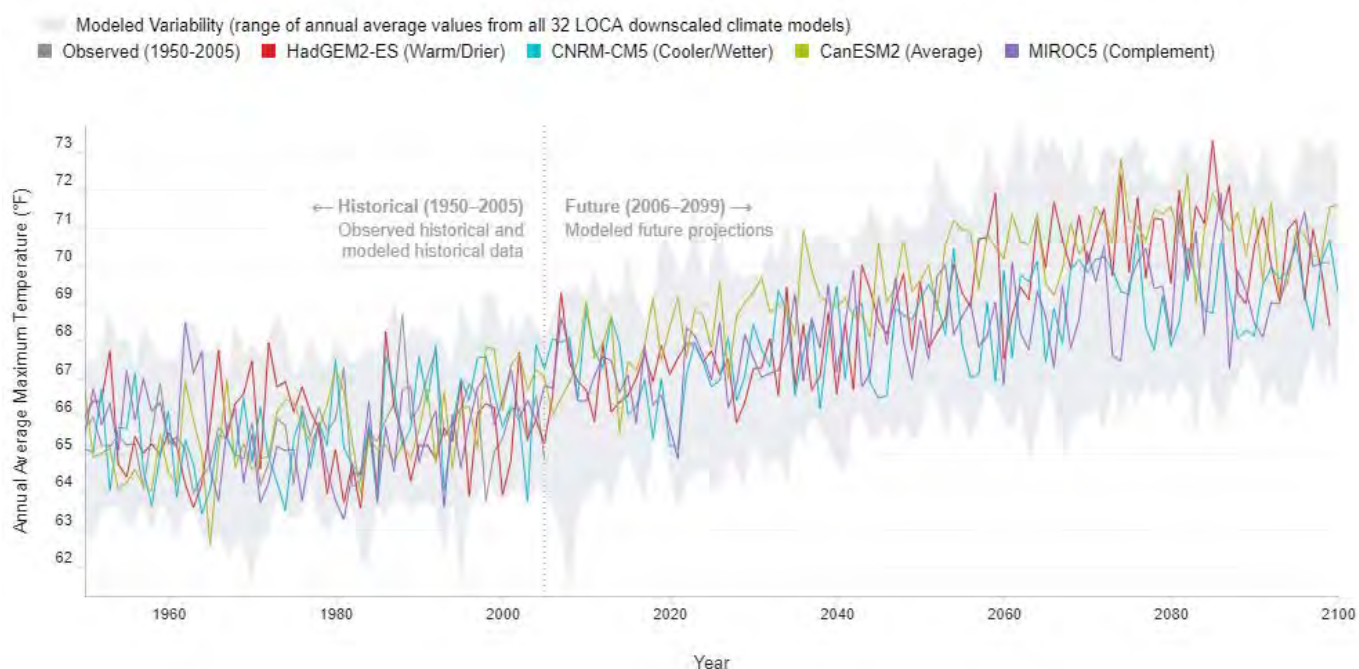
Figure 4-23 depicts average maximum temperature increases throughout Mendocino County starting in 2006 compared to 2009. There are four models which are depicted here. HadGEM2-ES has been termed the “warm/dry model,” and is weighted in rank closest to 1 across all metrics and RCPs. CanESM2 is the average model, which has a weighted rank closest to the average value across all metrics and RCPs. This is the model utilized throughout this document for climate change projections. The “cool and wet model” is CNRM-CM5 and has a weighted rank closest to 10. MIROC5 gives a more comprehensive range of the 10 California global climate model results. (Scripps Institution of Oceanography, 2018). See *Section 4.5.3.4* for a description of RCP.

Table 4-19: Maximum Temperatures in the Mendocino County Climate Region (RCP 4.5)

Source: cal-adapt.org

Annual Average Maximum Temperature

Data is shown for Mendocino County, California under the RCP 4.5 scenario in which emissions peak around 2040, then decline.





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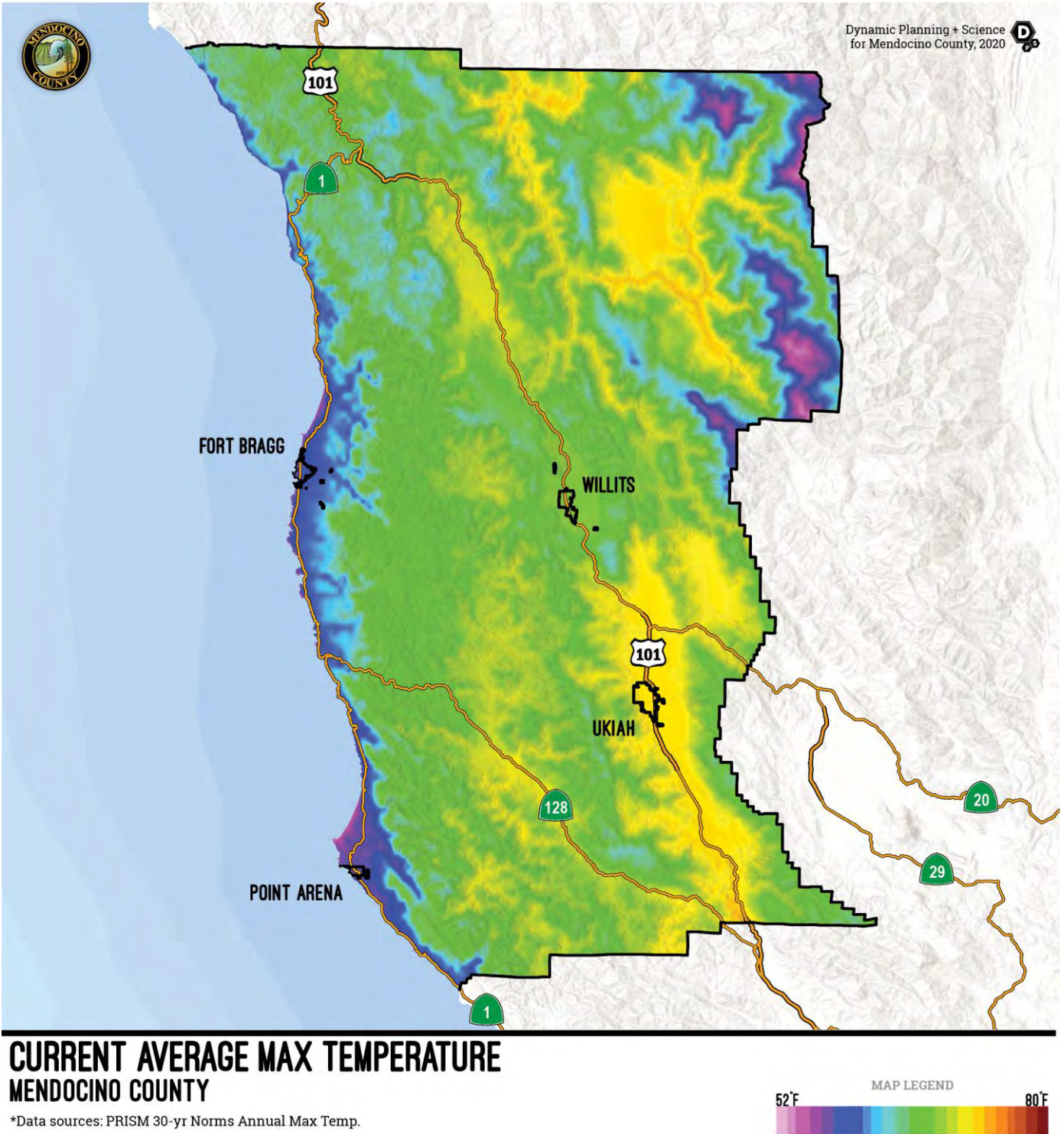


Figure 4-22: Current Average Max Temperature

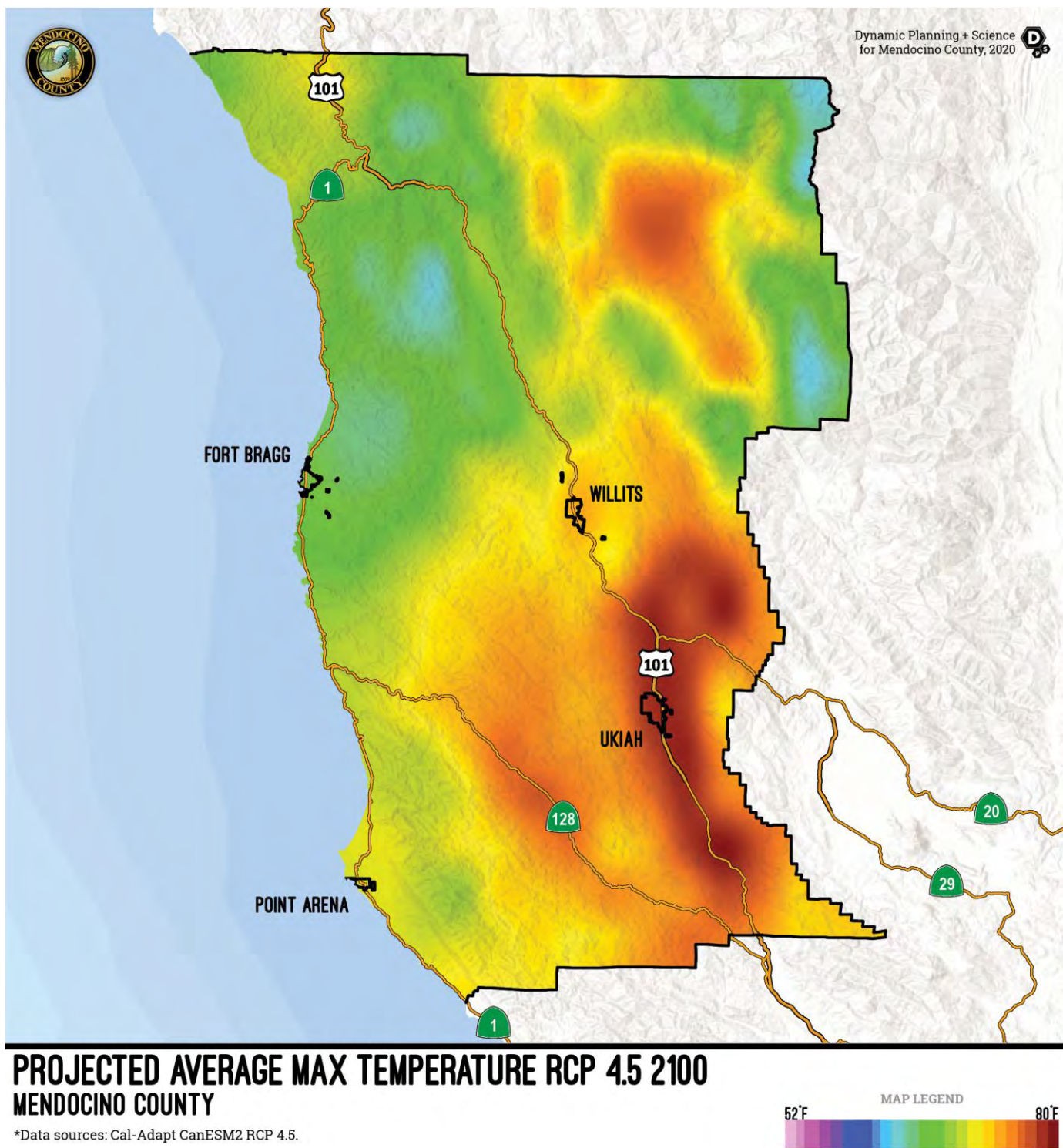


Figure 4-23: Projected Average Max Temperature RCP 4.5 2100



4.5.3.6 Warning Time

As this section as described, many existing hazards could be intensified as a result of climate change, decreasing warning times and exacerbating impacts. Warning times are discussed under the various other hazards. Other climate change impacts are more long-term; scientists have a high confidence in predicting the rise in global temperatures and have reached a consensus on the future impacts of climate change and the time frame in which they will occur.

Sea-level rise will occur slowly over time and increase impacts of other hazards profiled in the HMP such as coastal and bluff erosion and the potential impact of tsunamis.

4.5.3.7 Secondary Hazards

Secondary hazards of climate change include flood, severe weather, drought, wildfire, sea-level rise, extreme heat, and heavy rain events. Climate change will increase the frequency at which extreme weather events occur. Secondary hazards of climate change that will have the greatest impact on Mendocino County include flood, drought, and severe weather. Many of these impacts are discussed in other hazard profiles.

4.5.3.8 Vulnerability Assessment

This section outlines vulnerabilities of Mendocino County to impacts from climate change and focuses on sea-level rise in particular, as many of the other impacts are secondary, outlined in other hazard profiles within this document, and further explained and analyzed in the County's 2020 Climate Vulnerability Assessment. Sea-level rise also has delineated hazard boundaries and quantifiable exposure and damage estimations. This HMP Vulnerability Assessment summarizes population, including vulnerable populations in a more general context, property, and critical facilities within known hazard areas.

The County's 2020 Climate Vulnerability Assessment was developed to determine how climate change will likely affect the County's population and assets. The Assessment provides detailed analysis of how a range of climate impacts can harm people, physical structures, and other community assets throughout Mendocino County and will enable these jurisdictions to identify and take action to address dangerous conditions from climate change hazards before they develop or become more intense and frequent. This HMP Vulnerability Assessment does not supersede, but rather compliments, the County's 2020 Climate Vulnerability Assessment.

4.5.3.8.1 Population

The total number of County-wide households containing individuals aged 65 and older is approximately 84%. Approximately 25% of the population is Hispanic or Latino origin. Consequently, the County's projected climate change exposures have the potential to leave sensitive populations in the County especially vulnerable to increased risk. (American Community Survey, 2017)



Higher frequency of extreme heat conditions can cause serious public health impacts, increasing the risk of conditions directly related to heat such as heat stroke and dehydration. Older adults, particularly seniors, are more likely to experience respiratory and/or cardiovascular health complications than younger individuals. Approximately 36,043 residents of the County are elderly. These are populations are more likely to live alone with limited mobility. These conditions create the potential to exacerbate health risks associated with extreme heat. (*Id.*)

The majority of the County's large agricultural job base is of Hispanic origin. Heat stress can seriously affect those working outside, by reducing overall productivity and in extreme exposures could lead to illness, disability, or death. The portion of the County's Hispanic population that is low-income and that speaks primarily Spanish are especially vulnerable and would be impacted by a flood event associated with sea-level rise. Renters are also more vulnerable, as they are less likely to reinforce buildings and buy insurance because the decision to make major home improvements typically lies with the property owner. Additionally, disaster recovery services target homeowners; renters may not receive as much outreach.

As sea levels rise, the area and the number of people at risk because of flooding will also rise. Factors that increase vulnerability to the adverse impacts of flood events associated with sea-level rise include access to preparedness information, transportation, healthcare, and insurance. Key demographics associated with these vulnerabilities include income, race, linguistic isolation (i.e., non-English speaking), and residential tenure (CEC 2012:8). Language ability is an important factor in assessing vulnerability as emergency response crews may be unable to communicate with non-English speakers. The estimated population exposed to sea-level rise is summarized in Table 4-20.

The County has recently developed a Climate Vulnerability Assessment in conjunction with this HMP which delineates between vulnerable populations and critically vulnerable populations. Vulnerable populations include children, households in poverty, immigrants and refugees, outdoor workers, persons experiencing homelessness, overcrowded households, tribal communities, isolated communities, people with health issues or disabilities, people with limited English proficiency, people without access to lifelines, senior citizens, senior citizens who live alone, and undocumented people. (Mendocino Climate Vulnerability Assessment, 2020)

Critically vulnerable populations are defined as a subset of vulnerable populations that face high or severe vulnerability because of one or more climate-related hazard. They include households living in poverty, people experiencing homelessness, immigrants and undocumented peoples, and isolated communities or tribal communities. These populations are vulnerable to inland flooding, severe weather, extreme heat, wildfire and associated smoke. People in isolated communities and or tribal communities might not have access to critical goods and services. Isolated communities in coastal areas such as Gualala, Manchester, Casper, and Westport are exceedingly vulnerable to losing access to critical goods and services if Highway 1 is damaged or destroyed by dune and bluff erosion, landslides, inland flooding, shoreline flooding, or sea level rise. This might impact the supply of goods, accessibility of services, emergency medical response, and regional tourism necessary for sustaining local economies. (*Id.*)



4.5.3.8.2 Property

The Mendocino coastline is vulnerable to sea-level rise to a limited extent. Approximately 1 percent of the general population would be at risk of exposure and critical infrastructure such as transportation and lifeline could be impacted by up to a percentage as well. See Figure 4-25 for an exposure summary.

Climate change could significantly impact the agricultural and wine industries, which are large drivers of the County's economy. Specifically, the agricultural industry, which was recorded at \$166.7 million in 2017, could be especially impacted as climate variability interferes with crop production. (Mendocino County 2018-2019 Economic Assessment, 2019) Increases in temperature and changes in precipitation and soil moisture could impact the growth of wine grapes by causing late or irregular blooming and affecting yields.

The increased likelihood of extreme floods could lead to the destruction of crops, erosion of topsoil, and deposits of debris and sediment on croplands. Conversely, as average temperatures increase with climate change, agricultural demand for water could intensify under extreme heat conditions, under which water evaporates faster, and plants need more water to move through their circulatory systems to stay cool. More specifically, attempts to maintain wine grape productivity and quality in the face of warming may be associated with increased water use for irrigation, a change to different varieties of grapes, and to cool grapes through misting or sprinkling. As noted earlier, increased average temperatures and changes in timing and amounts of precipitation could affect local aquifer recharge for groundwater supplies in the future, which could in turn affect water supplies for agricultural uses.

Table 4-20: Population Exposure to Sea-level rise (Unincorporated County)

		Total Population
Unincorporated County		58,995
Sea Level Rise (Feet)	Population Count	% of Total
Low Rise (0.3m)	123	0.21%
Intermediate-Low Rise (0.5m)	136	0.23%
Intermediate Rise (1.0m)	148	0.25%
Intermediate-High Rise (1.5m)	190	0.32%
High Rise (2.0m)	323	0.55%
Extreme Rise (2.5m)	423	0.72%

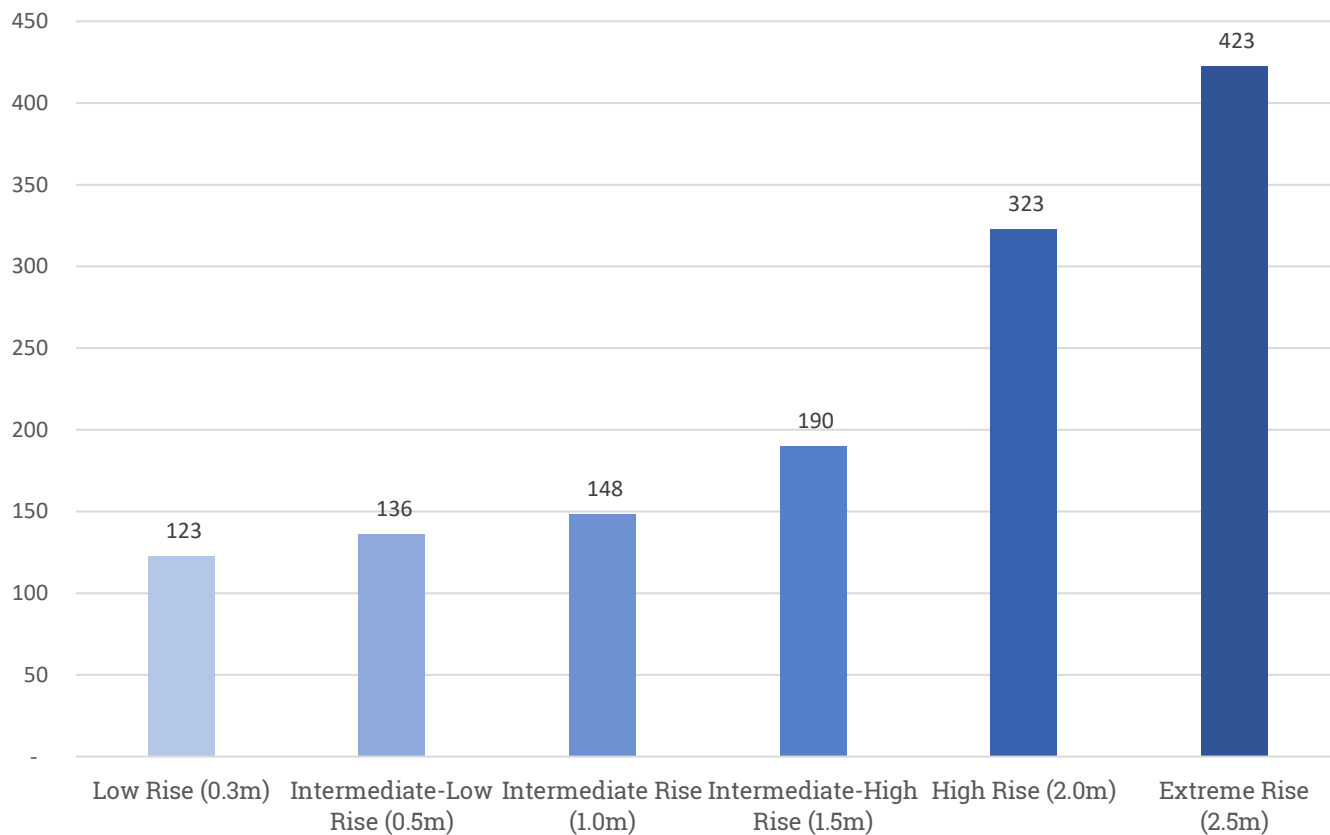


Figure 4-24: Population Exposure to Sea-level rise (Unincorporated County)



SEA LEVEL RISE

MENDOCINO COUNTY

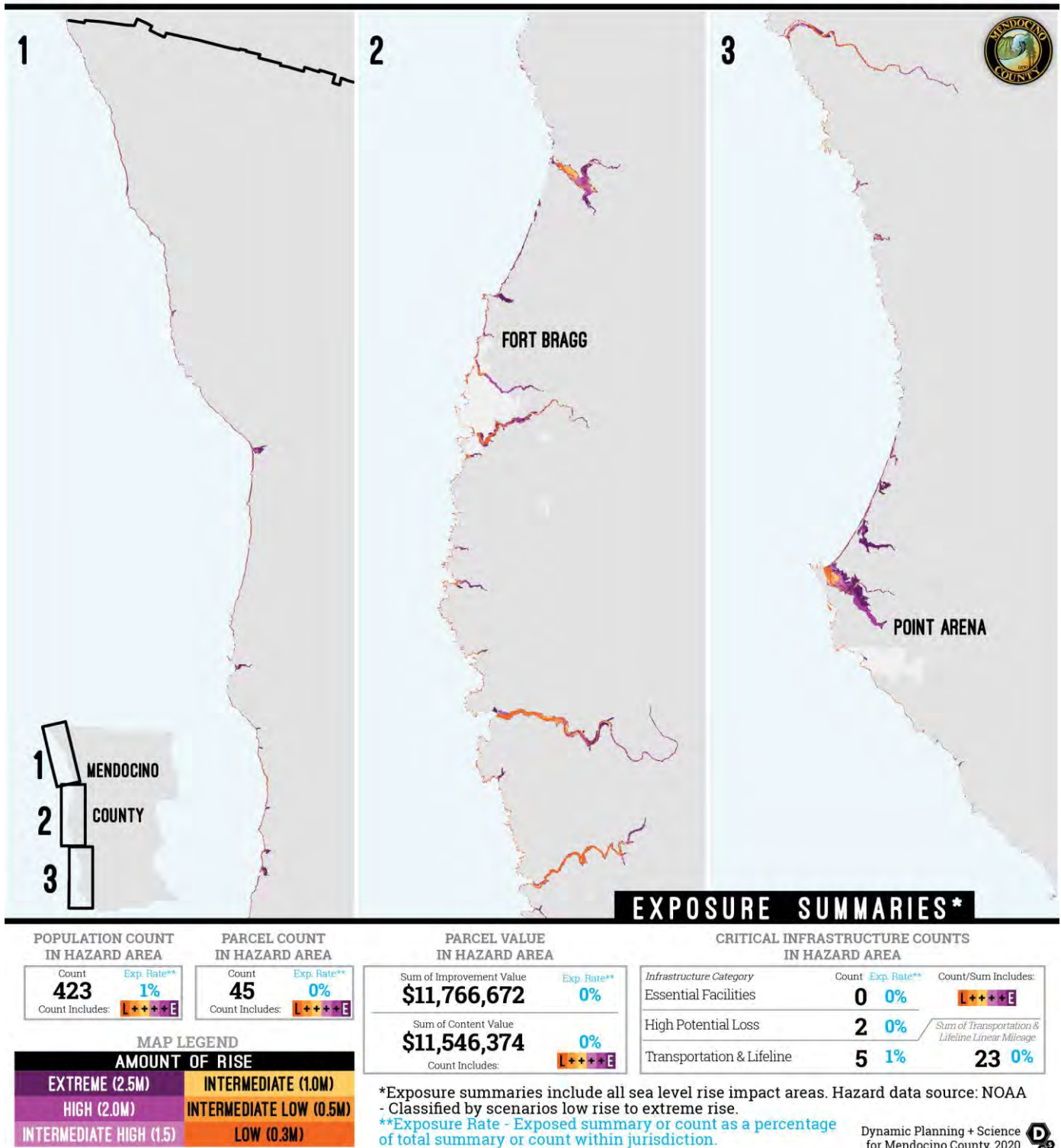


Figure 4-25: Sea-level rise Vulnerability and Exposure Snapshot



4.5.3.8.3 Critical Facilities

Some critical infrastructure (i.e., roads, hospitals, schools, emergency facilities, and properties) are at increased risk of coastal flooding in the County. For example, the Fort Bragg Intake Pump Station could become vulnerable to a 100-year flood event with 1.4 meters (m) of sea-level rise. Small sections of Highway 1 could also be completely obstructed (e.g. north of Point Arena from the delta of the Garcia River).

Critical facilities are summarized in the snapshot of sea-level rise in Figure 4-25. Table 4-21 and Table 4-22 summarize critical infrastructure exposed to sea-level rise in Mendocino.

Table 4-21: Critical Infrastructure Points in Sea-level rise Regions (Unincorporated County)

Critical Infrastructure - Sea-level rise						
Infrastructure Type	Low Rise	Intermediate-Low Rise	Intermediate Rise	Intermediate-High Rise	High Rise	Extreme Rise
Essential Facility	-	-	-	-	-	-
EOC	-	-	-	-	-	-
Fire Station	-	-	-	-	-	-
Law Enforcement	-	-	-	-	-	-
Medical Facility	-	-	-	-	-	-
High Potential Loss	-	-	-	-	2	2
Adult Residential Facility	-	-	-	-	-	-
Alternative Education Program	-	-	-	-	-	-
Animal Control	-	-	-	-	-	-
Child Care Center	-	-	-	-	-	-
Communication Tower	-	-	-	-	-	-
Community Center	-	-	-	-	-	-
Courthouse	-	-	-	-	-	-
Dam	-	-	-	-	-	-
Detention Center	-	-	-	-	-	-
Fairground	-	-	-	-	-	-
Family Child Care Home	-	-	-	-	-	-
Foster Family Agency	-	-	-	-	-	-
Historic Building	-	-	-	-	1	1
Historic Site	-	-	-	-	-	-
Library	-	-	-	-	-	-
Museum	-	-	-	-	-	-
Office	-	-	-	-	-	-
Park and Recreation	-	-	-	-	-	-
Power Plant	-	-	-	-	-	-
Real Property Asset*	-	-	-	-	1	1
Residential Child Care	-	-	-	-	-	-
Residential Elder Care Facility	-	-	-	-	-	-
School	-	-	-	-	-	-
Shop	-	-	-	-	-	-
Storage	-	-	-	-	-	-
Wastewater Treatment	-	-	-	-	-	-
Transportation and Lifeline	-	-	1	1	4	5



Critical Infrastructure - Sea-level rise						
Infrastructure Type	Low Rise	Intermediate-Low Rise	Intermediate Rise	Intermediate-High Rise	High Rise	Extreme Rise
Airport	-	-	-	-	-	-
Bridge	-	-	1	1	4	5
Bus Facility	-	-	-	-	-	-
Corp Yard	-	-	-	-	-	-
NG Station	-	-	-	-	-	-
Substation	-	-	-	-	-	-
Transfer Station	-	-	-	-	-	-
Hazmat	-	-	-	-	-	-
Hazmat	-	-	-	-	-	-
Grand Total	-	-	1	1	6	7

*Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.

-Sea-level rise Risk is cumulative

Table 4-22: Miles of Critical Infrastructure (Linear) in Sea-level rise Regions (Unincorporated County)

Lifelines (miles) - Sea-level rise						
Infrastructure Type (Linear)	Low Rise	Intermediate-Low Rise	Intermediate Rise	Intermediate-High Rise	High Rise	Extreme Rise
Levee	-	-	-	-	-	-
NG Pipeline	-	-	-	-	-	-
Railroad	0.0	0.0	0.0	0.0	0.1	0.4
Street	0.3	0.4	0.6	1.6	4.4	10.2
<i>4WD trail</i>	0.0	0.0	0.0	0.3	0.8	2.0
<i>4WD trail, major</i>	-	-	-	-	-	-
<i>Alley</i>	-	-	-	-	-	-
<i>Cul-de-sac</i>	-	-	-	-	-	-
<i>Driveway</i>	-	-	-	-	0.0	0.3
<i>Interstate</i>	-	-	-	-	-	-
<i>Local road</i>	0.0	0.1	0.2	0.8	2.8	6.2
<i>Local road, major</i>	-	-	-	-	0.0	0.0
<i>Primary highway</i>	0.2	0.3	0.4	0.5	0.9	1.5
<i>Ramp</i>	-	-	-	-	-	-
<i>Road, parking area</i>	-	-	-	-	-	-
<i>State/county highway</i>	-	-	-	-	-	0.1
<i>Thoroughfare, major</i>	-	-	-	-	-	-
<i>Traffic circle</i>	-	-	-	-	-	-
<i>Walkway</i>	-	-	-	-	-	-
Transmission Line	0.3	0.3	0.4	0.5	0.7	0.8
Grand Total	0.6	0.7	1.0	2.2	5.1	11.4



4.5.3.9 Future Trends in Development

The County is committed to continuing efforts to address and reduce existing climate-related risks and future impacts on a holistic and programmatic level. With several ordinances and programs that cover a range of climate exposures and related impacts, the County is well equipped to handle current issues of extreme heat events and water supply issues but could still likely face increasing challenges as projected changes occur.

The County has practices and organizations in place that help address future issues of sustainability and climate adaptation. The County has a County Climate Action Advisory Committee, which has proposed a resolution for the County to endorse a county-wide declaration of a climate emergency. The County is finding ways to change behaviors and practices now. The County has also adopted the Green Building Standards Code, which exemplifies the actionable steps that the County is taking in order to set a precedent for reduced energy use, building with more sustainable materials, and employing better water conservation tactics. Likewise, the County has recently developed a Climate Vulnerability Assessment Report in conjunction with this HMP. The intent of the Report is to protect the County from any current and projected hazardous conditions associated with Climate Change. The focus of the Report is on the health and safety of all County residents; this also includes maintaining a healthy economy for the County which is both diverse and strong. The Report profiles each jurisdiction in the County, including its local economy, and it tailors an adaptation planning method to include potential impacts to residents and the economies that they depend on such as tourism. Further, the Report also provides an assessment of building assets that support economic activities such as retail and tourism. (Mendocino Climate Vulnerability Assessment, 2020)

The County also joined Sonoma Clean Energy (SCE), which allows users to purchase more renewable energy options, as part of a progressive assembly bill called Community Choice Aggregation. Beginning in June of 2017, all homes, and businesses (except the City of Ukiah, which has its own energy provider) began receiving the power agency's default service, which runs on approximately 50% renewable power. (Sonoma Clean Power, 2020) (Clean Power Exchange, 2017) These efforts, however, need to be expanded and applied on a much larger scale, along with mitigation actions identified in this Plan, to address future changes attributed to climate change.



4.5.3.10 Climate Change Hazard Problem Statements

As part of the mitigation action identification process, each participating jurisdiction's Planning Committee identified issues and/or weaknesses (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and historic flood data. Climate change hazard problem statements are listed in Table 4-23.

Identifying these common issues and weaknesses assists the Planning Committee in understand the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-6 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-23 and Table 5-6.

Table 4-23: Climate Change Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-CC-MC-58	Climate Change	Impact	PE&A - Public Education & Awareness	Mendocino County	A warmer climate will have an impact on agriculture industries requiring research to better understand future impacts	ma-CC-MC-221
ps-CC-MC-59	Climate Change	Threat	PE&A - Public Education & Awareness	Mendocino County	Climate change will exacerbate the effects of other hazards including wildfire, drought, flood, and extreme weather	ma-AH-MC-134
ps-CC-MC-60	Climate Change	Threat	PE&A - Public Education & Awareness , NRP - Natural Resource Protection	Mendocino County	Increased average temperatures along with changes in precipitation could affect groundwater supplies in the County	ma-DR-MC-197



4.5.4 Earthquake Hazard Profile

Earthquake is the sudden shaking of the ground caused by the passage of seismic waves through Earth's rocks. Seismic waves are produced when some form of energy stored in Earth's crust is suddenly released, usually when masses of rock straining against one another suddenly fracture and "slip." Earthquakes associated with this type of energy release are called tectonic earthquakes. The energy also can be released by elastic strain, gravity, chemical reactions, or even the motion of massive bodies. Earthquakes occur most often along geologic *faults*, narrow zones where rock masses move in relation to one another. (United States Geological Survey, n.d.)



Earthquakes have different properties depending on the type of fault that causes them. See Figure 4-26. The usual fault model has a "strike" (that is, the direction from north taken by a horizontal line in the fault plane) and a "dip" (the angle from the horizontal shown by the steepest slope in the fault). The lower wall of an inclined fault is called the footwall. Lying over the footwall is the hanging wall. When rock masses slip past each other parallel to the strike, the movement is known as strike-slip faulting. Movement parallel to the dip is called dip-slip faulting. In dip-slip faults, if the hanging-wall block moves downward relative to the footwall block, it is called "normal" faulting; the opposite motion, with the hanging wall moving upward relative to the footwall, produces reverse or thrust faulting. (*Id.*)

As a fault rupture progresses along or up the fault, rock masses are flung in opposite directions and thus spring back to a position where there is less strain. (*Id.*)

Soil Liquefaction

Soil liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Soil liquefaction and related phenomena have been responsible for tremendous amounts of damage in historical earthquakes around the world. Soil liquefaction

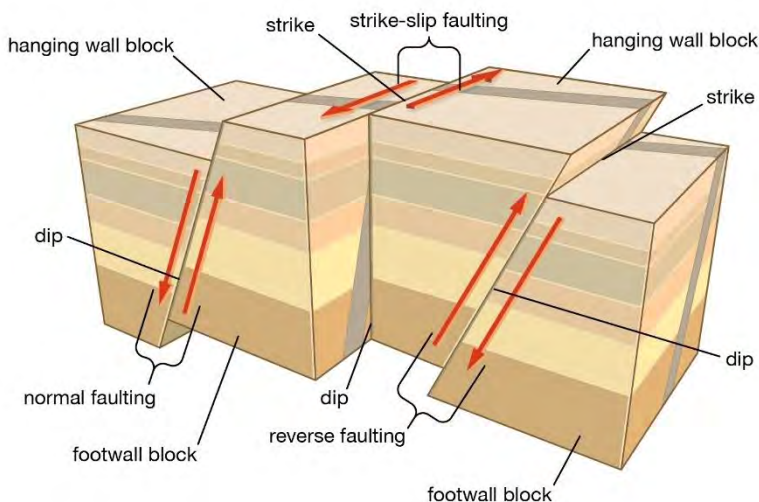


Figure 4-26: Earthquake Faulting

occurs when seismic waves pass through saturated granular soil, distorting its granular structure, and causing some of the pore spaces between granules to collapse. Pore-water pressure may also increase sufficiently to cause the soil to behave like a fluid for a brief period and cause deformations. Saturated or partially-saturated soil substantially loses strength and stiffness in response to an applied stress such as shaking during an earthquake or other sudden change in stress condition. The phenomenon is most often observed in saturated, loose, low-density or uncompacted, sandy soils. Loose sand tends to compress when a load is applied. Dense sands, by contrast, tend to expand in volume or 'dilate'. If the soil is saturated



by water, which often occurs when soil is below the water table or sea level, then water fills the pore spaces between soil grains. (United States Geological Survey, n.d.)

Artificial induction

Earthquakes are sometimes caused by human activities, including the injection of fluids into deep wells, pumping of groundwater, the excavation of mines, and the filling of large reservoirs. In fluid injection, the slip is thought to be induced by premature release of elastic strain, as in the case of tectonic earthquakes, after fault surfaces are lubricated by the liquid. (United States Geological Survey, n.d.)

Earthquake Classifications

Earthquakes are typically classified either 1) by the amount of energy released, measured as *magnitude*, or 2) by the impact on people and structures, measured as *intensity*. (United States Geological Survey, n.d.)

Magnitude

The most common method for measuring earthquakes is magnitude, which measures the strength of earthquakes. While the majority of scientists generally use the **Moment Magnitude (Mw) Scale** to measure earthquake magnitude, the **Richter (M) Scale** is the most universally-known measurement. The magnitude of an earthquake is related to the total area of the fault that ruptured, as well as the amount of offset (displacement) across the fault. As shown in Table 4-24, there are seven earthquake magnitude classes on the Mw scale, ranging from great to micro. A magnitude class of great can cause tremendous damage to infrastructure, compared to a micro class, which results in minor damage to infrastructure. (*Id*)

Earthquake Magnitude Classes (Mw)		
Magnitude Class	Magnitude Range (M = Magnitude)	Description
Great	M > 8	Tremendous damage
Major	7 <= M < 7.9	Widespread heavy damage
Strong	6 <= M < 6.9	Severe damage
Moderate	5 <= M < 5.9	Considerable damage
Light	4 <= M < 4.9	Moderate damage
Minor	3 <= M < 3.9	Rarely causes damage.
Micro	M < 3	Minor damage

Table 4-24: Moment Magnitude Scale



Intensity

The effects of an earthquake in a particular location are measured by intensity. Earthquake intensity decreases with increasing distance from the epicenter of the earthquake. The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects experienced at that place. (United States Geological Survey)

The **lower** numbers of the intensity scale generally deal with the manner in which the earthquake is felt by people. The **higher** numbers of the scale are based on observed structural damage. Structural engineers usually contribute information for assigning intensity values of VIII or above. Table 4-25 is an abbreviated description of the levels of Modified Mercalli Intensity. (*Id*)

Table 4-25: Modified Mercalli Intensity Level Descriptions

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations are similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Similar to a heavy truck striking a building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone, many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: USGS, Abridged from The Severity of an Earthquake, USGS General Interest Publication 1989-288-913



Ground Motion

Earthquake hazard assessment is also based on expected ground motion. This involves determining the annual probability that certain ground motion accelerations will be exceeded, then summing the annual probabilities over the time period of interest. The most commonly-mapped ground motion parameters are the horizontal and vertical peak ground accelerations (PGA) for a given soil or rock type. Instruments called accelerographs record levels of ground motion due to earthquakes at stations throughout a region. These readings are recorded by state and federal agencies that monitor and predict seismic activity. (Pacific Northwest Seismic Network)

Maps of PGA values form the basis of seismic zone maps that are included in building codes such as the International Building Code. Building codes that include seismic provisions specify the horizontal force due to lateral acceleration that a building should be able to withstand during an earthquake. PGA values are directly related to these lateral forces that could damage “short period structures” such as single-family dwellings. Longer-period response components determine the lateral forces that damage larger structures with longer natural periods such as apartment buildings, factories, high-rises, bridges. Table 4-26 lists the damage potential and perceived shaking by PGA factors, compared to the Mercalli scale. (USGS)

Table 4-26: Modified Mercalli Scale and Peak Ground Acceleration

Modified Mercalli Scale	Perceived Shaking	Potential Structure Damage		Estimated PGA (%g)
		Resistant Buildings	Vulnerable Buildings	
I	Not Felt	None	None	<0.17%
II-III	Weak	None	None	0.17% - 1.4%
IV	Light	None	None	1.4% - 3.9%
V	Moderate	Very Light	Light	3.9% - 9.2%
VI	Strong	Light	Moderate	9.2% - 18%
VII	Very Strong	Moderate	Moderate/Heavy	18% - 34%
VIII	Severe	Moderate/Heavy	Heavy	34% - 65%
IX	Violent	Heavy	Very Heavy	65% - 124%
X - XII	Extreme	Very Heavy	Very Heavy	>124%

Note: PGA measured in percent of g, where g is the acceleration of gravity

Sources: USGS, 2008; USGS, 2010



4.5.4.1 Plans, Policies, and Regulatory Environment

Alquist-Priolo Earthquake Fault Zoning Act and Seismic Hazards Mapping Act (1972)

The 1971 San Fernando Earthquake resulted in the destruction of numerous structures built across its path. This led to passage of the **Alquist-Priolo Earthquake Fault Zoning Act** in 1972. This Act prohibits the construction of buildings for human occupancy across active faults in the State of California. Similarly, extensive damage caused by ground failures during the 1989 Loma Prieta Earthquake focused attention on decreasing the impacts of landslides and liquefaction. This led to the creation of the **Seismic Hazards Mapping Act**, which increases construction standards at locations where ground failures are probable during earthquakes. Figure 4-27 displays these zones of required investigation in Mendocino County.

2019 California Building Standards Code

The 2019 California Building Code, adopted by Mendocino County in December 2019, includes materials requirements, construction methods, and maintenance standards for earthquake protection and resiliency.

Mendocino County General Plan

The 2009 Mendocino County General Plan includes the following goals and policies in the Development Element to mitigate the effects of earthquakes:

Development Element

Goal DE-24 (Safety): To reduce, to the extent possible, the risk and exposure of life, property and the environment to hazardous conditions and events such as earthquakes, landslides, wildfires, floods, inundation, energy emergencies, and toxic releases.

Policy DE-233: Require that structures for human habitation and occupancy, including residential, commercial and industrial uses, incorporate engineering and design measures which reduce risk to life in areas subject to excessive ground shaking and liquefaction during an earthquake.

Action Item DE-233.1: Continue to administer the Alquist-Priolo Earthquake Fault Zoning Act which defines and mitigates impacts relating to surface fault-rupture hazards.

Action Item DE-233.2: Implement the Seismic Hazards Mapping Act when maps become available for Mendocino County (Public Resources Code, Division 2, Chapter 7.8).

Action Item DE-233.3: Require geologic, seismic, and/or soil engineering reports in areas of known or potential geologic hazards prior to final approval of discretionary permits.

Action Item DE-233.4: Revise County codes to state that geologic, seismic, and soils reports must be prepared by the qualified professionals specified by law.



Policy DE-234: Prohibit structures necessary for public safety or emergency services in areas subject to ground shaking and subsequent failure unless the public benefit outweighs the use of reasonably feasible alternate sites.

Minimum Provisions for Public Notice and Structural Seismic Resistance in Mendocino County Code, § 18.30

The Mendocino County Code establishes minimum standards for public notice and structural seismic resistance as provided in the State Historical Building Code. Public notice standards require that building owners or agents post a notice in a conspicuous area in or on the building. The notice is an earthquake warning which must state that the building contains unreinforced masonry walls, and that they do not comply with building code requirements for earthquake resistant design and may be unsafe in an earthquake.

4.5.4.2 Past Events

A number of significant (more than 4.5 M) earthquakes have occurred in and near Mendocino County over the last sixteen years. *See* Table 4-27 for earthquake events 4.5 magnitude or higher since 2004. Two adjacent areas, in particular, located in the region between Healdsburg and Ukiah experienced earthquakes of 5.0 and 5.1, respectively, during 2016. The August 2016 earthquake resulted in minimal damage to homes in the area. This area is known for experiencing an earthquake every 15 years on average. The December 2016 earthquake had an epicenter just 24 miles from Ukiah. ([KTLA Local News, 2016](#))

Table 4-27: Earthquakes in or near Mendocino County 4.5 Magnitude or Greater Since 2004

Date	Location	Magnitude (M)
2/18/2004	Northern California	4.6
05/12/2006	Northern California	4.7
10/20/2006	Northern California	4.6
4/18/2007	Northern California	4.8
9/25/2012	Northern California	4.5
1/12/2014	6km Northwest of the Geysers, Ca	4.5
8/10/2016	20km Northeast of Upper Lake, Ca	5.1
12/14/2016	8km Northwest of the Geysers, Ca	5.0

Source: USGS

4.5.4.3 Location

The Alquist-Priolo Act established earthquake fault zones in California. These Alquist-Priolo Earthquake Fault Zones encompass surface traces of active faults that have a potential for future surface fault rupture and are mapped as estimated fault locations across California. These zones require future investigation to determine the location of the fault.



These zones have been established by the State Geologist and indicate an active fault within the zone. The fault may pose a risk to existing or future structures from a surface fault rupture. The major faults include the San Andreas (North Coast) fault system running north and south through the County, the Maacama⁶ fault zone which extends north to south through most of the County, and the Barlett Springs fault which extends southward from the north of Arcata towards Lake Berryessa. Figure 4-27 shows the location of fault zones as well as the underlying quaternary faults near the County. (Mendocino 2014 MJHMP, 2014)

4.5.4.4 Frequency/ Probability of Future Occurrences

This plan utilizes two mapping tools for understanding the frequency and probability of an earthquake occurring at different faults in and around Mendocino County: 1) the Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3)(see Figure 4-28) and the Earthquake Shaking Potential based on the USGS National Seismic Hazard Model (see Figure 4-29). Both mapping tools are described in more detail below.

Importantly, these probabilistic maps were used to determine the earthquake scenario used for the vulnerability analysis. This plan focuses on the North San Andreas North Coast and the Maacama scenarios because they are the scenarios with the highest likelihood of severe shaking and of producing a magnitude 6.7 earthquake within the next 30 years. See Figure 4-30 for an overview map of the scenario and Section 4.5.4.4.3 for further explanation on why this scenario was chosen.

According to the California State Hazard Mitigation Plan, earthquakes large enough to cause moderate damage to structures—those of 5.5 Magnitude (M.) or larger—occur three to four times a year statewide. Strong earthquakes of 6 to 6.9 M. strike on an average of once every two to three years. Major earthquakes of 7 to 7.9 M. occur in California about once every 10 years.

⁶ This MJHMP utilizes fault terminology from the US Geological Survey, and the spelling of the Maacama fault is different from the spelling of Mayacama in other features throughout the region. See https://earthquake.usgs.gov/cfusion/qfault/show_report_AB_archive.cfm?fault_id=30§ion_id=a.



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REGIONAL FAULT LINES MENDOCINO COUNTY

*Data sources: USGS

MAP LEGEND

- QUATERNARY FAULTS (USGS)
- EARTHQUAKE FAULT ZONE OF REQUIRED INVESTIGATION (CGS)

Figure 4-27: Zones of Required Investigation

Quaternary faults, as illustrated in red in Figure 4-27, are those active faults that have been recognized at the surface and which have evidence of movement in the past 1.6 million years - the duration of the Quaternary Period.



4.5.4.4.1 30-Year Earthquake Probability (UCERF3)

Probability of earthquake events is based on the approximate location of earthquake faults within and outside the Mendocino County region. The Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3)⁷ is a comprehensive model of earthquake occurrence for California. It represents the best available science for authoritative estimates of the magnitude, location, and likelihood of potentially damaging earthquakes in California. According to UCERF3 and as shown in Figure 4-28, the San Andreas fault has a 10% to 100% probability of occurrence within 30 years, the highest probability affecting the County. The most recent earthquake to happen in the Mendocino area was a 5.0 earthquake, which happened in 2016, approximately 8 km northwest of Geysers, California. (*Id.*)

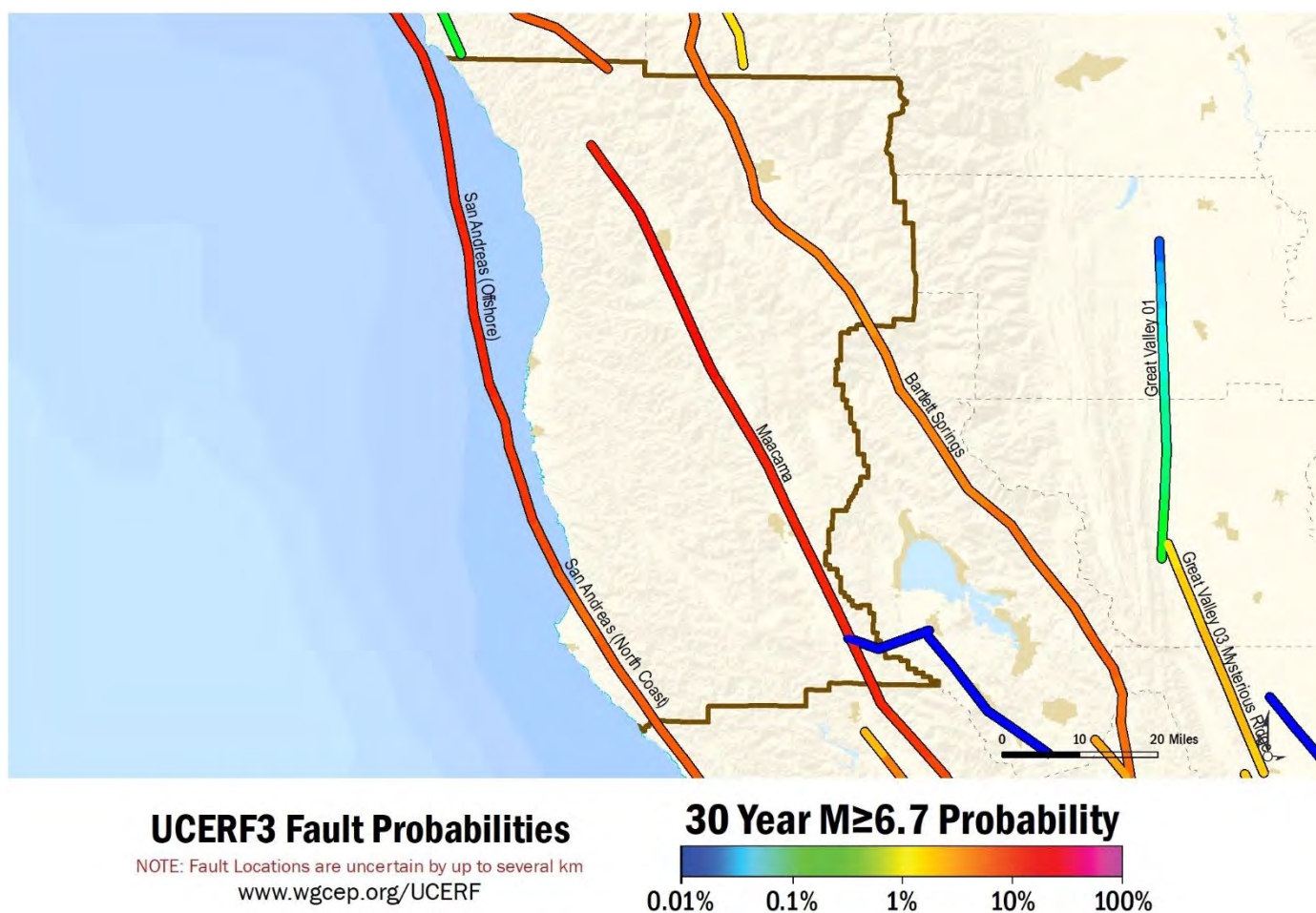


Figure 4-28: Fault Probability Map for Mendocino County

⁷ Quaternary faults are those active faults that have been recognized at the surface and which have evidence of movement in the past 1.6 million years - the duration of the Quaternary Period.



4.5.4.4.2 Earthquake Shaking Potential

The Earthquake Shaking Potential Map, Figure 4-29, shows potential seismic shaking from anticipated future earthquakes. It is probabilistic in the sense that the analysis takes into consideration the uncertainties in the size and location of earthquakes and the resulting ground motions that can affect a particular site. (CGS, 2020) It is also useful in understanding the probability of severe shaking in different locations throughout the County, as discussed in Section 4.5.4.5.

The map is expressed in terms of the probability of exceeding a certain ground motion. The map shows a 2% probability of exceeding one second of ground motion in 50 years. Earthquake shaking potential in California is calculated based on the USGS National Seismic Hazard Model and in partnership with California Geological Survey (CGS). Earthquake shaking potential also considers historic earthquakes, slip rates on major faults, deformation throughout the region, and the potential for amplification of seismic waves by near-surface geologic materials. (CGS, 2020)

The map depicts a range of lower hazard to higher hazard probability, where higher hazard areas are those regions near major, active faults that will on average experience stronger earthquake shaking more frequently. This intense shaking can damage even strong, modern buildings. Lower hazard areas are those regions that are distant from known, active faults that will experience lower levels of shaking less frequently. In most earthquakes, only weaker, masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in those locations. (D. Branum, 2016)

The shaking potential is calculated as the level of ground motion that has a 2% chance of being exceeded in 50 years, which is the same as the level of ground-shaking with about a 2500-year average repeat time. Relatively long-period (1.0 second) earthquake shaking is shown. Long-period shaking affects tall, relatively flexible buildings, but also correlates well with overall earthquake damage. Although the greatest hazard is in areas of highest intensity as shown in Figure 4-29, no region is immune from potential earthquake damage. (*Id.*)

The potential for earthquake ground shaking, as defined by the U.S. National Seismic Hazard Model, is used by engineers to design buildings for larger ground motions than what we think will occur during a 50-year interval, which will make buildings safer than if they were only designed for the ground motions that we expect to occur in the next 50 years. (USGS, 2020)

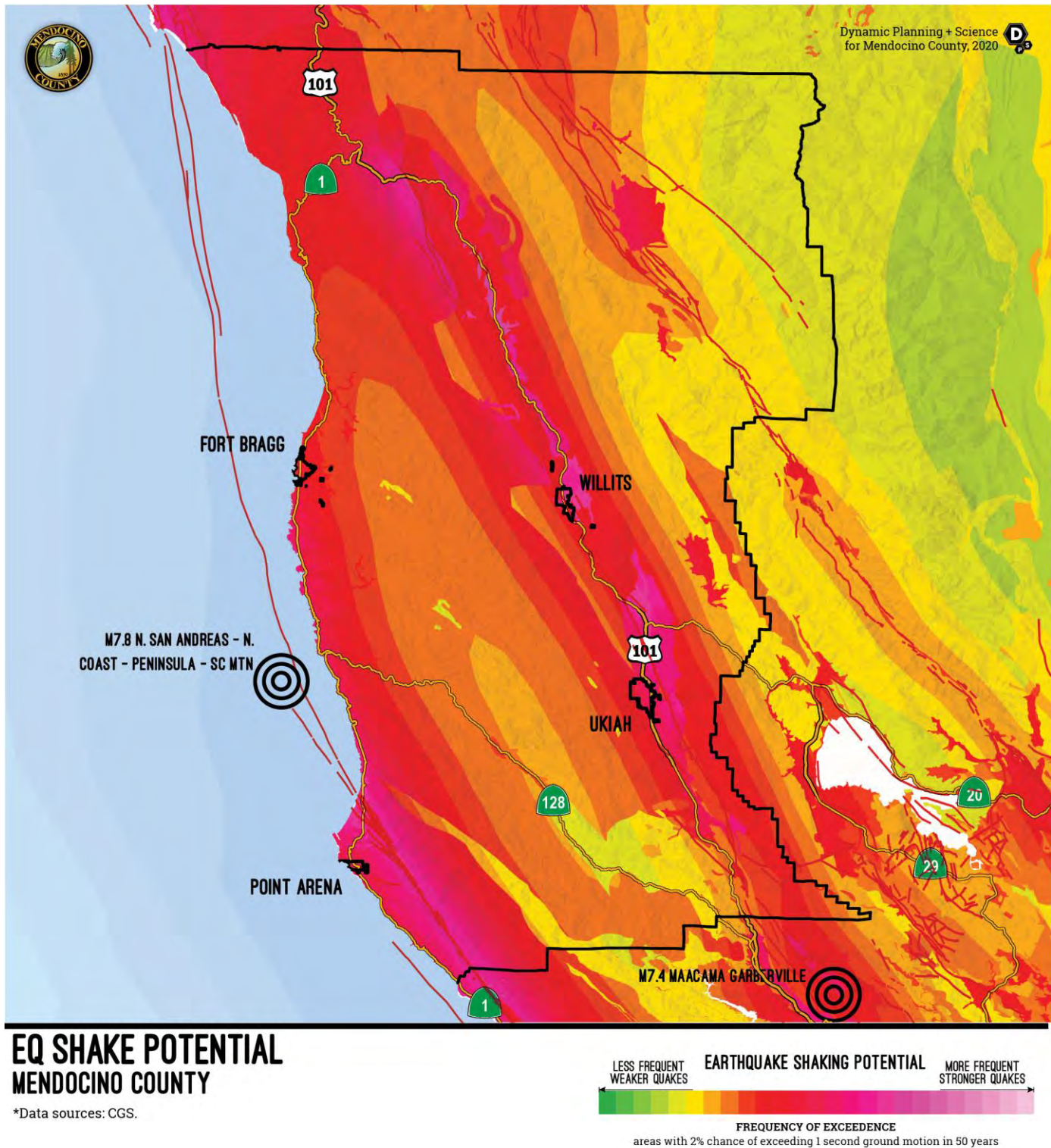


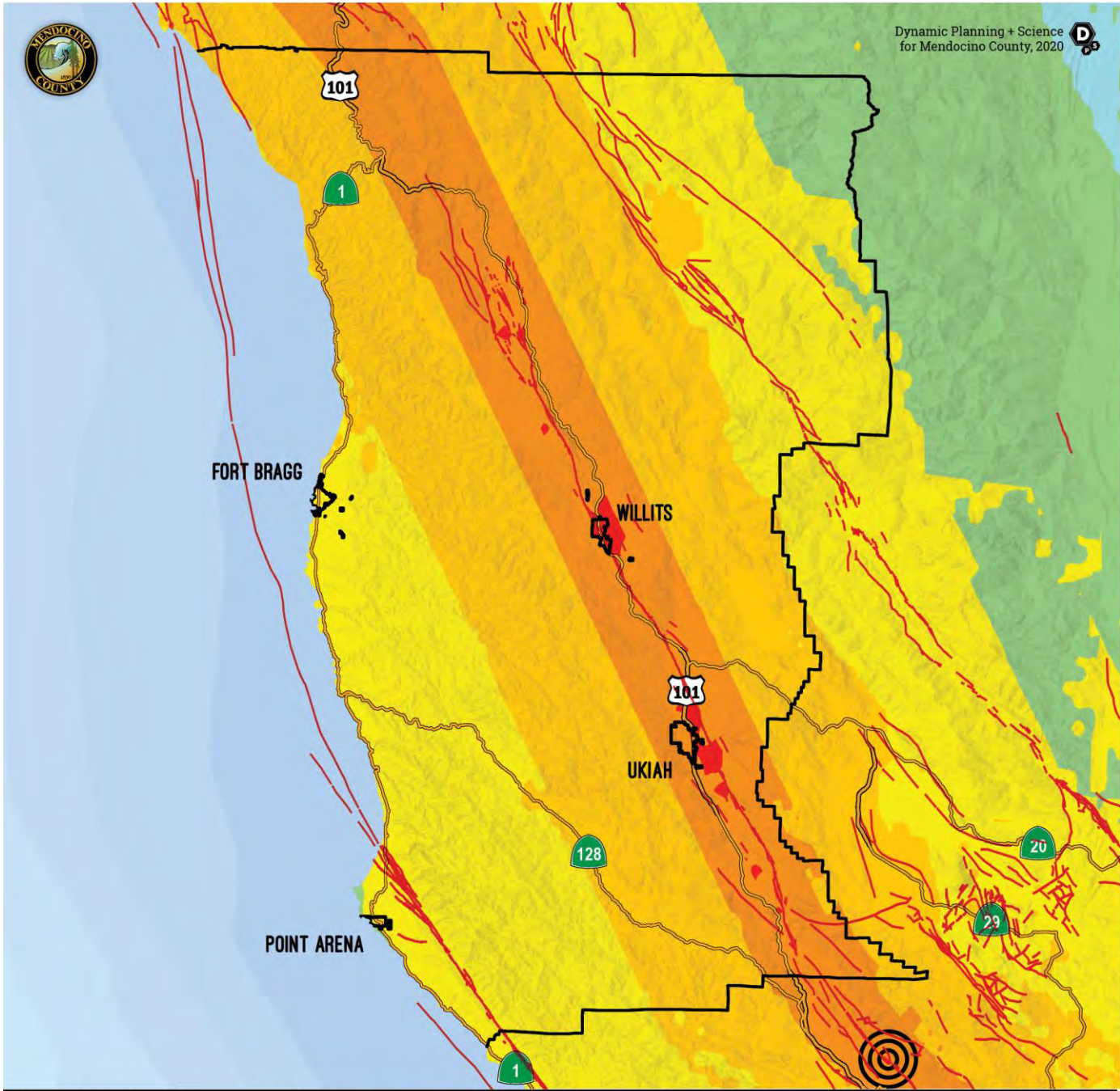
Figure 4-29: Earthquake Shaking Potential



4.5.4.4.3 N. San Andreas and Maacama Garberville Earthquake Scenarios

The North San Andreas and the Maacama Garberville earthquake scenarios were chosen from a range of regional, scenario-based shakemaps available from USGS for the vulnerability analysis. The shakemap data consist of peak ground velocity, peak ground acceleration, peak spectral accelerations in an earthquake scenario. The San Andreas fault has the near highest probability of an earthquake greater than 7.8 M. within Mendocino County, with a greater than 10% annual probability. The Maacama Garberville fault also has a greater than 10% annual probability. See Figure 4-28 for these probabilities. Likewise, the most significant shaking potential depicted in the ShakeMap in Figure 4-29 centers around the San Andreas and Maacama Garberville fault systems, the epicenter of which is shown on the same. The 7.4 M Maacama is shown in Figure 4-30 and the 7.8 M North San Andreas fault scenarios is shown in Figure 4-31.

Section 4.5.4.8.1 analyzes the County's exposure to these scenarios and Section 4.5.4.8.2 details damage estimation to residential properties and County facilities for these scenarios.

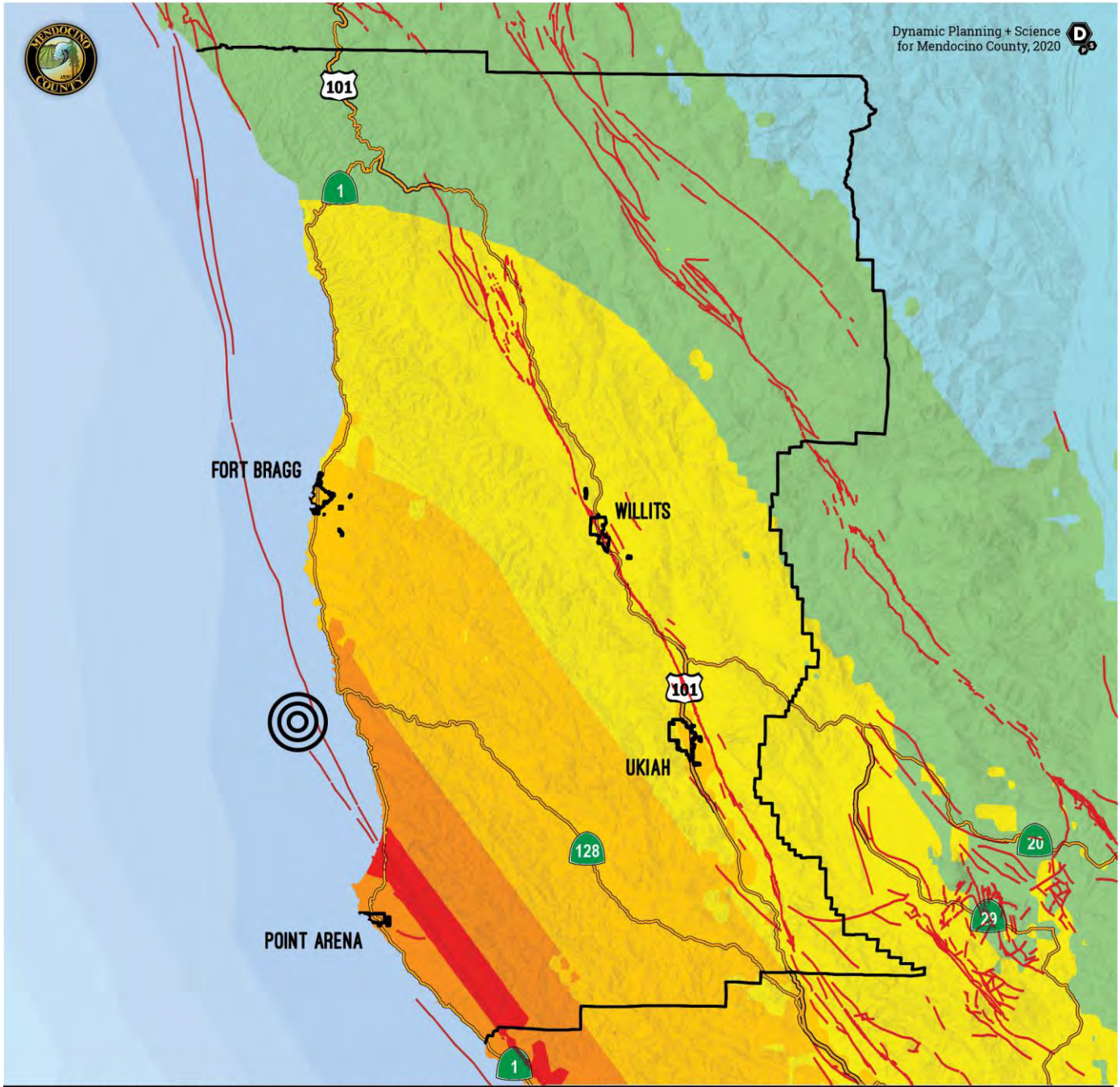


M7.4 MAACAMA GARBERVILLE MENDOCINO COUNTY

*Data sources: USGS.



Figure 4-30: M7.4 Maacama Garberville



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN MENDOCINO COUNTY

*Data sources: USGS.



Figure 4-31: M7.8 N. San Andreas -N. Coast – Peninsula – SC MTN



4.5.4.5 Severity and Extent

As we know from past events, even a “moderate” earthquake occurring in or near the Mendocino County region could result in deaths, casualties, property and environmental damage, and disruption of normal services and activities. The severity of the event could be aggravated by collateral emergencies such as fires, hazardous material spills, utility disruptions, landslides, transportation emergencies, and the possible failure of the Mendocino County dams.

Neither the occurrence of an earthquake nor the severity can be predicted. Instead, scientists can only calculate the probability that a significant earthquake will occur in a specific area within a certain number of years.

The probabilistic Earthquake Shake Potential Map, Figure 4-29, illustrates the areas of the County most likely to experience an earthquake exceeding one second of ground motion in 50 years, which aids in understanding locations in Mendocino County with the greatest probability of experiencing a severe earthquake. The greatest probability of a severe earthquake focuses on the North San Andreas fault and the Maacama Garberville fault. This is merely a probability, as the same map also illustrates that most of the County is susceptible to moderate-to-severe earthquakes depending on the location, intensity, and magnitude of the earthquake.

4.5.4.6 Warning Time

There is currently no reliable way to predict the day or month that an earthquake will occur at any given location. Research is being done with warning systems that use the low energy waves that precede major earthquakes. Seconds and minutes of advance warning can allow people and systems to take actions to protect life and property from destructive shaking. Even a few seconds of warning can enable protective actions specific to various sectors of the population, such as:

- **Public:** Citizens, including schoolchildren, drop, cover, and hold on; turn off stoves, safely stop vehicles.
- **Businesses:** Personnel move to safe locations, automated systems ensure elevator doors open, production lines are shut down, sensitive equipment is placed in a safe mode.
- **Medical services:** Surgeons, dentists, and others stop delicate procedures.
- **Emergency responders:** Open firehouse doors, personnel prepare and prioritize response decisions.
- **Power infrastructure:** Protect power stations and grid facilities from strong shaking.



4.5.4.7 Secondary Hazards

Earthquakes can create tsunamis which have the potential to affect the coastline and coastal delta areas of Mendocino County. Other hazards that can occur from earthquakes, such as dam failure or wildfires, are profiled in other parts of this plan.

Tsunamis

Tsunamis are typically caused by earthquakes generated in subduction zones, areas where ocean plates are forced down into the mantle by plate tectonic forces. This creates an enormous friction between the plates and eventuates in an accumulated seismic energy which is released in the form of a tsunami when the plates spring back into unrestrained positions. The Mendocino County region marks the start of the Cascadia subduction zone.

The actual height of a tsunami wave in open water is generally only 1 to 3 feet and can often be unnoticeable to people aboard ships. The energy of a tsunami passes through the entire water column to the seabed, unlike surface waves, which typically reach only down to a depth of 30 feet or so. The tsunami wave travels across the ocean at speeds up to 700 miles per hour. As the tsunami enters shallower water near coastal shorelines, it slows to about 20 to 30 miles per hour. As it nears the coast, the wave can increase to a height of 90 feet or more as it approaches the coastline and compresses. (National Oceanic and Atmospheric Administration, 2018)

Tsunamis can result in severe property damages and loss of life. They can also disrupt emergency services and transportation routes. (Geology.com, 2020)

Past Events

A number of significant tsunamis have impacted Mendocino County over the last 124 years. Table 4-28 depicts tsunami events with recorded wave height locations in Mendocino County.

Date	Source Location	Source Type	Recorded Wave Height Location	Max. Run-up (Feet)
6/15/1896	Sanriku, Japan	8.3 M Earthquake	Mendocino, CA	3.28
4/18/1906	N. California, USA	7.9 M Earthquake	Navarro River, CA	-
4/1/1946	Unimak Island, AK, USA	8.6 M Earthquake	Caspar Beach, CA	-
4/1/1946	Unimak Island, AK, USA	8.6 M Earthquake	Navarro River, CA	-
4/1/1946	Unimak Island, AK, USA	8.6 M Earthquake	Noyo, CA	4.92
4/1/1946	Unimak Island, AK, USA	8.6 M Earthquake	Arena Cove, CA	7.87
3/9/1957	Andreanof Islands, AK, USA	8.6 M Earthquake	Noyo Harbor, CA	-
5/22/1960	Southern Chile, Chile	9.5 M Earthquake	Gualala River, CA	2.00
5/22/1960	Southern Chile, Chile	9.5 M Earthquake	Noyo Harbor, CA	3.28
5/22/1960	Southern Chile, Chile	9.5 M Earthquake	Shelter Cove, CA	2.00
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Albion River, CA	4.43
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Arena Cove, CA	5.91



Date	Source Location	Source Type	Recorded Wave Height Location	Max. Run-up (Feet)
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Caspar, CA	-
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Russian Gulch Park, CA	5.58
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Van Damme State Park, CA	4.27
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Point Arena, CA	6.07
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Fort Bragg, CA	12.47
3/28/1964	Prince William Sound, AK, USA	9.2 M Earthquake	Noyo, CA	6.56
4/25/1992	Cape Mendocino, N. California, USA	7.2 M Earthquake	Arena Cove, CA	0.39
10/4/1994	S. Kuril Islands, Russia	8.3 M Earthquake	Arena Cove, CA	0.46
7/30/1995	Northern Chile, Chile	8 M Earthquake	Arena Cove, CA	0.23
12/3/1995	S. Kuril Islands, Russia	7.9 M Earthquake	Arena Cove, CA	0.13
2/17/1996	Irian Jaya, Indonesia	8.2 M Earthquake	Arena Cove, CA	0.30
6/10/1996	Andreanof Islands, AK, USA	7.9 M Earthquake	Arena Cove, CA	0.20
6/23/2001	S. Peru, Peru	8.4 M Earthquake	Arena Cove, CA	0.26
9/25/2003	Hokkaido Island, Japan	8.3 M Earthquake	Point Arena, CA	0.07
12/26/2004	Off W. Coast OF Sumatra, Indonesia	9.1 M Earthquake	Arena Cove, CA	0.62
6/15/2005	N. California, USA	7.2 M Earthquake	Arena Cove, CA	0.10
5/3/2006	Tonga, Tonga	8 M Earthquake	Point Arena, CA	0.26
11/15/2006	S. Kuril Islands, Russia	8.3 M Earthquake	Arena Cove, CA	2.00
1/13/2007	S. Kuril Islands, Russia	8.1 M Earthquake	Arena Cove, CA	0.82
8/15/2007	S. Peru, Peru	8 M Earthquake	Arena Cove, CA	0.13
1/3/2009	Near North Coast, Indonesia	7.6 M Earthquake	Arena Cove, CA	0.16
1/15/2009	Kamchatka, Russia	7.4 M Earthquake	Arena Cove, CA	0.13
9/29/2009	Samoa Islands, Samoa	8.1 M Earthquake	Arena Cove, CA	1.44
10/7/2009	Vanuatu Islands, Vanuatu	7.6 M Earthquake	Arena Cove, CA	0.13
2/27/2010	Central Chile, Chile	8.8 M Earthquake	Arena Cove, CA	1.28
3/11/2011	Honshu Island, Japan	9.1 M Earthquake	Arena Cove, CA	5.71
3/11/2011	Honshu Island, Japan	9.1 M Earthquake	Point Arena, CA	5.71
3/11/2011	Honshu Island, Japan	9.1 M Earthquake	Noyo River Harbor, CA	3.28
3/11/2011	Honshu Island, Japan	9.1 M Earthquake	Albion, CA	2.62
3/11/2011	Honshu Island, Japan	9.1 M Earthquake	Dolphin Isle Marina, Noyo River, CA	2.62
7/6/2011	Kermadec Islands, New Zealand	7.6 M Earthquake	Arena Cove, CA	0.20
10/28/2012	British Columbia, Canada	7.7 M Earthquake	Arena Cove, CA	1.15
9/16/2015	Central Chile, Chile	8.3 M Earthquake	Arena Cove, CA	0.56
1/23/2018	Kodiak Island, AK, USA	7.9 M Earthquake	Arena Cove, CA	0.49

Table 4-28: Historic Mendocino County Tsunami Events, 1896-2018

Source: NCEI/WDS Global Historical Tsunami Database



Location

A 10-foot wave run-up would affect the entire coastal area of Mendocino County. Specifically, the low-lying coastal areas and riverine valleys for the Navarro, Albion, Noyo, Garcia, and Ten Mile rivers would be inundated by run-up. Wave run-up would not reach the town of Manchester but would inundate Noyo Harbor. (California Department of Conservation, 2019)

Extent and Severity

A tsunami will affect beaches that are open to the ocean. However, they also impact bay mouths, tidal flats, and the shores of large coastal rivers. Tsunami waves can also diffract around landmasses. Because tsunamis are not symmetrical, the waves may be much stronger in one direction than another, depending on the nature of the source and the surrounding geography. Tsunamis do propagate outward from their source, which means that coasts in the shadow of affected land masses are usually fairly safe. (*Id.*)

The extent of a tsunami is a factor of the following conditions:

- Distance of shoreline from the tsunami generating event
- Magnitude of the earthquake causing the event; duration and period of waves
- Run-up elevations
- Tidal level at time of occurrence
- Location along shore and direction of shore in respect to propagated waves
- Topography of the seabed

As depicted by Mendocino's tsunami history, the majority of tsunami events only lead to a wave run-up of one 1 foot or less; however, wave run-ups can also reach over 12 feet in height. Figure 4-32 displays potential tsunami run-up areas for Mendocino County.



TSUNAMI RUN-UP AREA SNAPSHOT

MENDOCINO COUNTY

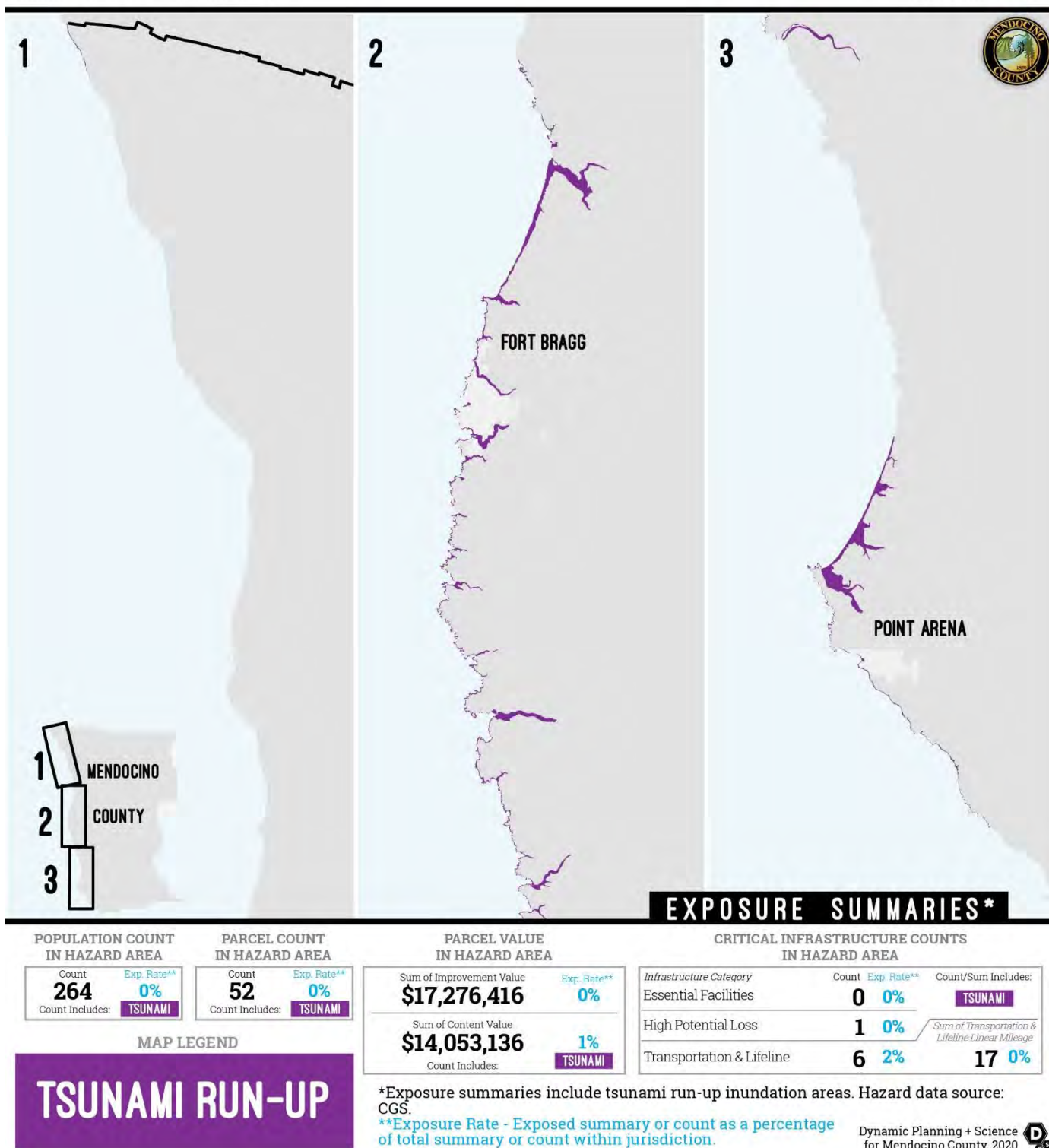


Figure 4-32: Tsunami Run-up Area



Warning Time

Over time, tsunami warning systems have become more sophisticated. Tsunami Warning Centers utilize observation systems, which include seismic and water-level networks around the world in order to aid in determining when and where to issue tsunami messages. Generally, if an earthquake is over 6.5 M and is occurring 0 and 5 kilometers in depth below the seafloor, a tsunami warning will be issued. This kind of warning can go out within 3 to 5 minutes of the undersea earthquake and gives an early indication of its potential to cause a tsunami with significant impacts. (National Tsunami Warning Center, 2020) (ABC Science, 2019)

4.5.4.8 Earthquake Vulnerability Analysis

Earthquakes are a considerable threat to life and property in Mendocino County. A moderate to severe seismic incident on any fault zone in close proximity to the County is expected to cause:

- Extensive property damage, particularly to pre-1930's unreinforced masonry structures,
- Possible fatalities and injuries,
- Damage to water and sewage systems,
- Disruption of communications systems,
- Broken gas mains and petroleum pipelines,
- Disruption to Electrical Utility Lines,
- Disruption of transportation arteries, and
- Competing requests for regional aid resources.

Community needs would quickly exceed the response capability of the County's emergency management organization, requiring mutual assistance from volunteer and private agencies, the Governor's Office of Emergency Services, and the Federal Emergency Support Functions.

In an earthquake, the primary consideration is saving lives. Time and effort must also be given to providing for people's mental health by reuniting families, providing shelter to the displaced persons, and restoring basic needs and services. A major effort will be needed to remove debris and clear roadways, demolish unsafe structures, assist in reestablishing public services and utilities, and provide continuing care and temporary housing for affected citizens.

After an earthquake, there will be a loss of income both in private and public sectors. Individuals can lose wages due to businesses inability to function because of damaged goods or facilities. Due to business losses, Mendocino County and the cities in the planning area will lose revenue. Economic recovery from even a minor earthquake is critical.



4.5.4.8.1 Earthquake Exposure

The exposure analysis for Mendocino County centers on an earthquake scenario produced from the North San Andreas and Maacama Garberville faultlines. As discussed in Section 4.5.4.4, these scenarios present the highest probability for a severe earthquake and severe shaking in Mendocino County.

An exposure analysis was conducted to develop earthquake vulnerability data throughout Mendocino County using the methods outlined in Section 4.4. To develop earthquake exposure data for the County, asset inventories for people, property, and critical facilities were superimposed with earthquake shaking intensity data from the USGS. Figure 4-33 and Figure 4-34 depict the exposure summaries for both fault lines. Both summaries demonstrate that a majority of the population would be exposed. The North San Andreas predicts a 94% population exposure, and the Maacama Garberville scenario predicts a 100% exposure for the County's population.



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN SNAPSHOT

MENDOCINO COUNTY

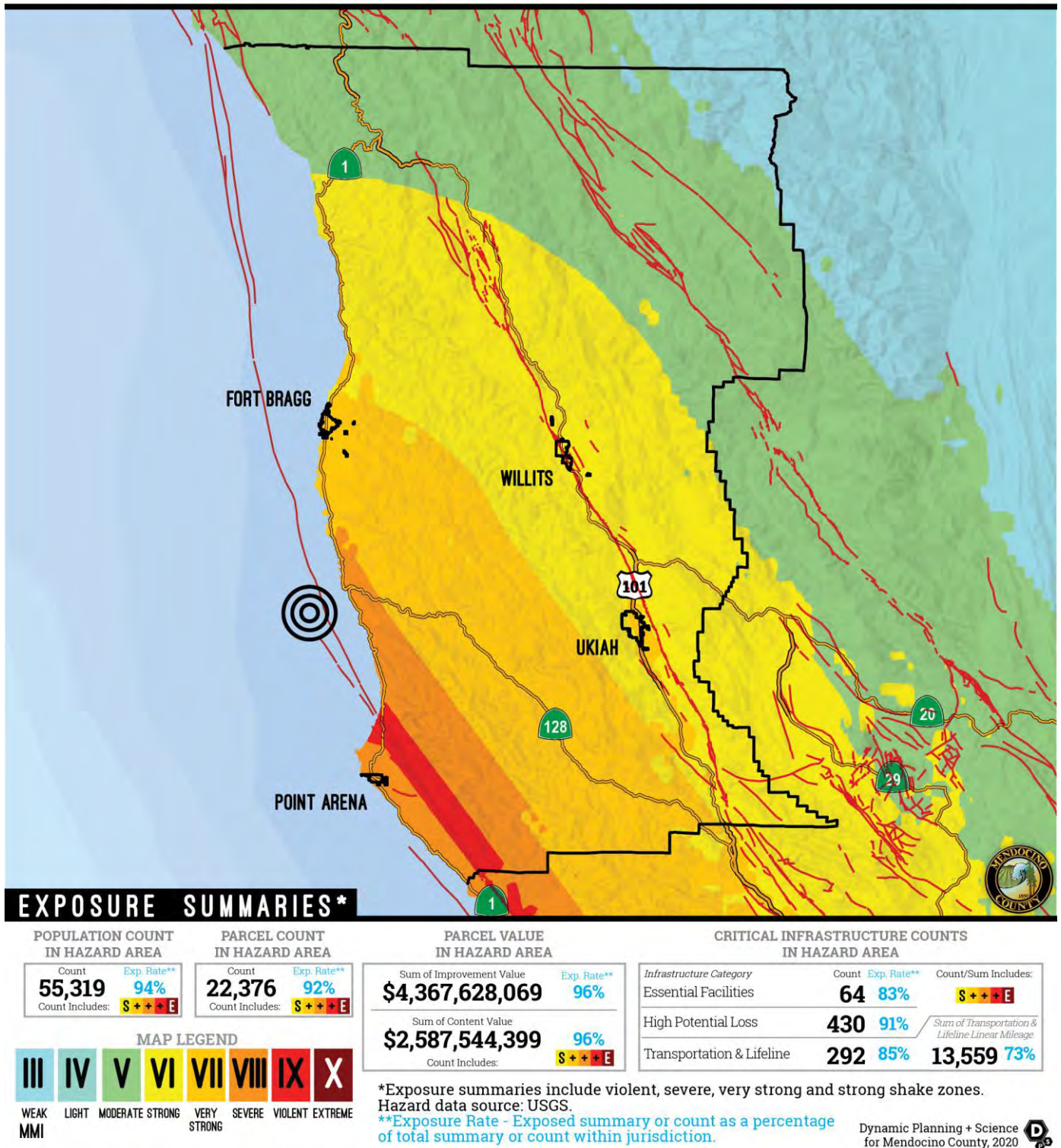


Figure 4-33: N. San Andreas Mojave N. Exposure and Snapshot Map



M7.4 MAACAMA GARBERVILLE SNAPSHOT

MENDOCINO COUNTY

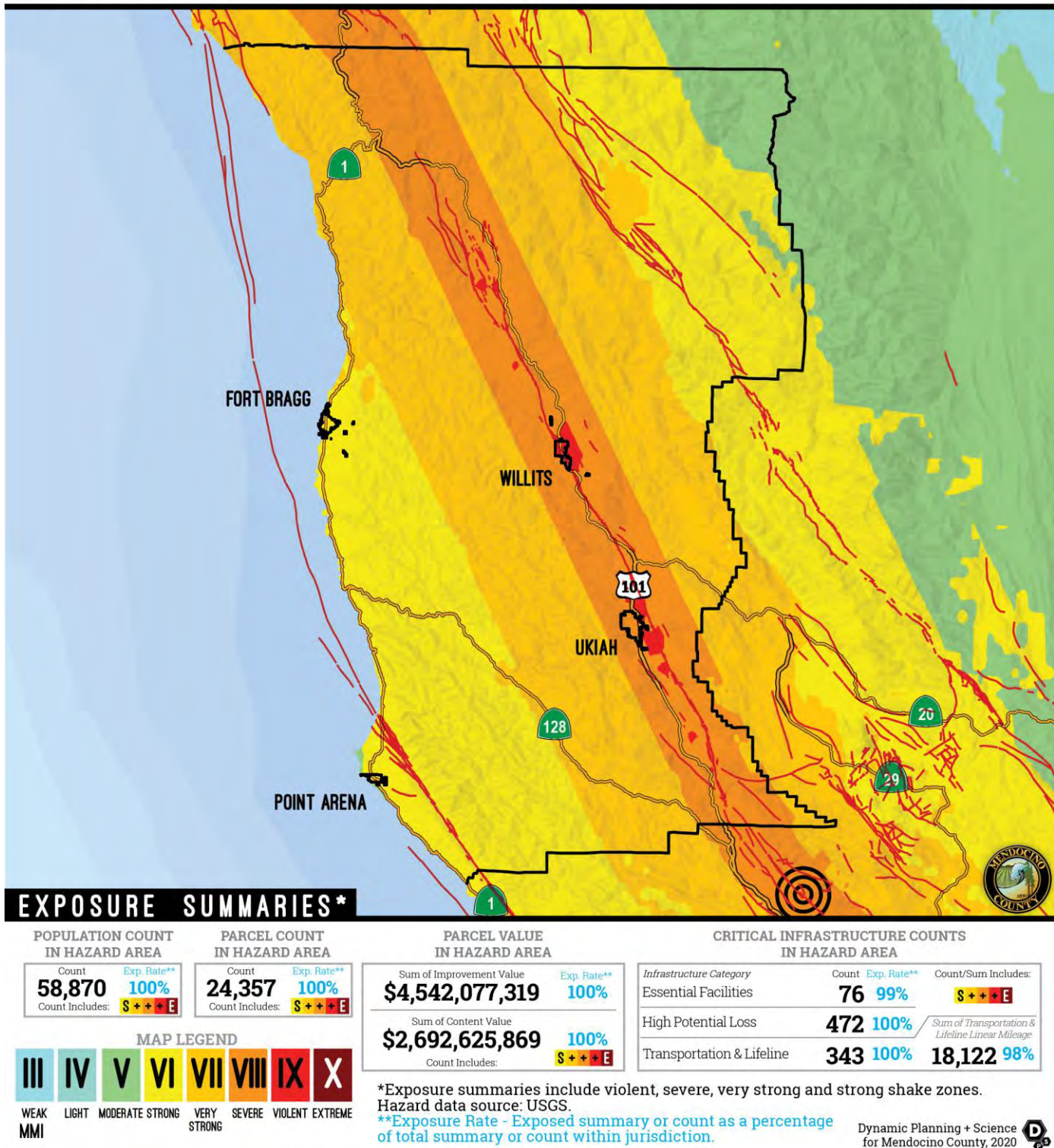


Figure 4-34: Maacama Garberville Exposure and Snapshot Map



Population

Table 4-29 and Table 4-30 summarize population exposure results for the Maacama Garberville Scenario. Table 4-31 and Table 4-32 summarize population exposure results for the North San Andreas; North Coast plus Peninsula and Santa Cruz Mountain scenario. The entire population of Mendocino County is potentially exposed to direct and indirect impacts from earthquakes. The degree of exposure depends on many factors, including the age and construction type of dwellings, the soil types on which their homes are constructed, and proximity to fault location. Whether directly or indirectly impacted, the entire population will have to deal with the consequences of earthquakes to some degree. Business interruption could keep people from working, road closures could isolate populations, and loss of functions of utilities could impact populations that suffered no direct damage from an event itself.

Table 4-29: Population Exposure to M7.4 Maacama Garberville Scenario (Unincorporated County)

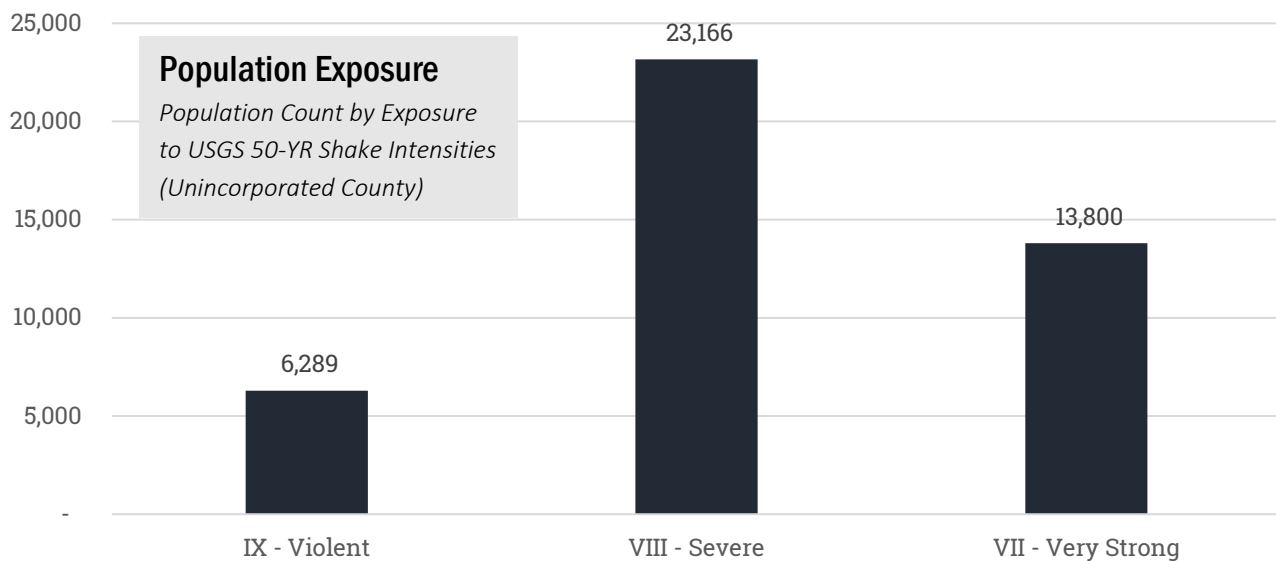


Table 4-30: Population Exposure to M7.4 Maacama Garberville Scenario (Unincorporated County)

Total Population		
Unincorporated County	58,995	

Shake Severity Zone	Population Count	% of Total
IX - Violent	6,289	10.66%
VIII - Severe	23,166	39.27%
VII - Very Strong	13,800	23.39%
Total	43,256	73.32%



Table 4-31: Population Exposure to M7.8 Scenario (Unincorporated County)

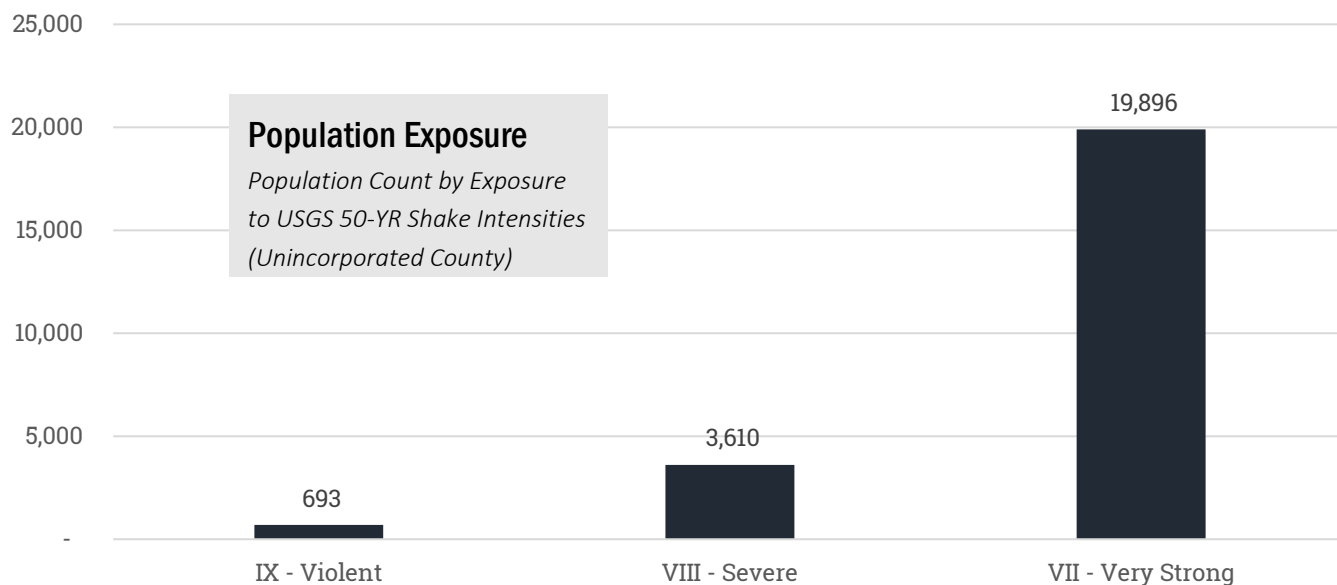


Table 4-32: Population Exposure to M7.8 Scenario (Unincorporated County)

Total Population	
Unincorporated County	58,995

Shake Severity Zone	Population Count	% of Total
IX - Violent	693	1.18%
VIII - Severe	3,610	6.12%
VII - Very Strong	19,896	33.72%
Total	24,199	41.02%



Property and Building Ages

The vulnerability of buildings and structures to an earthquake depends on determining two important factors:

- (1) the year in which seismic codes were initially adopted and enforced by the jurisdiction having authority, and
- (2) the year in which seismic codes were improved and enforced.

These are known as *benchmark years*, marking significant milestones in California Building Code requirements that directly affect the structural integrity of development in California.

The County adheres to the 2019 California Building Code. Table 4-33 provides a listing of code improvements. Benchmark years are indicated in bold. For reference, Table 4-34 provides the definitions of building types.

Table 4-33: Seismic Benchmark Years

Code Edition	Effective Date	Building Type
(2019 CBC)	January 1, 2020	
(2016 CBC)	January 1, 2017	
(2013 CBC)	January 1, 2014	N/A
(2012 IBC)		
(2010 CBC)	January 1, 2011	N/A
(2009 IBC)		
(2007 CBC)	January 1, 2008	N/A
(2006 IBC)		
(2001 CBC)	November 1, 2002	N/A
(1997 UBC)		
(1998 CBC)	July 1, 1999	W1a, S2, S2a, RM1, PC1, PC1a
(1997 UBC)		
(1994 UBC)	January 7, 1996	S1, S1a, C1, C2, C2a, RM2
(1991 UBC)	November 29, 1992	URM
(1988 UBC)	April 29, 1990	S2 & S2a
(1985 UBC)	November 8, 1987	N/A
(1982 UBC)	December 9, 1984	N/A
(1979 UBC)	June 21, 1981	N/A
(1976 UBC)	November 1, 1977	W1 and W2
(1973 UBC)	April 13, 1975	N/A
(1970 UBC)	August 29, 1971	N/A
(1967 UBC)	July 12, 1968	N/A
(1964 UBC)	July 1, 1965	N/A
(1961 UBC)	August 17, 1962	N/A
(1958 UBC)	October 1, 1958	N/A



Code Edition	Effective Date	Building Type
(1955 UBC)	January 1, 1956	N/A
(1955 UBC)	January 1, 1956	N/A
(1946 UBC)	June 18, 1948	N/A
(1943 UBC)	July 13, 1944	N/A
(1940 UBC)	April 4, 1941	N/A
(1937 UBC)	September 10, 1937	N/A
(1930 UBC)	March 20, 1933	N/A

Source: ASCE 41-13. County Building Dept.

Table 4-34: Definitions of FEMA Building Types

FEMA Building Type	Definition
W1	Wood Light Frame
W1A	Wood Light Frame (multi-unit residence)
W2	Wood Frame (commercial and industrial)
S1	Steel Moment Frames
S2	Steel-braced Frames
S3	Steel Light Frames
S4	Steel Frames with concrete shear walls
S5	Steel Frames with infill masonry walls
C1	Concrete Moment Frames
C3	Concrete Frames with infill masonry shear walls
C2	Concrete Shear Walls
PC1	Tilt-Up Concrete shear walls
PC2	Precast Concrete Frames with shear walls
RM1	Reinforced Masonry Walls with flexible diaphragms
RM2	Reinforced Masonry Walls with stiff diaphragms
URM	Unreinforced Masonry Bearing Walls



Soft-Story Buildings

A soft-story building is a multi-story building with one or more floors that are “soft” due to structural design. If a building has a floor that is 70-percent less stiff than the floor above it, it is considered a soft-story building. These floors can be especially dangerous in earthquakes because they cannot cope with the lateral forces caused by the swaying of the building during a quake. As a result, the soft story may fail, causing what is known as a *soft-story collapse*. Soft stories are typically associated with retail spaces and parking garages, often on the lower stories of a building. A soft-story collapse can cause the rest of the building to collapse as well, causing serious structural damage that may render the structure totally unusable.

Soft-story collapse is one of the leading causes of earthquake damage to private residences. The level of vulnerability due to this type of construction within the planning area is not currently known. This type of data should be generated to support future earthquake risk assessments.

Property Value Exposure

An inventory of current market values and the content value was completed using County Assessor’s parcel data. GIS was used to create centroids, or points, to represent the center of each parcel polygon, assumed to be the location of the structure for analysis purposes. The centroids were then superimposed with the USGS probabilistic shaking severity zones to determine the at-risk structures. Table 4-35 shows the count of at-risk parcels and their associated building and content exposure values to the Maacama Garberville earthquake scenario. Table 4-36 shows the count of at-risk parcels and their associated building and content exposure values to the North San Andreas; North Coast plus Peninsula and Santa Cruz Mountain earthquake scenario.



Table 4-35: Parcel Exposure to M7.4 Maacama Garberville (Unincorporated County)

	Total Parcels	Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)
Unincorporated County	24,371	\$ 4,544,212,021	\$ 2,693,943,855	\$7,238,155,876

Shake Severity Zone	Improved Res. Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
IX - Violent	1,280	5.3%	\$ 299,510,200	\$ 238,821,339	\$538,331,539	7.4%
VIII - Severe	10,156	41.7%	\$ 1,824,307,690	\$ 1,089,521,704	\$ 2,913,829,394	40.3%
VII - Very Strong	3,822	15.7%	\$ 535,094,583	\$ 336,891,900	\$ 871,986,483	12.0%
Total	15,258	62.6%	\$ 2,658,912,473	\$ 1,665,234,943	\$4,324,147,416	59.7%

Table 4-36: Parcel Exposure to M7.8 N. San Andreas (Unincorporated County)

	Total Parcels	Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)
Unincorporated County	24,371	\$ 4,544,212,021	\$ 2,693,943,855	\$7,238,155,876

Shake Severity Zone	Improved Res. Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
IX - Violent	353	1.4%	\$ 62,223,252	\$ 34,102,276	\$ 96,325,528	1.3%
VIII - Severe	2,530	10.4%	\$ 571,731,829	\$ 306,473,656	\$ 878,205,485	12.1%
VII - Very Strong	8,149	33.4%	\$ 1,742,225,915	\$ 1,066,985,670	\$ 2,809,211,585	38.8%
Total	11,032	45.3%	\$ 2,376,180,996	\$ 1,407,561,602	\$ 3,783,742,598	52.3%



Critical Facilities and Infrastructure

Earthquakes pose numerous risks to critical facilities and infrastructure. Seismic risks, or losses, that are likely to result from exposure to seismic hazards include:

- Utility outages,
- Economic losses for repair and replacement of critical facilities, roads, buildings, etc.,
- Indirect economic losses such as income lost during downtime resulting from damage public infrastructure, and
- Roads or railroads that are blocked or damaged can prevent access throughout the area and can isolate residents and emergency service providers needing to reach vulnerable populations or to make repairs.

Linear utilities and transportation routes are vulnerable to rupture and damage during and after a significant earthquake event. The cascading impact of a single failure can have effects across multiple systems and utility sectors. Degrading infrastructure systems and future large earthquakes with epicenters close to critical regional infrastructure could result in system outages that last weeks for the most reliable systems, and multiple months for others. Additionally, earthquakes may cause the loss of function of cellular phone sites, or cell towers, which can limit emergency services such as tracking and evacuation.

All critical facilities in Mendocino County are exposed to the earthquake hazard. Table 4-37 and Table 4-38 list the number of each type of facility in the Violent, Severe, and Very Severe MMI severity zones within the County, described in Table 4-25.



Table 4-37: Critical Facility Exposure to M7.4 Scenario (Unincorporated County)

Critical Infrastructure - M7.4 Maacama Garberville			
Infrastructure Type	IX - Violent	VIII - Severe	VII - Very Strong
Essential Facility	3	20	20
EOC	-	1	-
Fire Station	3	14	14
Law Enforcement	-	3	2
Medical Facility	-	2	4
High Potential Loss	55	186	113
Adult Residential Facility	2	2	-
Alternative Education Program	-	-	-
Animal Control	-	-	-
Child Care Center	1	7	6
Communication Tower	2	42	18
Community Center	-	2	3
Courthouse	-	-	-
Dam	-	22	3
Detention Center	-	-	-
Fairground	-	-	1
Family Child Care Home	-	-	1
Foster Family Agency	-	-	-
Historic Building	-	1	3
Historic Site	-	1	-
Library	-	-	1
Museum	-	-	-
Office	5	-	2
Park and Recreation	-	4	2
Power Plant	4	2	4
Real Property Asset*	25	71	41
Residential Child Care	-	-	-
Residential Elder Care Facility	-	2	-
School	8	29	27
Shop	2	1	-
Storage	6	-	-
Wastewater Treatment	-	-	1
Transportation and Lifeline	33	135	104
Airport	-	-	2
Bridge	28	127	94
Bus Facility	-	-	-
Corp Yard	1	1	2
NG Station	1	-	-
Substation	3	5	3
Transfer Station	-	2	3
Hazmat	13	-	-
Hazmat	13	-	-
Grand Total	104	341	237

**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*



Table 4-38: Critical Facility Exposure to M7.8 Scenario (Unincorporated County)

Critical Infrastructure - M7.8 N. San Andreas - N. Coast - Peninsula - SC Mtn.			
Infrastructure Type	IX - Violent	VIII - Severe	VII - Very Strong
Essential Facility	3	9	33
EOC	-	-	1
Fire Station	2	8	26
Law Enforcement	-	1	1
Medical Facility	1	-	5
High Potential Loss	9	34	203
Adult Residential Facility	-	-	-
Alternative Education Program	-	-	-
Animal Control	-	-	-
Child Care Center	-	1	8
Communication Tower	3	10	23
Community Center	-	-	2
Courthouse	-	-	-
Dam	-	-	4
Detention Center	-	-	-
Fairground	-	-	1
Family Child Care Home	-	1	-
Foster Family Agency	-	-	-
Historic Building	3	4	2
Historic Site	-	-	-
Library	-	-	-
Museum	-	-	-
Office	-	-	1
Park and Recreation	-	1	2
Power Plant	-	-	4
Real Property Asset*	1	9	114
Residential Child Care	-	-	-
Residential Elder Care Facility	-	4	1
School	2	4	29
Shop	-	-	1
Storage	-	-	10
Wastewater Treatment	-	-	1
Transportation and Lifeline	6	18	106
Airport	-	2	1
Bridge	4	13	95
Bus Facility	-	1	-
Corp Yard	-	-	1
NG Station	-	-	1
Substation	1	2	4
Transfer Station	1	-	4
Hazmat	-	-	1
Hazmat	-	-	1
Grand Total	18	61	343

**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*



HazMat Fixed Facilities

Earthquakes can produce hazardous materials (HazMat) threats at extremely high levels. Depending on the year of build and construction of each facility containing HazMat, the earthquake-initiated hazardous material release (EIHR) potential will vary. HazMat contained within masonry or concrete structures built before certain benchmark years may be particularly vulnerable.

Utilities

Linear utilities and transportation infrastructure would likely suffer considerable damage in the event of an earthquake. Due to the amount of infrastructure and sensitivity of utility data, linear utilities are difficult to analyze without further investigating individual system components. Table 4-39 and Table 4-40 provide the best available linear utility data; it should be assumed that these systems are exposed to breakage and failure.

Table 4-39: Lifeline Exposure Maacama Garberville Scenario (Unincorporated County)

Lifelines (miles) - M7.4 Maacama Garberville			
Infrastructure Type (Linear)	IX - Violent	VIII - Severe	VII - Very Strong
Levee	0.3	0.9	0.6
NG Pipeline	5.2	40.3	-
Railroad	8.8	71.9	49.8
Street	104.7	1,624.3	2,441.7
4WD trail	3.7	199.2	525.6
4WD trail, major	-	7.0	11.2
Alley	-	-	-
Cul-de-sac	0.0	0.4	0.2
Driveway	9.1	68.6	95.1
Interstate	6.2	48.6	1.1
Local road	62.8	1,004.6	1,499.7
Local road, major	0.7	27.3	42.9
Primary highway	4.4	102.7	66.9
Ramp	1.6	9.4	1.2
Road, parking area	0.3	0.7	-
State/county highway	15.8	154.2	197.3
Thoroughfare, major	-	1.3	0.5
Traffic circle	-	0.0	-
Walkway	0.0	0.1	-
Transmission Line	19.5	157.7	75.9
Grand Total	138.5	1,895.0	2,568.0


Table 4-40: Lifeline Exposure M7.8 Scenario (Unincorporated County)

Lifelines (miles) - M7.8 N. San Andreas - N. Coast - Peninsula - SC Mtn.			
Infrastructure Type (Linear)	IX - Violent	VIII - Severe	VII - Very Strong
Levee	-	-	1.0
NG Pipeline	-	-	17.2
Railroad	-	-	26.1
Street	127.8	517.3	1,576.7
<i>4WD trail</i>	0.2	71.2	296.9
<i>4WD trail, major</i>	-	-	5.7
<i>Alley</i>	-	-	-
<i>Cul-de-sac</i>	-	-	0.4
<i>Driveway</i>	11.1	17.6	39.7
<i>Interstate</i>	-	-	13.9
<i>Local road</i>	100.2	312.3	947.6
<i>Local road, major</i>	1.0	10.8	22.2
<i>Primary highway</i>	4.8	42.9	70.5
<i>Ramp</i>	-	-	4.5
<i>Road, parking area</i>	-	-	0.3
<i>State/county highway</i>	10.4	59.1	172.1
<i>Thoroughfare, major</i>	-	3.3	2.8
<i>Traffic circle</i>	-	-	-
<i>Walkway</i>	-	-	0.1
Transmission Line	9.4	38.7	63.1
Grand Total	137.2	556.0	1,684.0

Water Supply Utilities

Mendocino water supply is sourced primarily from groundwater resources. Van Arsdale Reservoir and Lake Mendocino are the two most notable surface water resources in the County and smaller reservoirs and ponds are prevalent as well. Groundwater is the primary source for municipal and individual domestic water use, outside of the Ukiah Valley. It also contributes significantly to irrigation needs. Groundwater wells throughout the County are used for domestic, commercial, industrial, agricultural, and for fire protection needs. (Mendocino County General Plan, 2009)



Natural Gas Utilities

Several common characteristics of earthquakes and their impacts on natural gas safety are:

- Earthquake ground shaking will generally lead to substantially more instances of building damage than fire ignitions.
- Ground motions that are sufficient enough to damage buildings are the most likely to impact utility and customer gas systems and create a potential for gas-related fire ignitions.
- The number of post-earthquake fire ignitions related to natural gas can be expected to be 20% to 50% of the total post-earthquake fire ignitions.
- The consequences of post-earthquake fire ignitions for residential gas customers are largely financial. A fire ignition only becomes a life safety concern when inhabitants are unable to exit the building following earthquakes. Experience in past earthquakes indicates that egress from earthquake-damaged single-family homes is generally possible because of the limited structure height, low numbers of occupants, and multiple direct escape paths through doors and windows.
- The potential life safety dangers from post-earthquake fires are considerably more serious in seismically vulnerable apartment or condominium buildings since they provide a greater chance for damaging the structure and trapping the occupants. (Occupational Safety and Health Administration, n.d.)

Pacific Gas and Electric (PG&E), the County's natural gas and electricity utility, is responsible for designing, constructing, maintaining, and operating the natural gas system safely and efficiently. This includes all the facilities used in the delivery of gas to any customer up to and including the point of delivery to the customers' gas piping system.

Gas customers and Mendocino County residents are responsible for using gas safely on their property and within their buildings and other facilities. Customers meet this responsibility by maintaining their gas appliances in good working condition, assuring that only qualified individuals are engaged to modify or maintain their gas service and facility piping, and knowing what to do before and after earthquakes to maintain the safe operation of their natural gas service.

The following conditions, when combined, pose the greatest risk for post-earthquake fire damage:

1. Buildings are unoccupied and individuals are not present to mitigate damage to gas systems or control small fires.
2. High building density or dense, fire-prone vegetation.
3. High wind and low humidity weather conditions.
4. Damage to water systems that severely limits firefighting capabilities.



5. Reduced responsiveness of firefighting resulting from impaired communications, numerous requests for assistance, direct damage to fire stations, restricted access because of traffic congestion and damaged roadways, and delays in mutual aid from neighboring fire districts. (United States Fire Administration, 2020)

Telecommunication

Telecommunication systems will be affected by a system failure, overloads, loss of electrical power, and possible failure of some alternate power systems. Immediately following an event, numerous failures will occur, compounded by system use overloads. This will likely disable up to 80% of the telephone system for one day. County UHF/VHF and microwave radio systems are expected to operate at 40% effectiveness the first 12 hours following an earthquake, increase to 50% for the second 12 hours, then begin to slowly decline to approximately 40% within 36 hours. (City and County of San Francisco Hazard Mitigation Plan, 2014)

Microwave systems will likely be 30% or less effective following a major earthquake. Damage to natural gas facilities serving the Mendocino County communities will consist primarily of isolated breaks in major transmission lines. Breaks in mains and individual service connections within the distribution system will be significant, particularly near the fault zones. These many leaks pose a fire threat in these susceptible areas of intense ground shaking and/or poor ground near the shoreline. Breaks in the system will affect large portions of the County, and restoration of natural gas service could be significantly delayed. (*Id.*)

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Public Schools

The Field Act was enacted on April 10, 1933, one month after the Long Beach Earthquake in which many schools were destroyed or suffered major damage. Public school construction has been governed by the Field Act since 1933 and enforced by the Division of the State Architect. In any community, public schools constructed under the Field Act after 1978 are likely to be among the safest buildings in which to experience a major earthquake. The Field Act requires:

- School building construction plans to be prepared by qualified California licensed structural engineers and architects.
- Designs and plans to be checked by the Division of the State Architect (DSA) for compliance with the Field Act before a contract for construction can be awarded.
- Qualified inspectors, independent of the contractors and hired by the school districts, to continuously inspect construction and verify full compliance with plans.



- The responsible architects and/or structural engineers to observe the construction periodically and prepare changes to plans (if needed) subject to approval by DSA.
- Architects, engineers, inspectors and contractors to file reports, under penalty of perjury, to verify compliance of the construction with the approved plans emphasizing the importance of testing and inspections to achieve seismically safe construction. Any person who violates the provisions or makes any false statement in any verification report or affidavit required pursuant to the Act is guilty of a felony. (Seismic Safety Commission, 2009)

Private schools are not subject to the Field Act and fall solely under the jurisdiction of the local building departments and their requirements. Private schools are covered under the Private Schools Building Act of 1986, with the legislative intent that children attending private schools be afforded life safety protection similar to that of children attending public schools. (*Id.*)

In the late 1960s regulations were put in place to have pre-Field Act (1933) buildings retrofitted, removed from school use or demolished. (Cal. Edu. Code § 15516, Appendix X, 1968) The Field Act also prohibits the use of unreinforced masonry buildings as school buildings. Seismic building standards, in general, were greatly strengthened after significant damage to buildings was observed, especially in the 1971 San Fernando earthquake. The Field Act regulations in place since 1978 are considered adequate for most public school buildings in most cases. (*Id.*)

Transportation

Earthquake events can significantly impact bridges and overpasses, which often provide the only access to some neighborhoods. Since soft soil regions generally follow floodplain boundaries, bridges that cross watercourses are considered vulnerable.

United States 101 (US 101) travels from Los Angeles to the northwest portion of Washington State, crossing the County of Mendocino. It is an important route which serves interregional and interstate traffic. US 101 could become impassable after an earthquake event, which could isolate portions of the County until road crews were able to complete road restoration. Two other routes, State Route 1 and State Route 20, serve as arteries within the County, albeit in a more limited capacity. State Route 1 extends from Southern California to US 101 in Leggett, and it primarily serves local coastal communities. State Route 20 extends from State Route 1 at Fort Bragg to US 101 in the City of Willits. It continues eastwards into Lake County. It is an important route for connecting US 101 with Interstate 5, both of which are major interstate highway routes. Table 4-39 shows transportation infrastructure exposed to shake severity zones in the event of the N. San Andreas earthquake scenario. (Mendocino County General Plan, 2009)



4.5.4.8.2 Earthquake Damage Estimation

Hazus Earthquake damage data were generated using a Level 2 Hazus 4.2 analysis. Hazus is a FEMA software product that uses a GIS to analyze multiple factors influencing earthquake damage estimates including peak ground velocity (PGV), peak ground acceleration (PGA) and soil of a given scenario and geographic area. Once the location and size of a hypothetical earthquake is identified, Hazus software estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up.

The parcel data defined in Section 4.3 was imported into Hazus as User Defined Facilities (UDF) serving as the basis for replacement and content cost as well as associated damage estimation and loss. The scenarios used for the Mendocino County Hazus analysis was the M 7.4 Maacama Garberville and M 7.8 N. San Andreas – N. Coast – Peninsula – SC Mtn.

Building damage outputs from Hazus are categorized into slight, moderate, and extensive damage. Ranges of damage are used to provide the user with an understanding of the building's physical condition. Table 4-41 provides a physical description of each damage state.

County assessor data does not include detailed information for tax-exempt structures, such as federal and local government buildings. These data were added through the development of GIS data by utilizing insurance schedule tables for each municipality's insured assets.

While there are several limitations to the FEMA Hazus earthquake models, it does allow for potential loss estimation for each building construction category. Countywide loss estimation results are summarized by building category type in Table 4-44 for the N San Andreas 7.7 magnitude earthquake scenario. It is important to understand that the Hazus loss estimation values for earthquakes are categorized in exceedance values. From reviewing Table 4-44, one can infer the probability of structures exceeding extensive damage is relatively low. However, if damage were to occur, the economic loss is averaged and summarized for each building type defined in the software.

Important to note: Loss estimation is the worst-case scenario. Loss estimation does not include damage to transportation routes, infrastructure, and other public and private utilities located throughout the County. An important concept in loss data is the "probability" of damage to exceed a certain degree. It is unlikely that buildings in County would receive "extensive" damage from earthquake shaking.



Table 4-41: Hazus Building Damage Descriptions

Damage State	Damage Description
Slight	Small plaster cracks at corners of door and window openings and wall/ceiling intersections; small cracks in masonry chimneys and masonry veneers. Small cracks are assumed to be visible with a maximum width of less than 1/8 inch (cracks wider than 1/8 inch are referred to as "large" cracks).
Moderate	Large plaster or gypsum-board cracks at corners of door and window openings; small diagonal cracks across shear wall panels exhibited by small cracks in stucco and gypsum wall panels; large cracks in brick chimneys; toppling of tall masonry chimneys.
Extensive	Large diagonal cracks across shear wall panels or large cracks at plywood joints; permanent lateral movement of floors and roof; toppling of most brick chimneys; cracks in foundations; splitting of wood sill plates and/or slippage of structure over foundations.
Complete	Structure may have large permanent lateral displacement or be in imminent danger of collapse due to cripple wall failure or failure of the lateral load resisting system; some structures may slip and fall off the foundation; large foundation cracks. Three percent of the total area of buildings with Complete damage is expected to be collapsed, on average.



Damage Estimation Improved Parcel and Government Property Loss

Hazus 4.2 was used to estimate the loss potential to residential properties and Government service facilities exposed to both the M 7.4 Maacama Garberville and M 7.8 N. San Andreas – N. Coast – Peninsula – SC Mtn. earthquake scenarios. Hazus reports the damage potential and loss potential from a given earthquake scenario in four categories: slight damage, moderate damage, extensive damage, and economic loss. Economic loss consists of estimations on the cost of repair and replacement to damaged or destroyed buildings and contents, relocation expenses, capital-related income, wage losses, and rental income losses. The results shown in Table 4-42 and Table 4-43 summarize improved parcels and government property loss.

Table 4-42: Loss Estimations for M 7.4 Scenario

Building Type	Average of Potential Damage to Exceed "Slight" (%)	Average of Potential Damage to Exceed "Moderate" (%)	Average of Potential Damage to Exceed "Extensive" (%)	Average Economic Loss for Each Building Category (\$)	Sum of Economic Loss (\$)	Proportion of Loss (%)
Agriculture	70%	53%	24%	\$ 72,736	\$ 90,774,429	16%
Commercial	46%	32%	13%	\$ 92,145	\$ 61,276,096	11%
Education	61%	47%	24%	\$ 162,067	\$ 4,699,938	1%
Emergency	31%	11%	2%	\$ 0	\$ 0	0%
Government	30%	12%	3%	\$ 35,446	\$ 35,481,146	6%
Industrial	70%	56%	28%	\$ 242,182	\$ 62,482,877	11%
Religion	34%	13%	2%	\$ 16,882	\$ 962,290	0%
Residential	36%	13%	3%	\$ 13,837	\$294,529,747	54%
Total					\$550,206,524	

Note: Total Inventory Values

1 - Building Replacement Costs = \$6,607,442,042

2 - Content Replacement Costs = \$3,951,409,020

3 - Total Value = \$10,558,851,062



Table 4-43: Loss Estimations for M 7.8 Scenario

Building Type	Average of Potential Damage to Exceed "Slight" (%)	Average of Potential Damage to Exceed "Moderate" (%)	Average of Potential Damage to Exceed "Extensive" (%)	Average Economic Loss for Each Building Category (\$)	Sum of Economic Loss (\$)	Proportion of Loss (%)
Agriculture	26%	13%	2%	\$ 16,740	\$ 20,891,812	11%
Commercial	29%	16%	5%	\$ 2,477	\$ 21,597,118	11%
Education	32%	17%	4%	\$ 49,065	\$ 1,422,879	1%
Emergency	4%	1%	0%	\$ 0	\$ 0	0%
Government	18%	6%	1%	\$ 12,070	\$ 12,082,134	6%
Industrial	29%	15%	4%	\$ 42,090	\$ 10,859,277	6%
Religion	12%	3%	0%	\$ 3,810	\$ 221,012	0%
Residential	16%	4%	1%	\$ 5810	\$ 123,665,602	65%
Total					\$190,739,836	

Note: Total Inventory Values
1 - Building Replacement Costs = \$6,607,442,042
2 - Content Replacement Costs = \$3,951,409,020
3 - Total Value = \$10,558,851,062



Damage Estimation for County Owned Property

Hazus 4.2 was used to estimate the loss potential to county facilities exposed to both the Maacama M 7.4 Garberville and M 7.8 N. San Andreas – N. Coast – Peninsula – SC Mtn. earthquake scenarios. Hazus reports the damage potential and loss potential from a given earthquake scenario in four categories: slight damage, moderate damage, extensive damage, and economic loss. Economic loss consists of estimations on the cost of repair and replacement to damaged or destroyed buildings and contents, relocation expenses, capital-related income, wage losses, and rental income losses.

County insurance data was obtained and formatted for use in Hazus for a detailed damage estimation. This dataset has additional information including number of floors, building value, content value, and construction type that greatly enhances results from default Hazus database.

The results shown in Table 4-44 and Table 4-45 summarize essential facility and high potential loss facilities with county insurance holding data.

Table 4-44: Loss Estimations for M 7.4 Maacama Garberville Scenario

Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Administration	3	\$11,963,350	\$7,257,925	\$19,221,275	60%	14%	1%	\$1,235,502	6%
County Administration Office	1	\$11,567,360	\$7,085,361	\$18,652,721	57%	14%	1%	\$1,192,826	6%
Modular Office	1	\$85,378	\$22,094	\$107,472	62%	14%	1%	\$9,201	9%
Storage Building	1	\$310,612	\$150,470	\$461,082	62%	14%	1%	\$33,475	7%
Agricultural	2	\$4,432,589	\$2,647,120	\$7,079,709	76%	45%	16%	\$803,605	11%
Enviromental Health Building	1	\$3,488,557	\$2,306,252	\$5,794,809	57%	14%	1%	\$359,740	6%
Office Building	1	\$944,032	\$340,868	\$1,284,900	94%	77%	32%	\$443,865	35%
Airport	4	\$852,073	\$83,647	\$935,720	17%	4%	0%	\$15,558	2%
Airport Hangar	2	\$385,991	\$16,358	\$402,349	15%	3%	0%	\$10,706	3%
Airport/Radio Equipment	1	\$12,002	\$41,800	\$53,802	33%	10%	1%	\$802	1%
Terminal/Off./Frame Han-	1	\$454,080	\$25,489	\$479,569	6%	1%	0%	\$4,050	1%
Animal Control	1	\$2,138,393	\$15,856	\$2,154,249	51%	11%	1%	\$184,073	9%
Animal Control	1	\$2,138,393	\$15,856	\$2,154,249	51%	11%	1%	\$184,073	9%
Communications	3	\$3	\$53,583	\$53,586	61%	43%	16%	\$1	0%
Radio Tower Repeater	1	\$1	\$17,861	\$17,862	17%	7%	1%	\$0	0%
Repeater Site - Cahto Mountain	1	\$1	\$17,861	\$17,862	86%	66%	27%	\$0	0%



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Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Repeater Site - Spanish Mountain (Cleveland)	1	\$1	\$17,861	\$17,862	79%	57%	20%	\$0	0%
Community Building	8	\$4,756,473	\$346,600	\$5,103,073	36%	20%	10%	\$807,549	16%
Community Building	1	\$1,279,469	\$74,263	\$1,353,732	12%	1%	0%	\$18,706	1%
Justice Court/City Hall	1	\$703,567	\$57,810	\$761,377	5%	0%	0%	\$4,390	1%
Radio Tower Repeater	1	\$1	\$11,906	\$11,907	14%	2%	0%	\$0	0%
Veteran's Memorial Building	5	\$2,773,436	\$202,621	\$2,976,057	52%	31%	16%	\$784,452	26%
County Building	28	\$6,302,236	\$1,973,177	\$8,275,413	55%	32%	12%	\$2,418,333	29%
Administration Building	1	\$1,331,670	\$309,423	\$1,641,093	95%	77%	30%	\$612,342	37%
Dot Storage	1	\$1	\$3,746	\$3,747	69%	28%	3%	\$0	0%
Equipment Building	2	\$99,778	\$74,534	\$174,312	20%	7%	1%	\$4,623	3%
Equipment Building 2	1	\$46,331	\$1	\$46,332	11%	2%	0%	\$813	2%
Equipment Storage	1	\$53,399	\$9,534	\$62,933	7%	1%	0%	\$504	1%
Flammable Liquids Building	1	\$4,272	\$10,137	\$14,409	90%	81%	52%	\$2,445	17%
General Services Building	1	\$1,785,363	\$525,860	\$2,311,223	84%	56%	14%	\$552,713	24%
Main Building	1	\$377,116	\$148,499	\$525,615	12%	2%	0%	\$7,082	1%
Modular Break Room	1	\$165,510	\$1	\$165,511	66%	17%	1%	\$20,070	12%
Modular Office	1	\$37,000	\$13,367	\$50,367	65%	16%	1%	\$4,396	9%
Oil Shed	1	\$5,131	\$4,906	\$10,037	7%	1%	0%	\$48	0%
Parts Storage	1	\$103,958	\$8,309	\$112,267	80%	44%	11%	\$26,882	24%
Shop Building	5	\$640,493	\$263,440	\$903,933	51%	28%	8%	\$135,118	15%
Storage Building	2	\$291,225	\$22,793	\$314,018	78%	46%	16%	\$132,932	42%
Storage Facility	1	\$1	\$5,458	\$5,459	69%	28%	3%	\$0	0%
Storage Shed	3	\$88,584	\$124,018	\$212,602	52%	26%	6%	\$28,966	14%
Storage Unit	1	\$1	\$1,785	\$1,786	97%	88%	54%	\$1	0%
Tire Shed	1	\$4,666	\$399	\$5,065	20%	5%	0%	\$163	3%



Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Vehicle Service Building	1	\$1,054,828	\$385,273	\$1,440,101	99%	97%	82%	\$856,236	59%
Veterans Service Office	1	\$212,909	\$61,694	\$274,603	61%	25%	4%	\$32,999	12%
Courthouse	2	\$15,892,732	\$2,018,005	\$17,910,737	90%	83%	55%	\$10,837,475	61%
Courthouse	1	\$14,396,012	\$1,540,043	\$15,936,055	95%	91%	68%	\$10,095,491	63%
Courthouse Annex	1	\$1,496,720	\$477,962	\$1,974,682	85%	74%	42%	\$741,984	38%
Detention Facility	10	\$24,932,751	\$2,181,951	\$27,114,702	59%	29%	10%	\$3,810,260	14%
Administration Building	1	\$2,433,079	\$338,258	\$2,771,337	51%	11%	1%	\$207,809	7%
Adult Detention Facility	1	\$8,110,655	\$347,942	\$8,458,597	48%	20%	3%	\$973,441	12%
Adult Detention(Maximum Security)	1	\$6,074,661	\$925,893	\$7,000,554	48%	20%	3%	\$729,081	10%
Classroom/Training Building	1	\$1,545,431	\$97,508	\$1,642,939	51%	11%	1%	\$131,995	8%
Juvenile Hall Admin	1	\$537,980	\$38,873	\$576,853	65%	28%	5%	\$91,037	16%
Juvenile Hall Classroom	1	\$429,856	\$49,112	\$478,968	48%	20%	2%	\$49,906	10%
Juvenile Hall Dorm	1	\$1,958,563	\$125,134	\$2,083,697	86%	76%	40%	\$965,963	46%
Juvenile Hall Kitchen,	1	\$616,890	\$55,533	\$672,423	86%	76%	40%	\$304,250	45%
Juvenile Hall/Violent Hall	1	\$2,147,001	\$53,717	\$2,200,718	48%	20%	3%	\$257,683	12%
Kitchen/Laundry Building	1	\$1,078,635	\$149,981	\$1,228,616	56%	11%	1%	\$99,094	8%
Emergency Operations	5	\$1,612,688	\$2,126,084	\$3,738,772	63%	41%	15%	\$576,664	15%
Dispatch Center	1	\$1	\$1,165,446	\$1,165,447	48%	20%	3%	\$0	0%
I.D. & Evidence	1	\$1	\$148,499	\$148,500	85%	74%	42%	\$0	0%
Sheriff	1	\$1	\$4,459	\$4,460	14%	2%	0%	\$0	0%
Sheriff Admin/Probation	1	\$1,612,684	\$647,091	\$2,259,775	90%	63%	17%	\$576,664	26%
Sheriff Commet	1	\$1	\$160,589	\$160,590	78%	47%	10%	\$0	0%
Fair Grounds	29	\$6,664,751	\$29	\$6,664,780	31%	14%	4%	\$741,830	11%
Administration Building	1	\$287,175	\$1	\$287,176	19%	4%	0%	\$8,785	3%



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		Site Value			Probability Damage Exceeds				
Building/ Site Name	# Bldg.	Structure	Content	Total	Slight	Moderate	Extensive	Economic Loss	Loss Pct.
Agric.Bldg./Exhibit Hall .Bldg	1	\$1,522,765	\$1	\$1,522,766	56%	37%	11%	\$324,714	21%
Arts & Crafts Bldg.	1	\$606,837	\$1	\$606,838	25%	4%	0%	\$23,479	4%
Auditorium	1	\$603,767	\$1	\$603,768	25%	4%	0%	\$23,360	4%
Commercial Bldg./Exhibit Hall	1	\$724,276	\$1	\$724,277	22%	11%	2%	\$47,071	6%
Dinning Hall	1	\$218,838	\$1	\$218,839	18%	3%	0%	\$6,495	3%
Dormitory	1	\$96,274	\$1	\$96,275	19%	4%	0%	\$2,945	3%
Field Bleachers 1	1	\$26,408	\$1	\$26,409	56%	37%	11%	\$5,631	21%
Field Bleachers 2	1	\$11,825	\$1	\$11,826	56%	37%	11%	\$2,522	21%
Grandstand	1	\$402,829	\$1	\$402,830	25%	4%	0%	\$15,585	4%
Hog Barn	1	\$241,535	\$1	\$241,536	54%	35%	10%	\$48,834	20%
Jr. Barn 1	1	\$98,120	\$1	\$98,121	18%	3%	0%	\$2,912	3%
Jr. Barn 2	1	\$98,120	\$1	\$98,121	18%	3%	0%	\$2,912	3%
Judging Booth	1	\$4,667	\$1	\$4,668	19%	4%	0%	\$143	3%
Lamb Palace	1	\$241,032	\$1	\$241,033	54%	35%	10%	\$48,732	20%
Marvin Barn	1	\$88,318	\$1	\$88,319	54%	35%	10%	\$17,856	20%
Open Barn	1	\$496,968	\$1	\$496,969	54%	35%	10%	\$100,477	20%
Pumphouse	2	\$24,863	\$2	\$24,865	20%	7%	1%	\$1,390	6%
Restroom	3	\$500,585	\$3	\$500,588	20%	6%	1%	\$20,669	4%
Restrooms	1	\$123,766	\$1	\$123,767	19%	4%	0%	\$3,786	3%
Shop Building	1	\$76,778	\$1	\$76,779	18%	3%	0%	\$2,279	3%
Shop Storage Shed	1	\$1,345	\$1	\$1,346	18%	3%	0%	\$40	3%
Show Barn	1	\$144,048	\$1	\$144,049	54%	35%	10%	\$29,124	20%
Show Barn Bleachers	1	\$7,918	\$1	\$7,919	56%	37%	11%	\$1,688	21%
Ticket Office	1	\$5,825	\$1	\$5,826	15%	1%	0%	\$99	2%
Wood Bleachers	1	\$9,869	\$1	\$9,870	19%	4%	0%	\$302	3%
Health Services	11	\$11,047,323	\$3,976,707	\$15,024,030	25%	5%	0%	\$1,012,478	7%
County Health Building	1	\$661,359	\$259,209	\$920,568	12%	2%	0%	\$12,420	1%
Hhsa	1	\$1	\$300,722	\$300,723	8%	0%	0%	\$0	0%
Mental Health	1	\$1	\$29,766	\$29,767	10%	1%	0%	\$0	0%
Mental Health Annex	1	\$534,584	\$118,823	\$653,407	62%	14%	1%	\$57,612	9%
Mental Health Office	1	\$509,591	\$1	\$509,592	9%	0%	0%	\$4,887	1%
Modular Building	1	\$1	\$44,184	\$44,185	9%	0%	0%	\$0	0%



Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Office	1	\$223,369	\$1	\$223,370	9%	0%	0%	\$2,142	1%
Public Health Center	1	\$8,411,295	\$3,143,292	\$11,554,587	46%	18%	2%	\$917,925	8%
Public Health Storage	1	\$106,394	\$54,993	\$161,387	54%	10%	0%	\$9,175	6%
Social Services	1	\$567,393	\$1	\$567,394	9%	0%	0%	\$5,441	1%
Storage Building	1	\$33,335	\$25,715	\$59,050	54%	10%	0%	\$2,875	5%
Library	5	\$7,488,326	\$10,613,038	\$18,101,364	33%	21%	9%	\$1,701,767	9%
Covelo Library	1	\$1,116,120	\$1,062,466	\$2,178,586	4%	0%	0%	\$4,576	0%
Fort Bragg Library	1	\$1,211,737	\$2,655,032	\$3,866,769	8%	0%	0%	\$10,954	0%
Point Arena Library	1	\$757,965	\$805,729	\$1,563,694	9%	4%	0%	\$15,804	1%
Ukiah Library	1	\$2,895,989	\$3,404,642	\$6,300,631	85%	74%	42%	\$1,435,658	23%
Willits Library	1	\$1,506,515	\$2,685,169	\$4,191,684	58%	27%	4%	\$234,775	6%
Miscellaneous	13	\$1,077,145	\$402,688	\$1,479,833	60%	41%	19%	\$431,102	29%
Buildings & Grounds Building	1	\$476,209	\$61,315	\$537,524	94%	77%	32%	\$223,904	42%
Office	3	\$10,878	\$2,229	\$13,107	9%	0%	0%	\$99	1%
Offices	1	\$1	\$37,125	\$37,126	76%	39%	9%	\$0	0%
Old Justice Court	1	\$126,835	\$11,964	\$138,799	16%	3%	0%	\$3,227	2%
Recycling Facility	1	\$186,474	\$9,521	\$195,995	92%	76%	37%	\$89,474	46%
Shop Building	1	\$95,649	\$9,935	\$105,584	97%	93%	71%	\$68,957	65%
Site Office	1	\$4,691	\$743	\$5,434	24%	2%	0%	\$142	3%
Values Formerly Reported - Replacement Cost	2	\$2	\$2	\$4	95%	82%	43%	\$1	26%
Vehicle Value Scheduled At Location 100	1	\$1	\$221,200	\$221,201	79%	41%	6%	\$0	0%
Willits Action Group	1	\$176,405	\$48,654	\$225,059	79%	44%	11%	\$45,297	20%
Museum	5	\$5,621,348	\$1,468,329	\$7,089,677	86%	59%	19%	\$2,573,284	36%
Artifact Storage	1	\$1	\$498,860	\$498,861	88%	62%	18%	\$0	0%
Exhibit Building	1	\$1	\$29,047	\$29,048	63%	17%	1%	\$0	0%
Museum	2	\$5,621,345	\$337,918	\$5,959,263	95%	76%	29%	\$2,573,283	43%
Restoration Building	1	\$1	\$602,504	\$602,505	88%	62%	18%	\$0	0%
Park	10	\$609,229	\$120,014	\$729,243	31%	8%	1%	\$41,295	6%



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

		Site Value			Probability Damage Exceeds				
Building/ Site Name	# Bldg.	Structure	Content	Total	Slight	Moderate	Extensive	Economic Loss	Loss Pct.
Community Building	1	\$79,443	\$22,278	\$101,721	5%	0%	0%	\$454	0%
Picnic Shelter	2	\$251,704	\$14,585	\$266,289	55%	11%	0%	\$22,246	8%
Restroom	6	\$278,081	\$8,904	\$286,985	28%	10%	1%	\$18,595	6%
Shed	1	\$1	\$74,247	\$74,248	25%	2%	0%	\$0	0%
Social Services	33	\$21,074,994	\$5,049,159	\$26,124,153	65%	39%	17%	\$2,743,332	11%
Child Support Office	1	\$997,071	\$590,909	\$1,587,980	85%	74%	42%	\$494,288	31%
Childrens Office	1	\$1	\$101,304	\$101,305	58%	19%	2%	\$0	0%
Family Center	1	\$1	\$37,125	\$37,126	61%	25%	4%	\$0	0%
Family Recources	1	\$1	\$8,191	\$8,192	9%	1%	0%	\$0	0%
Fort Bragg Justice Center	1	\$2,606,077	\$376,334	\$2,982,411	8%	0%	0%	\$23,611	1%
Hopsital Office	1	\$1	\$9,223	\$9,224	58%	19%	2%	\$0	0%
Human Resources	1	\$510,036	\$118,823	\$628,859	73%	37%	8%	\$110,147	18%
Justice Center	1	\$3,470,062	\$191,464	\$3,661,526	63%	17%	1%	\$416,754	11%
Maintenance Garage	1	\$306,960	\$77,530	\$384,490	7%	1%	0%	\$3,137	1%
Office	1	\$425,391	\$236,211	\$661,602	88%	59%	21%	\$151,737	23%
Public Health	1	\$1,459,003	\$361,143	\$1,820,146	63%	17%	1%	\$175,226	10%
Social Services Building	1	\$2,643,876	\$447,975	\$3,091,851	50%	21%	3%	\$323,531	10%
Social Services Gain Unit	1	\$1	\$301,167	\$301,168	60%	15%	1%	\$0	0%
Social Services Modular Office	1	\$316,760	\$120,357	\$437,117	58%	12%	1%	\$30,691	7%
Social Services Office	1	\$6,198,465	\$1,486,033	\$7,684,498	50%	21%	3%	\$758,506	10%
Social Services Storage	7	\$7	\$19,064	\$19,071	88%	71%	35%	\$3	0%
Storage	5	\$5	\$52,707	\$52,712	69%	52%	26%	\$2	0%
Storage Shed	1	\$1,913	\$1	\$1,914	9%	0%	0%	\$18	1%
Storage Unit	2	\$2	\$6,688	\$6,690	92%	77%	38%	\$1	0%
Storage-Ergo	1	\$1	\$1,126	\$1,127	61%	21%	2%	\$0	0%
Wellness & Eap	1	\$102,111	\$24,255	\$126,366	62%	14%	1%	\$11,005	9%
Wisc Social Services	1	\$2,037,249	\$481,529	\$2,518,778	63%	17%	1%	\$244,674	10%
Grand Total	172	\$126,466,404	\$40,333,912	\$166,800,316	50%	28%	11%	\$29,934,106	18%



Table 4-45: Loss Estimations for M 7.8 N. San Andreas Scenario

Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Administration	3	\$11,963,350	\$7,257,925	\$19,221,275	8%	0%	0%	\$101,033	1%
County Administration Office	1	\$11,567,360	\$7,085,361	\$18,652,721	7%	0%	0%	\$97,513	1%
Modular Office	1	\$85,378	\$22,094	\$107,472	8%	0%	0%	\$759	1%
Storage Building	1	\$310,612	\$150,470	\$461,082	8%	0%	0%	\$2,761	1%
Agricultural	2	\$4,432,589	\$2,647,120	\$7,079,709	20%	4%	0%	\$83,152	1%
Enviromental Health Building	1	\$3,488,557	\$2,306,252	\$5,794,809	7%	0%	0%	\$29,409	1%
Office Building	1	\$944,032	\$340,868	\$1,284,900	33%	8%	0%	\$53,744	4%
Airport	4	\$852,073	\$83,647	\$935,720	27%	8%	1%	\$51,649	6%
Airport Hangar	2	\$385,991	\$16,358	\$402,349	39%	12%	1%	\$33,684	8%
Airport/Radio Equipment	1	\$12,002	\$41,800	\$53,802	8%	1%	0%	\$148	0%
Terminal/Off./Frame Han-	1	\$454,080	\$25,489	\$479,569	21%	6%	0%	\$17,818	4%
Animal Control	1	\$2,138,393	\$15,856	\$2,154,249	8%	0%	0%	\$19,374	1%
Animal Control	1	\$2,138,393	\$15,856	\$2,154,249	8%	0%	0%	\$19,374	1%
Communications	3	\$3	\$53,583	\$53,586	38%	23%	7%	\$0	0%
Radio Tower Repeater	1	\$1	\$17,861	\$17,862	78%	55%	19%	\$0	0%
Repeater Site - Cahto Mountain	1	\$1	\$17,861	\$17,862	13%	5%	0%	\$0	0%
Repeater Site - Spanish Mountain (Cleveland)	1	\$1	\$17,861	\$17,862	24%	10%	1%	\$0	0%
Community Building	8	\$4,756,473	\$346,600	\$5,103,073	18%	5%	1%	\$181,757	4%
Community Building	1	\$1,279,469	\$74,263	\$1,353,732	2%	0%	0%	\$2,316	0%
Justice Court/City Hall	1	\$703,567	\$57,810	\$761,377	48%	13%	1%	\$64,116	8%
Radio Tower Repeater	1	\$1	\$11,906	\$11,907	2%	0%	0%	\$0	0%
Veteran'S Memorial Building	5	\$2,773,436	\$202,621	\$2,976,057	18%	6%	1%	\$115,326	4%
County Building	28	\$6,302,236	\$1,973,177	\$8,275,413	25%	11%	4%	\$343,757	4%



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

					Probability Damage Exceeds				
Building/ Site Name	# Bldg.	Site Value			Slight	Moderate	Extensive	Economic Loss	Loss Pct.
		Structure	Content	Total					
Administration Building	1	\$1,331,670	\$309,423	\$1,641,093	11%	1%	0%	\$18,950	1%
Dot Storage	1	\$1	\$3,746	\$3,747	8%	1%	0%	\$0	0%
Equipment Building	2	\$99,778	\$74,534	\$174,312	59%	47%	32%	\$40,083	23%
Equipment Building 2	1	\$46,331	\$1	\$46,332	13%	2%	0%	\$963	2%
Equipment Storage	1	\$53,399	\$9,534	\$62,933	59%	23%	4%	\$7,673	12%
Flammable Liquids Building	1	\$4,272	\$10,137	\$14,409	10%	4%	1%	\$106	1%
General Services Building	1	\$1,785,363	\$525,860	\$2,311,223	23%	6%	0%	\$76,521	3%
Main Building	1	\$377,116	\$148,499	\$525,615	14%	2%	0%	\$8,462	2%
Modular Break Room	1	\$165,510	\$1	\$165,511	6%	0%	0%	\$1,006	1%
Modular Office	1	\$37,000	\$13,367	\$50,367	6%	0%	0%	\$225	0%
Oil Shed	1	\$5,131	\$4,906	\$10,037	59%	23%	4%	\$737	7%
Parts Storage	1	\$103,958	\$8,309	\$112,267	9%	1%	0%	\$1,291	1%
Shop Building	5	\$640,493	\$263,440	\$903,933	27%	15%	6%	\$49,955	6%
Storage Building	2	\$291,225	\$22,793	\$314,018	20%	4%	0%	\$16,050	5%
Storage Facility	1	\$1	\$5,458	\$5,459	8%	1%	0%	\$0	0%
Storage Shed	3	\$88,584	\$124,018	\$212,602	28%	9%	1%	\$2,689	1%
Storage Unit	1	\$1	\$1,785	\$1,786	24%	10%	1%	\$0	0%
Tire Shed	1	\$4,666	\$399	\$5,065	21%	5%	0%	\$179	4%
Vehicle Service Building	1	\$1,054,828	\$385,273	\$1,440,101	35%	19%	4%	\$115,451	8%
Veterans Service Office	1	\$212,909	\$61,694	\$274,603	11%	2%	0%	\$3,417	1%
Courthouse	2	\$15,892,732	\$2,018,005	\$17,910,737	40%	28%	9%	\$4,232,412	24%
Courthouse	1	\$14,396,012	\$1,540,043	\$15,936,055	66%	50%	18%	\$4,177,003	26%
Courthouse Annex	1	\$1,496,720	\$477,962	\$1,974,682	14%	6%	1%	\$55,409	3%
Detention Facility	10	\$24,932,751	\$2,181,951	\$27,114,702	12%	4%	0%	\$452,526	2%
Administration Building	1	\$2,433,079	\$338,258	\$2,771,337	7%	0%	0%	\$20,511	1%
Adult Detention Facility	1	\$8,110,655	\$347,942	\$8,458,597	7%	1%	0%	\$85,649	1%
Adult Detention(Maximum Security)	1	\$6,074,661	\$925,893	\$7,000,554	7%	1%	0%	\$64,148	1%



		Site Value			Probability Damage Exceeds				
Building/ Site Name	# Bldg.	Structure	Content	Total	Slight	Moderate	Extensive	Economic Loss	Loss Pct.
Classroom/Training Building	1	\$1,545,431	\$97,508	\$1,642,939	7%	0%	0%	\$13,028	1%
Juvenile Hall Admin	1	\$537,980	\$38,873	\$576,853	11%	2%	0%	\$9,189	2%
Juvenile Hall Classroom	1	\$429,856	\$49,112	\$478,968	6%	1%	0%	\$4,036	1%
Juvenile Hall Dorm	1	\$1,958,563	\$125,134	\$2,083,697	32%	16%	2%	\$170,121	8%
Juvenile Hall Kitchen,	1	\$616,890	\$55,533	\$672,423	32%	16%	2%	\$53,583	8%
Juvenile Hall/Violent Hall	1	\$2,147,001	\$53,717	\$2,200,718	7%	1%	0%	\$22,672	1%
Kitchen/Laundry Building	1	\$1,078,635	\$149,981	\$1,228,616	8%	0%	0%	\$9,589	1%
Emergency Operations	5	\$1,612,688	\$2,126,084	\$3,738,772	13%	3%	0%	\$41,091	1%
Dispatch Center	1	\$1	\$1,165,446	\$1,165,447	7%	1%	0%	\$0	0%
I.D. & Evidence	1	\$1	\$148,499	\$148,500	14%	6%	1%	\$0	0%
Sheriff	1	\$1	\$4,459	\$4,460	2%	0%	0%	\$0	0%
Sheriff Admin/Probation	1	\$1,612,684	\$647,091	\$2,259,775	18%	2%	0%	\$41,091	2%
Sheriff Commet	1	\$1	\$160,589	\$160,590	23%	6%	0%	\$0	0%
Fair Grounds	29	\$6,664,751	\$29	\$6,664,780	41%	24%	9%	\$1,329,828	20%
Administration Building	1	\$287,175	\$1	\$287,176	19%	4%	0%	\$8,782	3%
Agric.Bldg./Exhibit Hall .Bldg	1	\$1,522,765	\$1	\$1,522,766	79%	63%	28%	\$586,143	38%
Arts & Crafts Bldg.	1	\$606,837	\$1	\$606,838	42%	11%	1%	\$48,080	8%
Auditorium	1	\$603,767	\$1	\$603,768	42%	11%	1%	\$47,836	8%
Commercial Bldg./Exhibit Hall	1	\$724,276	\$1	\$724,277	31%	17%	4%	\$71,327	10%
Dinning Hall	1	\$218,838	\$1	\$218,839	19%	4%	0%	\$6,692	3%
Dormitory	1	\$96,274	\$1	\$96,275	19%	4%	0%	\$2,944	3%
Field Bleachers 1	1	\$26,408	\$1	\$26,409	79%	63%	28%	\$10,165	38%
Field Bleachers 2	1	\$11,825	\$1	\$11,826	79%	63%	28%	\$4,552	38%
Grandstand	1	\$402,829	\$1	\$402,830	42%	11%	1%	\$31,916	8%
Hog Barn	1	\$241,535	\$1	\$241,536	79%	63%	28%	\$92,972	38%
Jr. Barn 1	1	\$98,120	\$1	\$98,121	19%	4%	0%	\$3,001	3%
Jr. Barn 2	1	\$98,120	\$1	\$98,121	19%	4%	0%	\$3,001	3%



MENDOCINO COUNTY
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Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Judging Booth	1	\$4,667	\$1	\$4,668	19%	4%	0%	\$143	3%
Lamb Palace	1	\$241,032	\$1	\$241,033	79%	63%	28%	\$92,778	38%
Marvin Barn	1	\$88,318	\$1	\$88,319	79%	63%	28%	\$33,995	38%
Open Barn	1	\$496,968	\$1	\$496,969	79%	63%	28%	\$191,293	38%
Pumphouse	2	\$24,863	\$2	\$24,865	25%	11%	2%	\$2,102	8%
Restroom	3	\$500,585	\$3	\$500,588	23%	8%	1%	\$27,035	5%
Restrooms	1	\$123,766	\$1	\$123,767	19%	4%	0%	\$3,785	3%
Shop Building	1	\$76,778	\$1	\$76,779	19%	4%	0%	\$2,348	3%
Shop Storage Shed	1	\$1,345	\$1	\$1,346	19%	4%	0%	\$41	3%
Show Barn	1	\$144,048	\$1	\$144,049	79%	63%	28%	\$55,447	38%
Show Barn Bleachers	1	\$7,918	\$1	\$7,919	79%	63%	28%	\$3,048	38%
Ticket Office	1	\$5,825	\$1	\$5,826	15%	1%	0%	\$103	2%
Wood Bleachers	1	\$9,869	\$1	\$9,870	19%	4%	0%	\$302	3%
Health Services	11	\$11,047,323	\$3,976,707	\$15,024,030	10%	1%	0%	\$112,862	1%
County Health Building	1	\$661,359	\$259,209	\$920,568	15%	3%	0%	\$15,813	2%
Hhsa	1	\$1	\$300,722	\$300,723	10%	1%	0%	\$0	0%
Mental Health	1	\$1	\$29,766	\$29,767	13%	1%	0%	\$0	0%
Mental Health Annex	1	\$534,584	\$118,823	\$653,407	8%	0%	0%	\$4,752	1%
Mental Health Office	1	\$509,591	\$1	\$509,592	12%	1%	0%	\$6,874	1%
Modular Building	1	\$1	\$44,184	\$44,185	12%	1%	0%	\$0	0%
Office	1	\$223,369	\$1	\$223,370	12%	1%	0%	\$3,013	1%
Public Health Center	1	\$8,411,295	\$3,143,292	\$11,554,587	6%	1%	0%	\$73,599	1%
Public Health Storage	1	\$106,394	\$54,993	\$161,387	7%	0%	0%	\$880	1%
Social Services	1	\$567,393	\$1	\$567,394	12%	1%	0%	\$7,654	1%
Storage Building	1	\$33,335	\$25,715	\$59,050	7%	0%	0%	\$276	0%
Library	5	\$7,488,326	\$10,613,038	\$18,101,364	23%	16%	8%	\$494,678	3%
Covelo Library	1	\$1,116,120	\$1,062,466	\$2,178,586	0%	0%	0%	\$257	0%
Fort Bragg Library	1	\$1,211,737	\$2,655,032	\$3,866,769	10%	1%	0%	\$15,098	0%
Point Arena Library	1	\$757,965	\$805,729	\$1,563,694	84%	72%	40%	\$360,981	23%
Ukiah Library	1	\$2,895,989	\$3,404,642	\$6,300,631	14%	6%	1%	\$107,210	2%
Willits Library	1	\$1,506,515	\$2,685,169	\$4,191,684	5%	1%	0%	\$11,133	0%
Miscellaneous	13	\$1,077,145	\$402,688	\$1,479,833	18%	5%	0%	\$47,513	3%



Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Buildings & Grounds Building	1	\$476,209	\$61,315	\$537,524	33%	8%	0%	\$27,111	5%
Office	3	\$10,878	\$2,229	\$13,107	20%	1%	0%	\$251	2%
Offices	1	\$1	\$37,125	\$37,126	11%	2%	0%	\$0	0%
Old Justice Court	1	\$126,835	\$11,964	\$138,799	4%	0%	0%	\$599	0%
Recycling Facility	1	\$186,474	\$9,521	\$195,995	26%	11%	2%	\$12,386	6%
Shop Building	1	\$95,649	\$9,935	\$105,584	19%	8%	1%	\$4,669	4%
Site Office	1	\$4,691	\$743	\$5,434	4%	0%	0%	\$23	0%
Values Formerly Reported - Replacement Cost	2	\$2	\$2	\$4	26%	11%	1%	\$0	3%
Vehicle Value Scheduled At Location 100	1	\$1	\$221,200	\$221,201	10%	2%	0%	\$0	0%
Willits Action Group	1	\$176,405	\$48,654	\$225,059	10%	1%	0%	\$2,475	1%
Museum	5	\$5,621,348	\$1,468,329	\$7,089,677	14%	3%	0%	\$97,755	1%
Artifact Storage	1	\$1	\$498,860	\$498,861	20%	5%	0%	\$0	0%
Exhibit Building	1	\$1	\$29,047	\$29,048	6%	0%	0%	\$0	0%
Museum	2	\$5,621,345	\$337,918	\$5,959,263	13%	1%	0%	\$97,755	2%
Restoration Building	1	\$1	\$602,504	\$602,505	20%	5%	0%	\$0	0%
Park	10	\$609,229	\$120,014	\$729,243	18%	3%	0%	\$15,756	2%
Community Building	1	\$79,443	\$22,278	\$101,721	58%	12%	1%	\$7,737	8%
Picnic Shelter	2	\$251,704	\$14,585	\$266,289	6%	0%	0%	\$1,772	1%
Restroom	6	\$278,081	\$8,904	\$286,985	17%	3%	0%	\$6,248	2%
Shed	1	\$1	\$74,247	\$74,248	11%	1%	0%	\$0	0%
Social Services	33	\$21,074,994	\$5,049,159	\$26,124,153	14%	4%	0%	\$222,146	1%
Child Support Office	1	\$997,071	\$590,909	\$1,587,980	14%	6%	1%	\$36,912	2%
Childrens Office	1	\$1	\$101,304	\$101,305	9%	1%	0%	\$0	0%
Family Center	1	\$1	\$37,125	\$37,126	11%	2%	0%	\$0	0%
Family Recources	1	\$1	\$8,191	\$8,192	12%	1%	0%	\$0	0%
Fort Bragg Justice Center	1	\$2,606,077	\$376,334	\$2,982,411	10%	1%	0%	\$32,472	1%
Hopsital Office	1	\$1	\$9,223	\$9,224	9%	1%	0%	\$0	0%
Human Resources	1	\$510,036	\$118,823	\$628,859	11%	2%	0%	\$8,711	1%



Building/ Site Name	# Bldg.	Site Value			Probability Damage Exceeds			Economic Loss	Loss Pct.
		Structure	Content	Total	Slight	Moderate	Extensive		
Justice Center	1	\$3,470,062	\$191,464	\$3,661,526	6%	0%	0%	\$23,007	1%
Maintenance Garage	1	\$306,960	\$77,530	\$384,490	9%	2%	0%	\$4,405	1%
Office	1	\$425,391	\$236,211	\$661,602	16%	3%	0%	\$11,690	2%
Public Health	1	\$1,459,003	\$361,143	\$1,820,146	6%	0%	0%	\$9,673	1%
Social Services Building	1	\$2,643,876	\$447,975	\$3,091,851	6%	1%	0%	\$23,980	1%
Social Services Gain Unit	1	\$1	\$301,167	\$301,168	7%	0%	0%	\$0	0%
Social Services Modular Office	1	\$316,760	\$120,357	\$437,117	7%	0%	0%	\$2,620	1%
Social Services Office	1	\$6,198,465	\$1,486,033	\$7,684,498	6%	1%	0%	\$54,237	1%
Social Services Storage	7	\$7	\$19,064	\$19,071	21%	9%	1%	\$0	0%
Storage	5	\$5	\$52,707	\$52,712	17%	6%	1%	\$0	0%
Storage Shed	1	\$1,913	\$1	\$1,914	12%	1%	0%	\$25	1%
Storage Unit	2	\$2	\$6,688	\$6,690	24%	11%	1%	\$0	0%
Storage-Ergo	1	\$1	\$1,126	\$1,127	9%	1%	0%	\$0	0%
Wellness & Eap	1	\$102,111	\$24,255	\$126,366	8%	0%	0%	\$908	1%
Wisc Social Services	1	\$2,037,249	\$481,529	\$2,518,778	6%	0%	0%	\$13,507	1%
Grand Total	172	\$126,466,404	\$40,333,912	\$166,800,316	22%	9%	3%	\$7,827,291	5%

4.5.4.9 Future Trends in Development

Land use in the planning area will be directed by general plans adopted under California's General Planning Law. The safety elements of the general plans establish standards and plans for the protection of the community from hazards. The information in this plan provides the participating partners a tool to ensure that there is no increase in exposure in areas of high seismic risk. Development in the planning area will be regulated through building standards and performance measures so that the degree of risk will be reduced. The geologic hazard portions of the planning area are heavily regulated under California's General Planning Law. The California Building Code establishes provisions to address seismic risk.

4.5.4.10 Earthquake Hazard Problem Statements:

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective



facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Earthquake problem statements for all planning partners are listed in Table 4-46; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee in understanding the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. See Table 5-6 for a full list of mitigation actions and the corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-46 and Table 5-6.

Table 4-46 Earthquake Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-MC-33	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County	Older construction and particularly unreinforced masonry (URM) buildings within the County will pose hazards during earthquakes.	ma-EQ-MC-200, ma-EQ-MC-201, ma-EQ-MC-202
ps-EQ-MC-34	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County	Historic buildings can be more susceptible to ground shaking since many of these buildings have weakened with age and were built before the use of building codes.	ma-EQ-MC-201, ma-EQ-MC-202
ps-EQ-MC-35	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County	County facilities do not have seismic shut-off valves to prevent gas links in a seismic event	ma-EQ-MC-203



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Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-MC-36	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County	The following County bridges have been identified as highest priority for retrofit or replacement by the County: Eureka Hill Road - Seismic Retrofit, Seismic Retrofit of Bridge over Garcia River; Sherwood Road, Replace Bridge over Rowes Creek; Lambert Lane, Replace Bridge over Robinson Creek; Hill Road Bridge, Replace Bridge over Mill Creek; North State Street, Replace Bridge over Ackerman Creek; Philo Greenwood Road, Rehabilitate Bridge over Navarro River; Briceland Road, Replace Bridge over Mattole River; Powerhouse Road, Replace Bridge over Williams Creek; Wilderness Lodge Road, Replace Bridge over Dutch Charlie Creek; Fort Bragg Sherwood Road, Replace Bridge over Sherwood Creek; Reynolds Highway, Replace Bridge over Outlet Creek; Camp 1 Ten-Mile Road, Rehabilitate Bridge and Approaches over South Fork Ten Mile River; Windy Hollow Road & Bridge, Construct Bridge and Approaches over the Garcia River; Mountain View Road, Replace Bridge over Rancheria Creek; Hearst Willits Road, Replace Bridge over Eel River; Usal Road, Replace Bridge over Usal Creek; Navarro Ridge Road, Replace Bridge over Hay Creek; Gualala Road, Replace Bridge over Gualala River; Canyon Road, Replace Bridge over Berry Creek; Hearst Willits, Replace Bridge over Tomki Creek; Guntley Ranch Road, Replace Bridge over Cold Creek	ma-EQ-MC-201, ma-EQ-MC-127
ps-EQ-MC-37	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County	The following critical infrastructure is located in a violent shake zone for the Maacama Garberville On Shore Scenario: 2 communication towers, DOT vehicle service building and DOT sign shop, 1 child care center, 2 adult residential facilities, 3 substations, and 3 Fire Department facilities, and one natural gas station	ma-EQ-MC-200, ma-EQ-MC-201
ps-EQ-MC-38	Earthquake	Victim	PE&A - Public Education & Awareness	Mendocino County	Approximately 6,145 people live in a violent shake zone for the Maacama Garberville on shore EQ scenario	ma-EQ-MC-200, ma-AH-MC-134



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-MC-39	Earthquake	Victim	PE&A - Public Education & Awareness	Mendocino County	Approximately 677 people live within in a violent shake zone for the N. Coast – Peninsula – SC Mtn off shore EQ scenario	ma-EQ-MC-200, ma-AH-MC-134
ps-EQ-MC-40	Earthquake	Impact	PRV - Prevention , PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County	Buildings permitted as “class k” structures under the building code are at high risk from a seismic event	ma-AH-MC-134, ma-AH-MC-205
ps-EQ-MC-41	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County	The following critical infrastructure located in a violent shake zone for the N. Coast – Peninsula – SC Mtn Eq scenario: 4 County bridges, 3 historic buildings, 3 communication towers, 2 Fire Dept. facilities, 2 schools, 1 transfer station, 1 law enforcement facility, and 1 substation	ma-EQ-MC-200



4.5.5 Pandemic Disease Hazard Profile

The U.S. Center for Disease Control defines a disease outbreak as the occurrence of more cases of disease than normally expected within a specific place or group of people over a given period of time. An ***epidemic*** is a localized outbreak that spreads rapidly and affects many people or animals in a community. A ***pandemic*** is an epidemic that occurs worldwide or over an exceptionally large area and affects a large number of people or animals.



Pandemics are profiled here in accordance with their mitigation measures, which focus on physical parameters for mitigation rather than operational parameters focused on response efforts.

Pandemics are hazards which have sustained durations. Although the daily impacts may be low, cumulative impacts are likely to be overwhelming for both the health system and the community. During a moderate pandemic, Mendocino County could see a sustained increase in intensive care unit admissions, in emergency department admissions, in patients needing to be placed in respiratory isolation, and in deaths. The capacity to provide medical care, including basic emergency medical system (EMS) response, hospital emergency department services, and isolation rooms, will be reduced. At the same time, a higher than usual absenteeism rate for all employees is expected.

The following are the most prevalent types of pandemic diseases in the planning area:

Coronavirus

Coronavirus is a large family of viruses that cause illness ranging from the common cold to more severe diseases such as the Middle East Respiratory Syndrome and Severe Acute Respiratory Syndrome. The Novel Coronavirus, or COVID-19, is a new strain of these viruses which has not been previously identified in humans. The virus is spread easily between people. It is believed to spread primarily through close contact from person-to-person.. It can be contracted through respiratory droplets produced from the cough, sneeze, or vocalization of an infected person. Evidence suggests that it spreads more efficiently than influenza, but not as easily as the measles. (World Health Organization, 2020) COVID-19, short for "coronavirus disease 2019," the most recent (and still active in 2020) pandemic declared by the World Health Organization, is discussed in more detail herein.

Influenzas

The flu can cause mild to severe illness, and at times can lead to death. Anyone can get sick with the flu, but some people are at a higher risk of flu-related complications if they get sick. This includes older and younger people and people with certain chronic medical conditions.



West Nile Virus

West Nile virus is a mosquito-borne disease that is common in Africa, west Asia, the Middle East, and more recently, North America. Human infection with West Nile virus may result in serious illness. Experts believe West Nile virus is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall.

Hepatitis C

Hepatitis C is a liver disease caused by the Hepatitis C virus, which is found in the blood of persons who have this disease. Hepatitis C virus is spread by contact with the blood of an infected person.

Lyme Disease

Lyme disease is an infectious disease caused by a bacterium known as a spirochete. People get Lyme disease when a tick infected with the Lyme disease bacterium attaches and feeds on them. Lyme disease was first recognized in the northeastern United States in the 1970s. Lyme disease has been reported from many areas of the country, including California.

Typical Lyme disease symptoms include fever, headache, fatigue, and a characteristic skin rash called erythema migrans. If left untreated, the infection can spread to joints, the heart, and the nervous system. (CDC, 2020)

Measles

Measles, also called rubeola, is a childhood infection caused by a virus. Once quite common, now measles can almost always be prevented with a vaccine. Measles can be serious and even fatal for small children. While death rates have been falling worldwide as more children receive the measles vaccine, the disease still kills more than 100,000 people a year, most under the age of 5.

As a result of high vaccination rates in general, measles hasn't been widespread in the United States for more than a decade. The United States averaged about 60 cases of measles a year from 2000 to 2010, but the average number of cases jumped to 205 a year in recent years. Most of these cases originate outside the country and occurred in people who were unvaccinated or who didn't know whether or not they had been vaccinated.

Rabies

Rabies is a viral infection transmitted in the saliva of infected mammals. Common modes of rabies virus transmissions are through bites and contact with the saliva of an infected host. Other various routes of transmission include contamination of mucous membranes, aerosol transmission, and corneal transplantations. Any penetration of the skin by teeth, regardless of location, represents a potential risk of rabies transmission. The rabies virus infects the central nervous system, causing encephalopathy and, ultimately, death.



4.5.5.1 Policies, Plans, and Regulatory Environment

United States Department of Health and Human Services

The U.S. Department of Health and Human Services has statutory responsibility for preventing the introduction, transmission, and spread of communicable diseases in the United States

The Center for Disease Control and Prevention (CDC) is housed within the Department of Health and Human Services and is responsible for controlling the introduction and spread of infectious diseases. The CDC's roles include:

- instituting public education and awareness related to disease spread and prevention,
- studying and tracking transmission rates, treatment options, and vaccines,
- maintaining active surveillance of diseases through investigation and data collection, analysis, and distribution,
- developing and implementing operational programs and guidance relating to environmental health problems,
- conducting research aimed at developing and testing effective disease prevention, control, and health,
- implementing a program to sustain a strong national workforce in disease prevention and control, and conducts a national program for improving the performance of clinical laboratories. (CDC, 2020)

The Division of Global Migration and Quarantine works to control disease transmission internationally through the operation of Quarantine Stations at ports of entry, establishment of standards for medical examination of persons destined for the United States, and administration of interstate and foreign quarantine regulations, which govern the international and interstate movement of persons, animals, and cargo.

California Department of Public Health

The California Department of Public Health (CDHP) is responsible for protecting public health within the state of California. The CDPH is comprised of public health professions, researchers, scientists, doctors, nurses, and other staff members who aid in implementing the organizations programs and services. The essential functions of the CDHP are comprehensive in scope and include infectious disease control and prevention, food safety, environmental health, laboratory services, patient safety, emergency preparedness, chronic disease prevention and health promotion, family health, health equity and vital records and statistics.

Mendocino County Health and Human Services Agency

The mission of the Mendocino County Health and Human Services Agency is to ensure the support and empowerment of families and individuals to live healthy, safe, and sustainable lives in healthy environments, through advocacy, services. The Agency provides public, environmental, and mental health services, including public outreach, response, and data collection during the current COVID-19 outbreak.



4.5.5.2 Past Events

There have been six pandemics since 1900. The previous pandemics occurred in 1918-1920, 1957-1958, 1968-1969, 1977-1978, 2009-2010, and 2019-present. The 1918-1920 Pandemic, commonly referred to as the Spanish Flu, was unusually severe and had an extensive mortality rate. It is estimated that the 1918 Pandemic killed as much as one percent of the world's population, or 40,000,000 people worldwide, including more than 500,000 in the United States. The H1N1 Pandemic occurred in 2009 and resulted in 482,000 laboratory-confirmed cases and 6,071 deaths. (Centers for Disease Control and Prevention, 2019)

Coronavirus disease 2019 (COVID-19) is an ongoing pandemic. It was first detected in Wuhan China in late December of 2019, and it was later declared a Public Health Emergency of International Concern on 30 January 2020. COVID-19 is ongoing as of September 2020 and has resulted in more than 31 million globally-confirmed cases, and more than 900,000 deaths as of September 2020. (Johns Hopkins University of Medicine, 2020) The pandemic has also led to a severe global economic recession and financial and corporate sector distress. It is currently unclear how long or how severe this pandemic and related contraction in economic activity will be.

Table 4-47 lists the number of overall COVID-19 cases in Mendocino as of September, 2020. It also lists deaths reported, the number of people currently hospitalized (including in intensive care units), and the number of people who have been released from isolation. Table 4-48 represents the number of select cases of communicable diseases which have occurred per year in Mendocino. This table prioritizes pandemic diseases for which there are existing data for Mendocino County. Cases of Lyme disease and Influenza are the highest of the five categories.

Table 4-47 COVID-19 Mendocino County Case Data as of September, 2020

Overall Cases	Active Confirmed Cases	Deaths Reported	Hospitalized Currently	Hospitalized - Intensive Care Unit	Released from Isolation
887	91	18	5	2	778

Source: County of Mendocino, COVID-19 Case Data



Table 4-48 Mendocino County Selected Communicable Disease Cases 2011-2018

Infectious Disease	2011	2012	2013	2014	2015	2016	2017	2018
Lyme Disease	3	3	1	2	0	1	2	0
Animal Rabies	0	1	0	0	2	2	0	0
Measles	3	0	1	0	0	0	1	0
West Nile Virus	0	0	0	1	2	0	0	0
Infectious Disease	2013-2014		2014-2015		2015-2016		2016-2017	2017-2018
Influenza*	4		0		0		1	2

*Includes both fatal and non-fatal laboratory-confirmed influenza in persons <65 years of age reported to the California Department of Public Health. These data were recorded biennially in order to accurately reflect the following seasonal influenza periods: 2013–2014: September 29, 2013–September 27, 2014; 2014–2015: September 28, 2014–October 3, 2015; 2015–2016: October 4, 2015–October 2, 2016; 2016–2017: October 3, 2016–September 30, 2017; 2017–2018: October 1, 2017–September 29, 2018

Sources: California Department of Public Health, IDB Yearly Summaries of Selected Communicable Diseases in California, 2011-2018; California Department of Public Health, Vaccine-Preventable Disease Summaries; and California West Nile Virus Website, 2011-2018 WNV Incidence Reports.

4.5.5.3 Location

The entire planning area is susceptible to the human health hazards discussed in this profile. Some hazards such as West Nile virus can have a geographic presence within the planning area. Others such as COVID-19 may be transported into the County, through residents and visitors who travel extensively. As of June 2020, a total of 25,474 COVID-19 tests have been administered and 887 cases have been detected. Mendocino County Public Health has been working closely with local health care providers, with the California Department of Public Health, and with the CDC to closely monitor the virus. (County of Mendocino, 2020)

4.5.5.4 Frequency/ Probability of Future Occurrences

While the probability of a major infectious disease outbreak is relatively low, it can have catastrophic social and economic consequences. Past history indicates a major infectious disease outbreak occurs about once every 10 years (a 1 in 10 years chance of occurring - $1/10 = 10$ percent). (Mendocino 2014 MJHMP, 2014)

Influenza: According to the CDC, influenza has a predictable pattern and a near certainty of occurrence. CDC estimated that approximately 5 to 20 percent of the population contracts the seasonal flu. With the introduction of influenza vaccination, influenza occurrences are likely to remain below those reported during the particularly-high 2009 to 2010 influenza season. (Center for Disease Control and Prevention, 2020)

COVID-19: A report released by the World Health Organization and the China Joint Commission found that transmission rates of COVID-19 vary based on location. In general, between 1% and 5% of people in contact with a confirmed case of the virus subsequently, become a laboratory-confirmed case of COVID-19. (World Health Organization-China Joint Mission, 2020)

West Nile virus: In California, mosquitoes are monitored and controlled primarily to reduce cases of West Nile Virus, malaria, encephalitis, dog heartworm, and sensitivity to bites. Human mosquito-borne diseases,



including West Nile Virus, have declined significantly in California since the creation of mosquito and vector control agencies.

Lyme disease: There have been 16 confirmed cases of Lyme disease in Mendocino County between 2009-2018. (Dept of Public Health, Cal., 2020) Cases are expected to continue to develop, and instances may increase with warming temperatures due to climate change.

The frequency and probability of other diseases discussed in this profile are unpredictable and contingent on factors such as public awareness, treatment options, and vaccination rates.

4.5.5.5 Severity and Extent

A communicable disease can affect many people, causing mild illness, hospitalization, or in rare cases, death. Predicting severity and extent for communicable disease transmission can be difficult and is predicted by modeling scenarios based on a number of factors.

There have been approximately 15,204 COVID-19 related fatalities in California as of September, 2020. (California Department of Public Health, 2020) Globally, there have been 967,164 confirmed deaths, as of September, 2020, according to the World Health Organization. (World Health Organization, 2020)

The CDC and the Office of the Assistant Secretary for Preparedness and Response developed five COVID-19 Pandemic Planning Scenarios that attempt to predict transmission rates. These scenarios are based on data received by the CDC prior to June 2020. Scenarios 1 through 4 are based on parameter values that represent the lower and upper bounds of disease severity and viral transmissibility (moderate to very high). Scenario 5 represents the current best estimate about viral transmission and disease severity in the United States. (Centers for Disease Control and Prevention, 2020)

The current best estimate for viral transmissibility is 2.5 persons. Viral transmissibility is the average number of people that one person with COVID-19 is likely to infect in a population without any immunity. Table 40 depicts the viral transmissibility rate values for each of the five planning scenarios (row 1). The Table also lists an Infection Fatality Ratio for each scenario (row 2). The Infection Fatality Ratio is the number of individuals who die from the disease among all infected individuals (both symptomatic and asymptomatic). Rows 3-5 estimate the percentage of infections that will bear various characteristics. CDC makes clear that the scenarios are intended to aid in public health preparedness and planning; they are not predictions or estimates of the expected impact of COVID-19. The CDC will update and augment these values as more is learned about the epidemiology of COVID-19. (Centers for Disease Control and Prevention, 2020)



Table 4-49 Parameter Values Contingent on Five COVID-19 Pandemic Planning Scenarios

Parameter	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5: Current Best Estimate
Viral Transmissibility Rate	2.0	2.0	4.0	4.0	2.5
Infection Fatality Ratio, Overall	0.005	0.005	0.008	0.008	0.0065
Percent of Infections that are Asymptomatic	10%	70%	10%	70%	40%
Infectiousness of Asymptomatic Individuals Relative to Symptomatic	25%	100%	25%	100%	75%
Percentage of Transmission Occurring Prior to Symptom Onset	35%	70%	35%	70%	50%

Source: Centers for Disease Control and Prevention, COVID-19 Pandemic Planning Scenarios (2020)

4.5.5.6 Secondary Hazards

Human health hazards are not like natural hazards such as earthquakes, floods, or fires that have measurable secondary impacts. This is due primarily to the fact that human health hazards do not impact general building stock or critical facilities and infrastructure as other hazards do. The largest secondary impact caused by human health hazards would be economical. Large outbreaks of any human health hazard could reduce the workforce significantly for long periods of time while the infected population recovers from the impacts of the disease. Hospitals and health care providers could be overwhelmed.

Moreover, as the 2019-2020 COVID-19 outbreak is revealing, a pandemic can add significant challenges to ongoing hazard mitigation efforts, not to mention confusing and complicating response efforts for other natural hazard events. In 2020, the U.S. Forest Service suspended controlled burns scheduled in the spring due to the coronavirus pandemic. (Groom, 2020) Seattle has shuttered community centers designated as refuges from wildfire smoke, and the City has yet to establish what air-quality criteria might trigger the opening of any smoke shelters. (Hu, 2020) Furthermore, many populations vulnerable to COVID-19 are also most vulnerable to the effects of smoke inhalation. (*Id.*) FEMA released guidance on COVID-19 wildfire response in June of 2020. (U.S. Fire Administration, 2020) This is an emerging issue, and developments and guidance changes. Mitigating the impacts of the pandemic, in many instances, means mitigating the impact of a pandemic to other hazards that could occur simultaneously.



4.5.5.7 Pandemic Disease Vulnerability Assessment

4.5.5.7.1 Population

All citizens in the Mendocino County planning area could be susceptible to the human health hazards discussed in this profile. Additional pandemics or outbreaks of a communicable disease could have devastating effects on the population. The introduction of a disease such as the plague or influenza could rapidly impact those most at-risk (children, the elderly, and those already affected by health issues).

4.5.5.7.2 Property

None of the health hazards addressed in this profile are considered to have any measurable impact on the built environment in the planning area.

4.5.5.7.3 Critical Facilities and Infrastructure

None of the health hazards addressed in this profile are considered to have any measurable impact on critical facilities in the planning area. However, healthcare facilities (and veterinary clinics) are prepared for pandemic disease hazards. Emergency management planning incorporates all disciplines responding to an event, (fire agencies, law enforcement, first responder ground and air ambulance agencies, public health, mental and spiritual health). Planning includes identifying shelters, alternate treatment facilities, isolation capacity, and methods to immediately expand physical and human resources.

4.5.5.8 Future Trends in Development

The economic impact of a human health hazard could be localized to a single population or could be significant, depending on the number of cases and available resources to care for those affected. Other financial impacts are absorbed or managed by the organization affected. For example, healthcare facilities and veterinary offices train their personnel at their own cost. When more people visit Mendocino County or move into the area, the impacts from and the potential for a pandemic outbreak rises. Urban areas, in particular, will become more vulnerable as density increases and illnesses or contamination spread more rapidly.



4.5.5.9 Pandemic Disease Hazard Problem Statements

As part of the mitigation action identification process, each participating jurisdiction's Planning Committee identified issues and/or weaknesses (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool. Pandemic disease hazard problem statements are listed in Table 4-50.

Identifying these common issues and weaknesses assists the Planning Committee in understand the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-6 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing Table 4-50 and Table 5-6.

Table 4-50 Pandemic Disease Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-PN-MC-61	Pandemic	Victim	PE&A - Public Education & Awareness	Mendocino County	COVID-19 exists has a threat to the entire population of Mendocino County	ma-PN-MC-223, ma-PN-MC-224, ma-PN-MC-222
ps-PN-MC-114	Pandemic	Victim	ES - Emergency Services , SP - Structural Projects	Mendocino County	Need for additional sheltering locations in event of pandemic social distancing needs paired with another hazard event (flood, wildfire, earthquake)	ma-PN-MC-224
ps-PN-MC-115	Pandemic	Victim	SP - Structural Projects	Mendocino County	Critical facilities may not have adequate fresh air/ ventilation to be appropriate for essential work during pandemic.	ma-PN-MC-223, ma-PN-MC-222



4.5.6 Flood Hazard Profile

Flooding is one of the three primary hazards in California, along with earthquake and wildfire, and represents the second most destructive source of hazard, vulnerability, and risk statewide. (Cal OES, 2018) Flooding is a priority hazard for Mendocino County as well.



Connections between a river and its floodplain are most apparent during and after major flood events. A **floodplain** is the area adjacent to a river, creek, or lake that becomes inundated during a flood. Floodplains may be broad, as when a river crosses an extensive flat landscape, or narrow, as when a river is confined in a canyon. These areas form a complex physical and biological system that supports a variety of natural resources and provides natural flood and erosion control. When a river is separated from its floodplain with levees and other flood control facilities, its natural, built-in benefits can be lost, altered, or significantly reduced. (FEMA, 2020)

There are five types of flood events that might occur within the Mendocino County area: riverine, flash, urban stormwater, coastal flooding, and dam failure. Regardless of the type, the cause is primarily the result of severe weather and excessive rainfall, either in the flood area or upstream reach. (The National Severe Storms Laboratory, 2020)

Riverine flooding occurs when a watercourse exceeds its 'bank-full' capacity and is the most common type of flood event. Riverine flooding occurs as a result of prolonged rainfall that is combined with saturated soils from previous rain events, or combined with snowmelt, and is characterized by high peak flows of moderate duration and by a large volume of runoff. Riverine flooding occurs in river systems whose tributaries drain large geographic areas and can include many watersheds and sub-watersheds. The duration of riverine floods varies from a few hours to many days. Factors that directly affect the amount of flood runoff include precipitation amount, intensity and distribution, soil moisture content, channel capacity, seasonal variation in vegetation, snow depth, and water-resistance of the surface due to urbanization. (*Id.*)

In Mendocino County, riverine flooding can occur anytime during the period from November through April. Flooding is more severe when antecedent rainfall has resulted in saturated ground conditions.

The term "flash flood" describes localized floods of great volume and short duration, generally in less than four hours. In contrast to riverine flooding, this type of flood usually results from a heavy rainfall in a relatively small drainage area. Precipitation of this sort usually occurs in the spring and summer. (*Id.*)

Urbanization may increase peak flow runoff as well as the total volume of stormwater runoff from a site. The increase is dependent upon the type of soil and its topography in relation to the proposed development. Comparison of the peak flow and volume impacts to the watershed should be analyzed whenever development is proposed to assure that any increases are accommodated. (USGS, 2016)



Flooding may be a secondary impact from an earthquake, and may cause failure of dams, canal banks, or where landslides block drainage channels, streams, and/or rivers. *See Section 4.5.3 for the Earthquake Hazard Profile.*

Dam failures also often result in flash flooding. Dam failures are discussed separately in this plan. *See Section 4.5.1.*

Floodplain Definitions

100-YR Floodplain

The boundaries of the 100 year (100-YR) floodplain coincide with an annual risk of 1% and are a FEMA study product consisting of both floodway and flood fringe.

500-YR Floodplain

The boundaries of the floodplain coincide with an annual risk of 0.2% and are a FEMA study product. The 500-YR floodplain includes the 100-YR.

Floodway

This includes the channel of the tributary and the land adjacent to it. This zone needs to remain free from obstruction so the 100-YR floodplain can be conveyed downstream.

Flood Fringe

This is the remaining portion of the 100-YR floodplain, excluding the floodway. This zone can be obstructed or developed if criteria are met.

Special Flood Hazard Area (SFHA)

An area having special flood, mudflow, or flood-related erosion hazards and shown on a Flood Insurance Rate Map (FIRM). The SFHA is the area where the National Flood Insurance Program's (NFIP) floodplain management regulations must be enforced.

Floodplain Ecosystems

Floodplains can support ecosystems that are rich in quantity and diversity of plant and animal species. A floodplain can contain 100 or even 1,000 times as many species as a river. Wetting of the floodplain soil releases an immediate surge of nutrients left over from the last flood and resulting from the rapid decomposition of organic matter that had accumulated. Microscopic organisms thrive, and larger species enter a rapid breeding cycle. Opportunistic feeders, particularly birds, move in to take advantage. The production of nutrients peaks and falls away quickly; however, the surge of new growth endures for some time. This makes floodplains particularly valuable for agriculture. Species growing in floodplains are markedly different from those that grow outside floodplains. For instance, trees in floodplains and riparian areas tend to be very tolerant of root disturbance and very quick-growing compared to non-riparian trees.

Floodplains that are undisturbed or have been restored to a natural state provide many benefits to both human and natural systems. In their natural vegetative state, undisturbed floodplains provide the following benefits:



- Slow the rate at which incoming surface runoff reaches the main body of water, slowing down the impact of flood events.
- Maintain water quality by allowing surface runoff to drop sediment into the natural soil, preventing it from depositing in streams and rivers.
- Recharge groundwater. The slowing of runoff allows additional time for the runoff to recharge existing groundwater aquifers.
- Provide habitat for large and diverse populations of plants and animals.

Floodplains are often compromised by human development. Because they border water bodies, floodplains have historically been popular sites to establish settlements. Human activities tend to concentrate on floodplains because water is readily available, the land is fertile and suitable for farming, transportation by water is easily accessible, and the land is flatter and easier to develop.

But human activity in floodplains frequently interferes with the natural function of floodplains. It can affect the distribution and timing of drainage, thereby increasing flood problems. Human development can create local flooding problems by altering or confining drainage channels. This increases flood potential in two ways: it reduces the stream's capacity to contain flows, and it increases flow rates or velocities downstream during all stages of a flood event. Human activities can interface effectively with a floodplain as long as steps are taken to mitigate the activities' adverse impacts on floodplain functions.

4.5.6.1 Plans, Policies, and Regulatory Environment

National Flood Insurance Program (NFIP)

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. Mendocino County and the cities of Fort Bragg, Ukiah, Willits, and Point Arena participate in NFIP.

For most participating communities, FEMA has prepared a detailed Flood Insurance Study (FIS). The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood (the 100-year flood) and the 0.2-percent annual chance flood (the 500-year flood).

Base-flood elevations and the boundaries of the 100- and 500-year floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principal tool for identifying the extent and location of the flood hazard. FIRMs also designate and display the floodway, which is the channel of the river or stream and adjacent land that must remain free from obstruction so that the 100-year flood can be conveyed downstream. FIRMs are the most detailed and consistent data source available, and for many communities, they represent the minimum area of oversight under their floodplain management program. The most recent countywide FIRM was completed on November 14th, 2017, and is a digital flood insurance rate map (DFIRM).



Participants in the NFIP must, at a minimum, regulate development in floodplain areas in accordance with NFIP criteria. Before issuing a permit to build in a floodplain, planning partners must ensure that three criteria are met:

- New buildings and those undergoing substantial improvements must, at a minimum, be elevated to protect against damage by the 100-YR flood;
- New floodplain development must not aggravate existing flood problems or increase damage to other properties; and
- New floodplain development must exercise a reasonable and prudent effort to reduce its adverse impacts on threatened salmonid species.

Structures permitted or built in the County before December 31, 1974, are called “pre-FIRM” structures, and structures built afterward are called “post-FIRM.” Post-FIRM properties are eligible for reduced flood insurance rates. Such structures are less vulnerable to flooding since they were constructed after regulations and codes were adopted to decrease vulnerability. Pre-FIRM properties are more vulnerable to flooding because they do not meet code or are located in hazardous areas. The insurance rate is different for the two types of structures.

Compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA. Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified initiatives to maintain their compliance and good standing.

Community Rating System (CRS)

The CRS is a voluntary program within the NFIP that encourages floodplain management activities that exceed the minimum NFIP requirements. Flood insurance premiums are discounted to reflect the reduced flood risk resulting from community actions that meet the three goals of the CRS: 1) reduce flood losses, 2) facilitate accurate insurance rating, and 3) promote awareness of flood insurance.

For participating communities, flood insurance premium rates are discounted in increments of 5 percent according to the community’s classification. For example, a Class 1 community would receive a 45 percent premium discount, and a Class 9 community would receive a 5 percent discount. Class 10 communities are those that do not participate in the CRS; they receive no discount. The CRS classes for local communities are based on 18 creditable activities related to public information, mapping and regulations, flood damage reduction, and flood preparedness.

CRS activities can help to save lives and reduce property damage. Communities participating in the CRS represent a significant portion of the nation’s flood risk; over 66 percent of the NFIP’s policy base are communities in the CRS. Communities receiving premium discounts through the CRS range from small to large and represent a broad mixture of flood risks, including both coastal and riverine flood risks. Table 4-51 lists NFIP and CRS statistics for the County.



Table 4-51: Flood Insurance Statistics for Mendocino County

NFIP and CRS Status & Information	
Mendocino County	
NFIP Status	Participating since 06/01/83
CRS Class	Not Participating
Policies in Force	280
Policies in SFHA	192
Policies in non-SFHA	88
Total Claims Paid	107
Paid Losses	\$3,236,007
Repetitive Loss Properties	7
Severe Repetitive Loss Properties	1
Repetitive Loss Payment by NFIP on Building	\$320,723
Repetitive Loss Payment by NFIP on Contents	\$44,535

Note: The Privacy Act of 1974 (5 U.S.C. 522a) restricts the release of certain types of data to the public. Flood insurance policy and claims data are included in the list of restricted information. FEMA can only release such data to state and local governments, and only if the data are used for floodplain management, mitigation, or research purposes. Therefore, this plan does not identify the repetitive loss properties or include claims data for any individual property.

Cobey-Alquist Floodplain Management Act

The Cobey-Alquist Floodplain Management Act of 1965 provided state-level guidance and review of floodplain management, including the review of floodplain management plans, establishment of floodplain management regulations, and the use of designated floodways. The California Department of Water Resources (DWR) adopts regulations, maintains a statewide flood management data collection and planning program, manages a statewide grant program, and helps coordinate emergency flood response operations.

Russian River Integrated Coastal Watershed Management Plan (RRICWMP)

The RRICWMP is a watershed-specific planning document created for application to the Russian River. The plan identifies key management goals and objectives which include the enhancement of watershed processes and the improvement of land use; the protection and enhancement of hydrologic function and water supply; the protection of water quality; the protection of native biodiversity and ecosystems; the development and maintenance of public stewardship; and the engagement with scientific, and technical assessment and planning.

Mendocino County General Plan

The 2009 Mendocino County General Plan includes the following goals, and policies in the Development and Resource Management Elements to mitigate the effects of flood:

Development Element

Goal DE-17 (Drainage): To protect residents and businesses from hazards caused by flooding.



Goal DE-18 (Flooding/Inundation): To protect life and property while also protecting and managing natural drainage ways, floodplains and flood retention basins.

Goal DE-19 (Flooding/Inundation): To maintain flood carrying capacity in harmony with environmental, recreational, and open space objectives.

Policy DE-192: Encourage compatible uses of flood plain land, such as agriculture, forestry, and recreation.

Policy DE-193: Emphasize land use compatibility and onsite floodwater retention to prevent or manage flooding.

Policy DE-194: To the maximum extent practical, avoid constructing critical facilities within the designated 100-year flood plain areas or areas potentially subject to inundation by dam failures (or other water impoundment facilities) or seiches.

Policy DE-195: Development in the designated 100-year flood plain areas shall be consistent with all applicable federal regulations with regard to flooding.

Policy DE-196: Continue participation in the Federal Emergency Management Agency's National Flood Insurance Program.

Policy DE-199: Development in floodplains will not be allowed unless mitigation measures are incorporated into the project that protect against the contribution to downstream or upstream flooding.

Policy DE-200: Work with local, state, and federal agencies to fund and implement site-specific flood hazard planning, forecasting, and flood proofing measures.

Resource Management Element

Policy RM-3: Work cooperatively with property owners, agencies, and organizations to develop and support programs that maintain the integrity of stream systems for flood control, aquatic habitat, and water supply.

Policy RM-3: Stream restoration and maintenance programs shall conserve riparian vegetation and the floodwater carrying capacity of river and stream channels.

Methods of Reducing Flood Losses and Floodway Provisions in Mendocino County Code, § 22.17

The Mendocino County Code contains methods and provisions designed to reduce flood loss for the protection of property and loss of life, including restricting uses which result in or exacerbate water or erosion hazards or which cause damaging increases in erosion or flood heights or velocities. Any development vulnerable to flooding must include best practices for flood resiliency at the time of initial construction. This includes special attention to the management of altered natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters; the



management of filling, grading, dredging, and other development which may increase flood damage; and the prevention and regulation of the construction of flood barriers which will unnaturally divert floodwaters or which might increase flood hazards in alternate areas. The Code prohibits encroachments, which include fill, new construction, substantial improvement, and other new development unless certified by a registered professional engineer and approved by the County.

4.5.6.2 Major Flood Events

Table 4-52 shows the flood events that took place in Mendocino County since the year 2000 that caused either property or crop damage. (NOAA, 2020)

Table 4-52: Mendocino County Flood Events Since 2000

Date	Flood Type	Property Damage Value (\$)	Crop Damage Value (\$)
1/2/2002	Flood	0	0
12/14/2002	Flood	0	0
12/14/2002	Flood	0	0
12/16/2002	Flood	0	0
12/16/2002	Flood	0	0
12/16/2002	Flood	0	0
12/20/2002	Flood	0	0
12/28/2002	Flood	0	0
12/28/2002	Flood	0	0
12/31/2002	Flood	0	0
12/31/2002	Flood	0	0
12/31/2002	Flood	0	0
12/29/2005	Flood	30,0000	0
12/29/2005	Flood	42,200,000	8,000,000
12/15/2016	Flood	1,500,000	0
12/15/2016	Flood	0	0
12/15/2016	Flood	0	0
12/15/2016	Flood	0	0
4/5/2018	Flood	0	0
1/16/2019	Flood	0	0
1/16/2019	Flood	0	0
1/16/2019	Flood	0	0
2/26/2019	Flood	0	0
2/27/2019	Flood	0	0
2/27/2019	Flood	0	0
2/27/2019	Flood	0	0

Source: NOAA Storm Events Database



4.5.6.3 Location

Mendocino County, due to its varied geography and climate, has a significant number of potential flood sources. Figure 4-36 displays FEMA flood zones within Mendocino County. More detailed views of FEMA flood zones are available for planning partners through the Risk Assessment Mapping Platform (RAMP) on <http://mitigatehazards.com/mendocino-county/ramp/>.

In Mendocino County, riverine floodplains are diverse in nature. At times they might be confined to steep channels in the valleys of mountainous and hilly regions, and at other times they might be expansive, flat areas in plains and coastal regions. The amount of water in the floodplain is determined by the size and topography of the contributing watershed, the regional and local climate, and land use characteristics. The flooding, which occurs in steep, mountainous areas is usually confined, strikes with less warning time, and has a short duration. Conversely, larger rivers typically have longer, more predictable flooding sequences and broad floodplains. (Mendocino County MJHMP, 2014)

There are two basic flood types which most often occur in Mendocino County. The first is riverine flooding, also known as overbank flooding, which is due to excessive rainfall. The second is coastal flooding, which is due to wave run-up. Riverine floodplains range from narrow, confined channels in the steep valleys of mountainous and hilly regions to wide, flat areas in plains and coastal regions. The amount of water in the floodplain is a function of the size and topography of the contributing watershed, the regional and local climate, and land use characteristics. Flooding in steep, mountainous areas is usually confined, strikes with less warning time, and has a short duration. Larger rivers typically have longer, more predictable flooding sequences and broad floodplains. (*Id*)

Localized flooding may sometimes occur outside of recognized drainage channels or delineated floodplains due to a combination of locally heavy precipitation, increased surface runoff, and inadequate facilities for drainage and stormwater conveyance. Such events most typically occur in flat areas and in urbanized areas with extensive impermeable surfaces. Local drainage may result in "nuisance flooding," in which streets or parking lots are temporarily closed and minor property damage occurs. (Mendocino 2014 MJHMP, 2014) Major localized flood areas include lands adjoining waterways, such as the Russian River and its tributaries in the south Ukiah and Hopland areas, and low-lying lands east of Willits. Highway 128 between Philo and Navarro is regularly closed due to flooding caused by winter storms. (Mendocino County General Plan, 2009)

Flooding in Coastal areas of Mendocino County is typically caused by wave run-up. Pacific Ocean storms in the months of November through February in combination with high tides and strong winds can cause significant wave run-up. In addition to intense offshore storms, coastal flooding from the Pacific Ocean can also be attributed to seismic sea-waves or tsunamis which can occur throughout the year. As a result,



coastal flooding can be exacerbated by the physical characteristics of the continental shelf and shoreline. (*Id.*)

Figure 4-35 displays the six primary HUC8 watersheds⁸ in Mendocino County. The County can be broadly divided into three watersheds which include the Coastal, Eel, and Russian river basins. The Coastal system consists of a multitude of relatively short streams flowing west to the Pacific Ocean. Ten Mile, Noyo, Big, Albion, Navarro, Garcia, and Gualala rivers compose the Major stream systems located in the Coastal watershed.

The interior county is drained by the two larger drainage systems – the Eel River and Russian River systems. The Eel River system drains the northern interior, while the Russian River system drains the southern interior. These watersheds overlap with other counties. It is only portions of these interior watersheds which lie within the county. The Eel River watershed is shared with Humboldt, Lake, and Trinity counties, while the Russian River watershed includes significant portions of Sonoma County.



Figure 4-35: HUC8 Watershed Map

Surface runoff in each basin is derived almost entirely from rainfall, although snow does fall in the mountains located in the eastern portion of the Eel River watershed. Streamflow responds directly to the rainfall pattern; high stream flows will drop quickly without sustaining rainfall. (Mendocino County General Plan, 2009)

⁸ HUC is a Hydrologic Unit Code, a term used by the US Geological Survey to delineate watersheds based on surface hydrologic features. HUC8 is an eight-digit code delineating subbasins of watersheds. For more information, see <https://nas.er.usgs.gov/hucs.aspx>.



Valley Flood Sources

One of the largest valleys within Mendocino County is Ukiah Valley. The Russian River carved the Valley, which ranges from 600 feet at Calpella to 7,500 feet wide, south of Ukiah near Plant Road. Typically, the river flows through a portion of the channel, which it carved through the center of the Valley. The river may sometimes overtop its banks during moderately severe storms. The area subject to flooding during more severe storms, or one-hundred-year storm events, is much more extensive. The primary areas subject to flooding from a one-hundred-year storm (which has a one percent chance of occurring in any given year) can reach as far west as U.S. 101 in several portions of the Ukiah Valley Area Plan area. To the north, portions of The Forks area and the communities of Calpella and Talmage are located within the one-hundred-year floodplain. (Ukiah Valley Area Plan, 2010)

When the flow from the Russian River exceeds the confines of its banks, the probability of flooding along its tributaries increases. Orr Creek, Doolin Creek, Gibson Creek, and Robinson Creek each have the potential to inundate significant portions of residential areas near the channel centerline. Mill Creek and Sulphur Creek have a record of flooding an area nearly one thousand feet wide through the Talmage and the Vichy Springs Road areas. Flood risk also increases with additional paving and development. Pavement, in particular, creates compacted and impermeable surfaces, preventing natural percolation of water into the water table and increasing runoff. (*Id.*)

Rainfall and Coastal Flood Sources

The general cause of major floods in Mendocino County is due to extended periods of winter rainfall, which are produced by winter storms from the Pacific Ocean. Years with strong El Niños are often associated with significant flood events. Historical records from 1911 through 2006 indicate that flooding, landslides, embankment failures, and high winds occurred in portions of Mendocino County every ten to twenty years at a minimum, and often more frequently (1912, 1937, 1955, 1964-66, 1974, 1978, 1983, 1986, 1995, 1997, 1998, 2005-2006). Most floodplains are located in relatively undeveloped areas; however, there are infrastructure and other nonresidential and residential developments, which are susceptible to flooding and are situated in at-risk locations. (Mendocino County General Plan, 2009) Highway 101, a state highway under the jurisdiction of the California Department of Transportation, floods regularly and experiences regular slope failure occurrences that shut down the highway. This leads to emergency and evacuation concerns for coastal populations.

Table 4-37 displays major FEMA flood zones as well as the associated population center locations.



Dynamic Planning + Science
for Mendocino County, 2020



FEMA FLOOD RISK EXPOSURE MENDOCINO COUNTY

*Data sources: FEMA.

MAP LEGEND

100-YR
100-YR COASTAL 100-YR FLOODWAY
500-YR

Figure 4-36: FEMA Flood Risk Exposure



4.5.6.3.1 Flood Awareness Zones

Flood Awareness Zones have been developed by California DWR to map areas of additional flood threat throughout the state. The intent of the Awareness Floodplain Mapping project is to identify all pertinent flood hazard areas for areas that are not mapped under the Federal Agency Management Agency's (FEMA) National Flood Insurance Program (NFIP) and to provide the community and residents an additional tool in understanding potential flood hazards currently not mapped as a regulated floodplain. The awareness maps identify the 100-YR flood hazard areas using approximate assessment procedures. These floodplains are shown simply as flood-prone areas without specific depths and other flood hazard data.

4.5.6.4 Measuring Frequency and Severity

The frequency and severity of flooding are measured using a discharge probability, a statistical tool that defines the probability that a certain river discharge or flow level will be equaled or exceeded within a given year. Flood studies use historical records to determine the probability of occurrence for the different discharge levels. The flood frequency equals 100 divided by the discharge probability. For example, the 100-YR discharge has a 1-percent chance of being equaled or exceeded in any given year. The "annual flood" is the greatest flood event expected to occur in a typical year. These measurements reflect statistical averages only; it is possible for two or more floods with a 100-YR or higher recurrence interval to occur in a short time period. The same flood can have different recurrence intervals at different points on a river.

The extent of flooding associated with a 1-percent annual probability of occurrence (the base flood or 100-YR flood) is used as the regulatory boundary by many agencies. Also referred to as the special flood hazard area (SFHA), this boundary is a convenient tool for assessing vulnerability and risk in flood-prone communities. Many communities have maps that show the extent and likely depth of flooding for the base flood. Corresponding water-surface elevations describe the elevation of water that will result from a given discharge level, which is one of the most important factors used in estimating flood damage.



4.5.6.5 Frequency/ Probability of Future Occurrences

Mendocino County will experience flooding in the future, with the probability of flooding in Mendocino County between 10 and 100% annually. The majority of the floods in Mendocino County have occurred from winter-through-spring rainfall, but several have been the result of heavy rain events during July, August, and September. The Pacific high is known to cause increased intensity in weather patterns. As it moves southwards, it encourages storm formation across the state, producing widespread rain at low elevations and snow at high elevations. It is responsible for occasional heavy rains that are known to cause serious flooding. The semi-permanent high-pressure area of the north Pacific Ocean is also responsible for storms, causing heavy rains and widespread flooding during winter months. (Western Regional Climate Center, 2020)

Flooding in California is often associated with the El Nino weather phenomenon. El Nino is a term originally used to describe the appearance of warm (surface) water from time to time in the eastern equatorial Pacific region along the coasts of Peru and Ecuador. This ocean warming can strongly affect weather patterns all over the world. El Nino events are often associated with above-normal precipitation in the southwestern United States. El Niños often occur during the Christmas season. La Niña is the opposite or “cold phase” of the El Niño cycle. Current understanding suggests that El Niño has a return period of four to five years. When an El Niño event occurs, it often lasts from 12 to 18 months. (National Oceanic and Atmospheric Administration , 2020) Based on previous occurrences, Mendocino County can expect a severe flood event to occur every 3 – 4 years, and in particular, during strong El Niño years (every 7 – 8 years). (Mendocino County Multi Hazard Mitigation Plan, 2008)

4.5.6.6 Severity and Extent

The main factors affecting flood damage are water depth and velocity. Deeper and faster flood flows can cause more damage. Shallow flooding with high velocities can cause as much damage as deep flooding with slow velocity. This is especially true when a channel migrates over a broad floodplain, redirecting high velocity flows and transporting debris and sediment. Flood severity is often evaluated by examining peak discharges; Table 4-53 lists peak flows used by FEMA to map Mendocino County floodplains.

Table 4-53: Summary of Discharges in Mendocino County

Flooding Source/Location	Drainage sq. Miles	Peak Discharge (cubic feet/second)			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Ackerman Creek					
At Confluence with Russian River	20.6	3,190	4,800	5,370	7,000
At Orrs Springs Road	19.0	3,060	4,700	5,320	6,600
Anderson Creek					
At the Confluence with Con Creek	35.4	5,230	8,060	9,140	11,800



Flooding Source/Location	Drainage sq. Miles	Peak Discharge (cubic feet/second)			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Upstream of the Confluence with Robinson Creek	24.0	3,670	5,730	6,520	8,460
Upstream of the Confluence with Donelly Creek	21.7	3,360	5,240	5,970	7,750
At State Highway 253	14.3	2,280	3,630	4,150	5,460
Broadus Creek					
Above the Confluence with Haeh/Baechtel Creek	7.9	1,380	2,260	2,620	3,530
Davis Creek					
At Hearst-Willits Road	14.8	2,200	3,710	4,360	6,040
Doolin Creek					
At Confluence with Russian River	7.2	1,040	1,650	1,880	2,460
Above the confluence with Gibson Creek	4.3	660	1,060	1,200	1,570
Above the confluence with Mendocino Creek	3.0	480	770	880	1,150
Above the confluence with Tributary near State Street	2.1	383	627	721	957
East Fork Russian River					
0.3 miles downstream of Centerville Road	29.1	4,050	6,050	6,810	8,640
Eel River					
At the confluence with Hale Creek	35.3	41,000	70,000	82,500	11,200
Feliz Creek					
At the confluence with Russian River	43.3	5,990	8,230	9,160	11,470
At Old Hopland-Yorkville Road	31.1	4,550	6,290	7,040	8,940
Forsythe Creek					
At the confluence with Russian River	49.7	6,940	10,500	11,900	15,200
Upstream of the confluence with Seward Creek	34.6	5,120	7,900	8,960	11,600
Upstream of the confluence with Bakers Creek	32.5	4,810	7,460	8,480	11,000
Upstream of the confluence with Mill Creek (at Redwood Valley)	18.7	3,070	4,790	5,450	7,060
Gibson Creek					
At the confluence with Doolin Creek	2.9	466	748	854	1,120
At West Standley Street	1.5	266	459	538	743
Haehl/Baechtel					



Flooding Source/Location	Drainage sq. Miles	Peak Discharge (cubic feet/second)				
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Creek						
At the downstream City of Willits corporate limits ¹	33.6	3,520	7,940	9,240	12,600	
Above Broaddus Creek Low Flow Confluence ²	23.9	2,450	5,800	6,740	9,160	
Above Broaddus Creek 2-percent-annual chance flow confluence ³	16.0	2,450	4,070	6,740	9,160	
Above Haehl Creek low flow confluence ⁴	10.1	1,680	4,070	4,730	6,420	
Above Haehl Creek 0.2-percent-annual chance Flow confluence ⁵	9.9	1,680	2,790	3,250	4,410	
At the upstream Limit of Study	8.1	1,410	2,380	2,780	3,810	
Hensley Creek						
At the confluence with Russian River	7.6	1,290	1,970	2,210	2,790	
2.1 miles upstream of U.S. Highway 101	3.7	661	1,070	1,230	1,630	
Mill Creek (near Talmage)						
At the confluence with Russian River	18.0	2,210	3,320	3,790	4,490	
Above the confluence with McClure Creek	10.1	1,260	2,000	2,290	3,000	
Above confluence with North Fork Mill Creek	4.4	610	990	1,140	1,520	
Mill Creek (at Willits)						
At the downstream City of Willits corporate limits	9.7	1,620	2,730	3,190	4,380	
North Fork Mill Creek						
At the confluence with Mill Creek	5.3	730	1,210	1,410	1,910	
Noyo River						
At U.S. Highway 1	114.0	17,740	31,085	38,000	57,367	
Orrs Creek						
At the confluence with Russian River	10.2	1,570	2,460	2,790	3,610	
At Low Gap Park	7.9	1,350	2,190	2,530	3,360	
Robinson Creek						
At the confluence with Russian River	26.7	3,930	5,890	6,590	8,280	
Upstream of the confluence with Unnamed Tributary near State Highway 253 Crossing	20.5	3,240	5,020	5,680	7,310	
1.4 miles upstream of State Highway 253	16.3	2,620	4,150	4,720	6,210	
2.2 miles upstream of State Highway 253	10.2	1,770	2,810	3,220	4,210	
Russian River						
At U.S. Highway 101 bridge south of Hopland	437	36,900	53,100	59,900	75,800	
Upstream of the confluence with Feliz Creek	391	32,700	47,100	53,000	67,100	



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Flooding Source/Location	Drainage sq. Miles	Peak Discharge (cubic feet/second)			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
At USGS gaging station near Hopland (No. 11462500)	362	30,000	43,100	48,600	61,400
Downstream of the confluence with Robinson Creek	317	26,100	37,500	42,100	53,800
Upstream of the confluence with Robinson Creek	291	23,100	33,300	37,300	46,800
Upstream of the confluence with Doolin and Mill Creek (near Talmage)	261	19,600	28,300	31,700	39,700
Upstream of the confluence with Orrs Creek	249	18,200	26,300	29,400	36,900
Downstream of the confluence with Ackerman Creek	235	16,500	23,900	26,800	33,600
Upstream of the confluence with Ackerman Creek	215	15,800	21,500	23,700	29,100
Upstream of the confluence with Hensley Creek	207	14,800	21,100	22,200	27,200
At USGS gaging station near Ukiah (No. 11461000)	99.7	14,400	19,700	21,700	26,800
Upstream of the confluence with Your Creek	87.0	12,700	17,300	19,200	23,600
Upstream of the confluence with Forsythe Creek	35.0	5,310	7,620	8,480	10,600
At upstream Limit of Detailed Study	27.1	4,480	6,400	7,120	8,900
Sulphur Creek					
At Vicky Springs Road	5.5	950	1,380	1,600	2,130
Tenmile Creek					
0.2 mil downstream of Branscomb Road	20.9	3,440	5,850	6,900	9,620
Town Creek					
At the confluence with Grist Creek	11.3	1,300	2,280	2,720	3,890
York Creek					
At the confluence with Russian River	12.0	1,920	2,920	3,290	4,170
2.1 miles upstream of U.S. Highway 101	8.0	1,270	2,080	2,410	3,220

* Data not available

¹ Includes Mill Creek (near Willits Drainage Area and Contributing Flows), except for Mill Creek 10% Annual Chance Peak Discharge

² Includes Broaddus Creek Drainage Area and Contributing Flows, except for Broaddus Creek 10% Annual Chance Peak Discharge

³ 1,750 feet upstream of Broaddus Creek Low Flow Confluence, does not include Broaddus Creek 10% or 2% Annual Chance Peak Discharges

⁴ Does not include Haehl Creek 10% Annual Chance Peak Discharge

⁵ 880 feet upstream of Haehl Creek Low Flow Confluence, does not include Haehl Creek Peak Discharges

Source: Table 10 Summary of Discharges from FEMA FIS Text, 2017



4.5.6.7 Warning Time

The type and rate of flooding experienced in Mendocino County varies. In general, warning times for floods can be between 24 and 48 hours to prepare communities to reduce flood damages. Seasonal notification for flooding can enhance awareness for citizens at risk, and, when communicated effectively, advance notification can reach target audiences on a large scale.

4.5.6.7.1 DWR Awareness Zones Notification

The Flood Risk Notification Program (FRN Program) is part of DWR's FloodSAFE California Initiative. The program's key goal is to increase flood risk awareness by effectively communicating that risk to individual property owners, the public, and local, state, and federal agencies. This includes encouraging people to understand the levee system that protects them; be prepared and aware of their flood risk; and take appropriate actions before, during, and after flooding to protect themselves, minimize damage to their property or personal possessions, and facilitate recovery.

To achieve this goal, the FRN Program:

- sends out an annual notice to property owners whose property is at risk of flooding,
- maintains accurate Levee Flood Protection Zone (LFPZ) maps⁹ and an associated parcel information database,
- provides people with useful ways to assess risk and reduce flood loss,
- establishes outreach and educational projects with public involvement,
- expands its interactive Flood Risk Notification website, and
- collaborates with federal agencies, local agencies, and communities.

In September of 2010, DWR provided the first annual written notice of flood risks to each landowner whose property is protected by State Plan of Flood Control (SPFC) levees and is within an LFPZ. The notice informs recipients of their property's potential flood risks and potential sources of flooding and offers flood emergency planning and preparedness tips. It encourages recipients to take preventative actions such as purchasing flood insurance, elevating or "floodproofing" their buildings, and preventing blockage of channels, drains, and ditches.

⁹ These maps are different from Federal Emergency Management Agency regulatory maps.



4.5.6.8 Secondary Hazards

The most problematic secondary hazard for flooding is bank erosion, which in some cases can be more harmful than actual flooding. Flooding is also responsible for landslides when high flows over-saturate soils on steep slopes and cause them to fail. Hazardous materials spills are a secondary hazard of flooding if storage tanks rupture and spill into streams or storm sewers. (Department of Environmental Conservation, 2020)

Wildland fires within a watershed can exacerbate flood hazards by virtue of increased rate and volume of runoff and attendant erosion and sediment discharge. (USGS, 2020)

4.5.6.9 Climate Change Impacts

The effects of climate change are varied and include warmer and more varied weather patterns, melting ice caps, and poor air quality, for example. As a result, climate change will likely worsen a number of natural hazards, including flooding. Climate change will shift rainfall patterns, making heavy rains more frequent in many areas. An increase in heavy rain events will lead to more flooding, including flash floods that happen suddenly as a result of heavy rain and localized flooding, which involves the pooling of water in low-lying areas. Heavy rain events can inundate and overwhelm stormwater drainage systems resulting in localized flooding where pooling of water can cause significant damage to buildings. Overwhelmed stormwater drainage facilities also create hazardous conditions on roadways where water pools in low lying areas creating dangerous driving conditions. (US EPA, 2020)

4.5.6.10 Flood Vulnerability Analysis

Both an exposure analysis and Hazus loss estimation analysis were conducted to develop the flood vulnerability analysis for Mendocino County. Flood exposure numbers were generated using the inventories outlined in 4.5.6.10.1 County inventories were overlaid with FEMA delineated flood plains to determine exposure. These risk assessment exposure analysis values do not include Hazus -generated results.

Hazus flood vulnerability data was generated using a Level 2 Hazus 4.2 analysis. Hazus is a FEMA software product that uses a GIS to analyze 100-year depth grids derived from FEMA 100-year "A" zones with Base Flood Elevations (BFE) to estimate loss. Parcel data defined in 4.5.6.10.1 was imported into Hazus as User Defined Facilities (UDF) and serves as the basis for replacement and content cost estimations as well as associated loss. Where flood vulnerability is mentioned absent of Hazus, exposure analysis figures are used. Figure 4-38 displays a snapshot of flood exposure and damage estimation in Unincorporated Mendocino County.



4.5.6.10.1 Flood Exposure

The tables and graphs in this section detail the populations, properties, and infrastructure exposed to flooding in Unincorporated Mendocino County. Flood exposure is categorized by exposure to different flood hazard zones, including the floodway, flood fringe, 100-year floodplain, and 500-year floodplain. The tables and graphs also include a category of the 100-year total, which is a combined total of floodway, flood fringe, and 100-year floodplain categories. The 500-year sans 100-year category includes only the 500-year floodplain, and the 500-year total includes all of the categories combined. Refer to section 4.5.6 for floodplain definitions to better understand these flood hazard areas.



Population

Population counts of those living in the floodplain were generated by analyzing County assessor and parcel data that intersect with the 100-YR and 500-year floodplains identified on FIRMs. Using GIS, U.S. Census Bureau information was used to intersect the floodplain, and an estimate of population was calculated by weighting the population within each census block and track with the percentage of the flood risk area. Using this approach, Table 4-54 and Figure 4-37 display the results of this analysis showing how much of the population of Unincorporated Mendocino County is exposed to flood hazard zones.

Figure 4-37: Population Exposure to Flood (Unincorporated County)

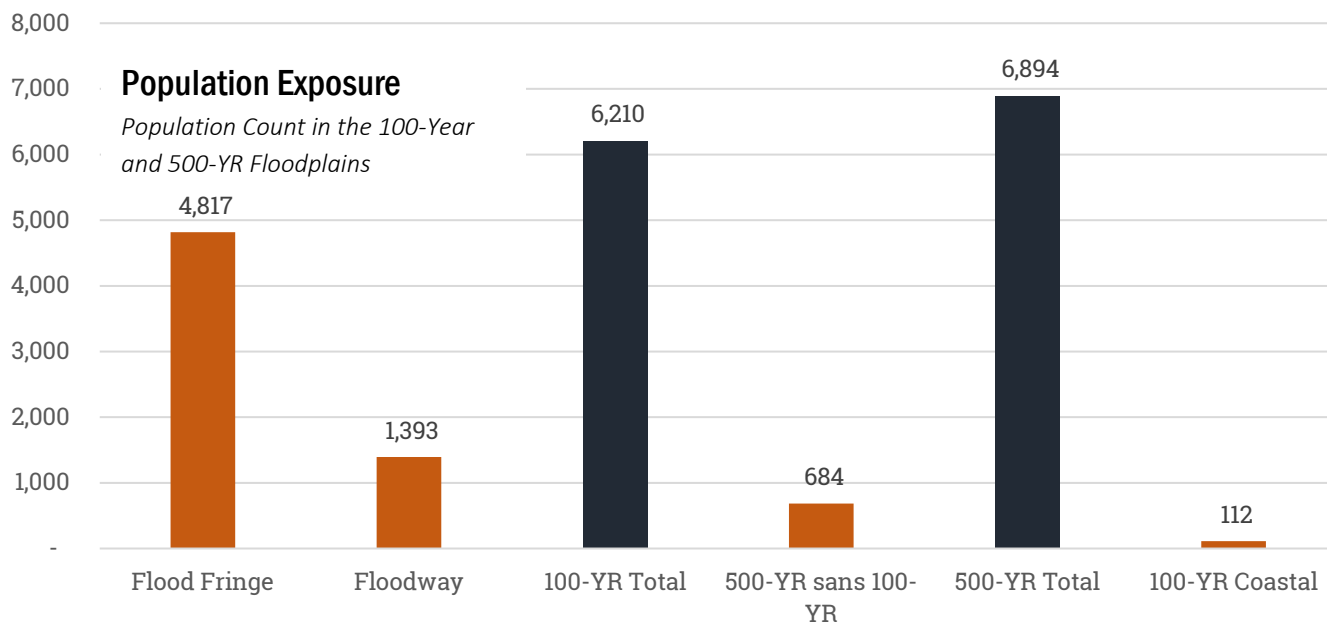


Table 4-54: Summary Population Exposure to Flood (Unincorporated County)

Total Population	
Unincorporated County	58,995

Flood Hazard Zone	Population Count	% of Total
Flood Fringe	4,817	8.16%
Floodway	1,393	2.36%
100-YR Total	6,210	10.53%
500-YR sans 100-YR	684	1.16%
500-YR Total	6,894	11.69%
100-YR Coastal	112	0.19%



FEMA FLOOD RISK EXPOSURE SNAPSHOT

MENDOCINO COUNTY

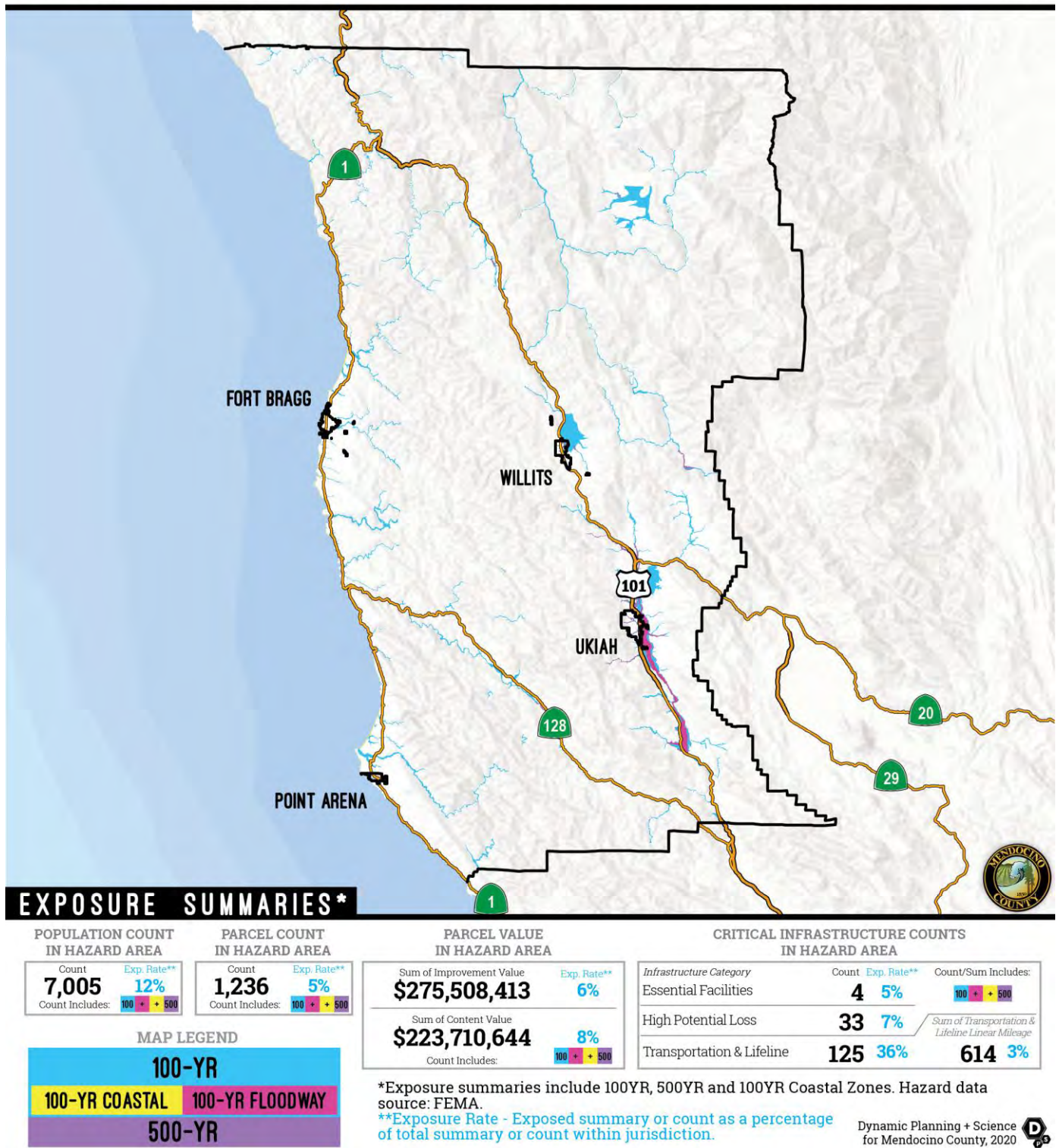


Figure 4-38: FEMA Flood Risk Exposure and Snapshot Map



Structures and Parcel Value

Table 4-55 summarizes parcels in Unincorporated Mendocino County that are exposed to flood hazard areas. The beginning of Section 4.5.6 includes definitions of the various flood hazard areas.

Table 4-55: Parcels Exposed to NFIP Flood Zones (Unincorporated County)

	Total Parcels		Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)	
Unincorporated County	24,371		\$4,544,212,021	\$ 2,693,943,855	\$7,238,155,876	

Flood Hazard Zone	Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
Flood Fringe	896	3.7%	\$ 177,485,381	\$ 134,638,286	\$ 312,123,667	4.3%
Floodway	160	0.7%	\$ 28,994,524	\$ 24,936,926	\$ 53,931,450	0.7%
100-YR Total	1,056	4.3%	\$ 206,479,905	\$ 159,575,211	\$ 366,055,116	5.1%
500-YR sans 100-YR	178	0.7%	\$ 67,600,174	\$ 63,421,266	\$ 131,021,440	1.8%
500-YR Total	1,234	5.1%	\$ 274,080,079	\$ 222,996,477	\$ 497,076,556	6.9%
100-YR Coastal	2	0.0%	\$ 1,428,334	\$ 714,167	\$ 2,142,501	0.0%

Note: The table above does not display loss estimation results; the table exhibits total value at risk based upon the hazard overlay and Mendocino County Assessor data.

Critical Facilities and Infrastructure

Table 4-56 summarizes the critical facilities and infrastructure located in the flood fringe, floodway, and 100-year and 500-year floodplains of Mendocino County.

Table 4-56: Critical Facility Points in the Floodplain

Infrastructure Type	Flood Fringe	Floodway	100-YR Total	500-YR sans 100-YR	500-YR Total	100-YR Coastal
Essential Facility	4	-	4	-	4	-
EOC	-	-	-	-	-	-
Fire Station	4	-	4	-	4	-
Law Enforcement	-	-	-	-	-	-
Medical Facility	-	-	-	-	-	-
High Potential Loss	21	3	24	9	33	-
Adult Residential Facility	-	-	-	-	-	-
Alternative Education Program	-	-	-	-	-	-
Animal Control	-	-	-	-	-	-
Child Care Center	-	-	-	-	-	-
Communication Tower	-	1	1	1	2	-
Community Center	-	-	-	-	-	-
Courthouse	-	-	-	-	-	-
Dam	3	1	4	-	4	-



Infrastructure Type	Flood Fringe	Floodway	100-YR Total	500-YR sans 100-YR	500-YR Total	100-YR Coastal
Detention Center	-	-	-	-	-	-
Fairground	-	-	-	-	-	-
Family Child Care Home	-	-	-	-	-	-
Foster Family Agency	-	-	-	-	-	-
Historic Building	2	-	2	-	2	-
Historic Site	-	-	-	-	-	-
Library	-	-	-	-	-	-
Museum	-	-	-	-	-	-
Office	1	-	1	-	1	-
Park and Recreation	-	1	1	-	1	-
Power Plant	4	-	4	-	4	-
Real Property Asset*	8	-	8	6	14	-
Residential Child Care	-	-	-	-	-	-
Residential Elder Care Facility	1	-	1	-	1	-
School	2	-	2	1	3	-
Shop	-	-	-	1	1	-
Storage	-	-	-	-	-	-
Wastewater Treatment	-	-	-	-	-	-
Transportation and Lifeline	105	11	116	8	124	1
Airport	-	-	-	-	-	-
Bridge	103	10	113	5	118	1
Bus Facility	-	-	-	-	-	-
Corp Yard	-	1	1	-	1	-
NG Station	-	-	-	1	1	-
Substation	2	-	2	1	3	-
Transfer Station	-	-	-	1	1	-
Hazmat	8	-	8	-	8	-
Hazmat	8	-	8	-	8	-
Grand Total	138	14	152	17	169	1

**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*



Linear Utilities

It is important to determine who may be at risk if infrastructure is damaged by flooding. Roads or railroads that are blocked or damaged can isolate residents and can prevent access throughout the county, including for emergency service providers needing to get to vulnerable populations or to make repairs. Bridges washed out or blocked by floods or debris also can cause isolation. Water and sewer systems can be flooded or backed up, causing health problems. Underground utilities can be damaged. Levees can fail or be overtopped, inundating the land that they protect. Table 4-57 shows critical facilities (linear) in the floodplain.

Table 4-57: Lifelines in the Floodplain (Unincorporated County)

Infrastructure Type (linear)	Lifelines (miles) - Flood Risk Exposure					
	Flood Fringe	Floodway	100-YR Total	500-YR sans 100-YR	500-YR Total	100-YR Coastal
Levee	0.5	0.4	1.0	0.2	1.2	-
NG Pipeline	6.4	0.3	6.7	1.3	8.0	-
Railroad	36.9	1.2	38.0	4.8	42.8	-
Street	215.1	19.1	234.3	14.4	248.6	1.5
4WD trail	22.7	0.0	22.7	-	22.7	0.8
4WD trail, major	0.1	-	0.1	-	0.1	-
Alley	-	-	-	-	-	-
Cul-de-sac	0.1	-	0.1	-	0.1	-
Driveway	8.2	6.0	14.2	0.6	14.9	-
Interstate	1.9	0.2	2.1	1.3	3.4	-
Local road	129.7	9.8	139.4	9.2	148.6	0.3
Local road, major	2.5	0.0	2.5	0.2	2.6	-
Primary highway	23.0	0.4	23.4	0.7	24.1	0.3
Ramp	0.3	-	0.3	0.0	0.4	-
Road, parking area	-	-	-	0.1	0.1	-
State/county highway	26.7	2.7	29.4	2.3	31.6	0.1
Thoroughfare, major	-	-	-	-	-	-
Traffic circle	-	-	-	-	-	-
Walkway	-	-	-	-	-	-
Transmission Line	16.1	2.8	19.0	1.0	20.0	-
Grand Total	275.1	23.9	298.9	21.6	320.6	1.5

Roads

Mendocino County Department of Transportation maintains a list of roads throughout the County to avoid during a flood event. This list can be viewed at the following link:

<https://www.mendocinocounty.org/government/transportation/road-closures>.



Water and Sewer Infrastructure

Water and sewer systems can be affected by flooding. Floodwaters can back up drainage systems, causing localized flooding. Culverts can be blocked by debris from flood events, also causing localized urban flooding. Floodwaters can get into drinking water supplies, causing contamination. Sewer systems can be backed up, causing wastewater to spill into homes, neighborhoods, rivers, and streams.

4.5.6.10.2 Flood Damage Estimation

Hazus calculates losses to structures from flooding by analyzing the depth of flooding and type of structure. Using historical flood insurance claim data, Hazus estimates the percentage of damage to structures and their contents by applying established damage functions to an inventory. For this analysis, all non-vacant parcels with current market values were used instead of the default inventory data provided with Hazus. Table 4-58 and Figure 4-39 shows the 100-year flood loss estimation (based on depth) in NFIP flood zones by occupancy type. Figure 4-40 and Table 4-60 shows the 500-year flood loss estimation (based on depth) in NFIP flood zones by occupancy type.

The County's insurance data was obtained and formatted for use in Hazus for a detailed damage estimation of County-owned facilities. This combined government dataset has additional information, including the number of floors, building value, content value, and construction type that greatly enhances Hazus results. Table 4-59 displays damage estimation for County facilities located in the 100-year flood zone.

Damage Estimation for 100 yr. Floodplain

Table 4-58 and Figure 4-39 display damage estimation summaries for the 100-year floodplain in Unincorporated Mendocino County by improved parcel and government property loss.

Table 4-58: 100 YR Flood Damage Estimation by Occupancy Type

Building Type	Building Damage (\$)	Building Damage (% of total loss)	Content Damage (\$)	Content Damage (% of total loss)	Total Damage (\$)	Proportion of Loss (%)
Agriculture	\$ 9,209,882	11.1%	\$ 20,644,722	24.8%	\$ 29,854,604	36%
Commercial	\$ 1,025,460	1.2%	\$ 3,196,381	3.8%	\$ 4,221,840	5%
Education	\$ 32,827	0.0%	\$ 177,925	0.2%	\$ 210,752	0%
Emergency	-	0.0%	-	0.0%	-	0%
Government	\$ 783,569	0.9%	\$ 3,099,593	3.7%	\$ 3,883,162	5%
Industrial	\$ 1,335,091	1.6%	\$ 3,360,636	4.0%	\$ 4,695,727	6%
Religion	\$ 40,529	0.0%	\$ 307,588	0.4%	\$ 348,117	0%
Residential	\$30,217,642	36.4%	\$ 9,668,199	11.6%	\$ 39,885,841	48%
Total	\$42,644,999	51%	\$ 40,455,044	49%	\$ 83,100,044	



Note: Total Inventory Values
1 - Building Replacement Costs = \$6,607,442,042
2 - Content Replacement Costs = \$3,951,409,020
3 - Total Value = \$10,558,851,062

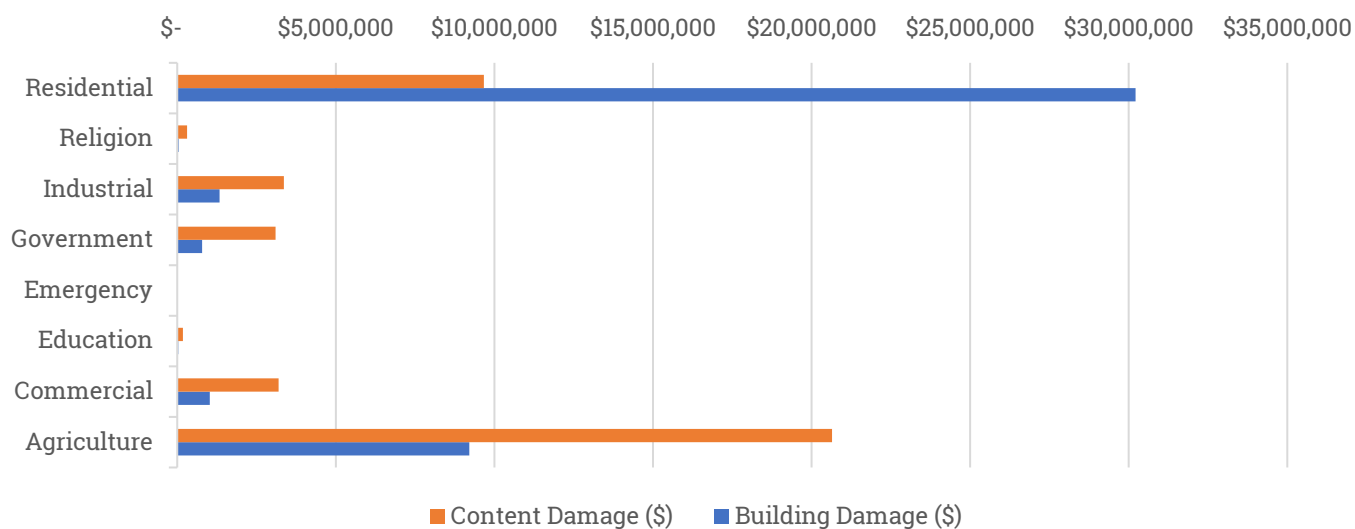


Figure 4-39: 100-YR Flood Damage Estimation by Occupancy

Table 4-59 displays damage estimation for County facilities located in the 100-year flood zone.

Table 4-59: 100 YR Flood Damage Estimation of County Facilities

		Value		Damage Pct.		Estimated Losses (USD)			
Row Labels	Count	Structure	Content	Structure	Content	Structure	Content	Total	Loss Pct. of Value
Headlands State Park	1	\$1	\$25,000	70%	100%	\$1	\$25,000	\$25,001	100%
The Carriage House	1	\$1	\$25,000	70%	100%	\$1	\$25,000	\$25,001	100%
Willits Library	1	\$1,506,515	\$2,685,169	0%	0%	\$0	\$0	\$0	0%
Grand Total	2	\$1,506,516	\$2,710,169	35%	50%	\$1	\$25,000	\$25,001	1%



Damage Estimation for 500 yr. Floodplain

Table 4-60 displays the damage estimation for the 500 yr. floodplain in Unincorporated Mendocino County by improved parcel. There is no damage estimated to County-owned facilities in the 500-year floodplain.

Table 4-60: Damage Estimation Summary for 500 yr. Floodplain

Building Type	Building Damage (\$)	Building Damage (% of total loss)	Content Damage (\$)	Content Damage (% of total loss)	Total Damage (\$)	Proportion of Loss (%)
Agriculture	834	0.0	481,052	10.9	481,886	11
Commercial	2,188	0.0	159,610	3.6	161,798	4
Education	-	0.0	-	0.0	-	0
Emergency	-	0.0	-	0.0	-	0
Government	-	0.0	-	0.0	-	0
Industrial	118,289	2.7	235,819	5.4	354,107	8
Religion	-	0.0	-	0.0	-	0
Residential	2,582,496	58.6	823,651	18.7	3,406,146	77
Total	2,703,806	61	1,700,132	39	4,403,938	

Note: Total Inventory Values

1 - Building Replacement Costs = \$6,607,442,042

2 - Content Replacement Costs = \$3,951,409,020

3 - Total Value = \$10,558,851,062

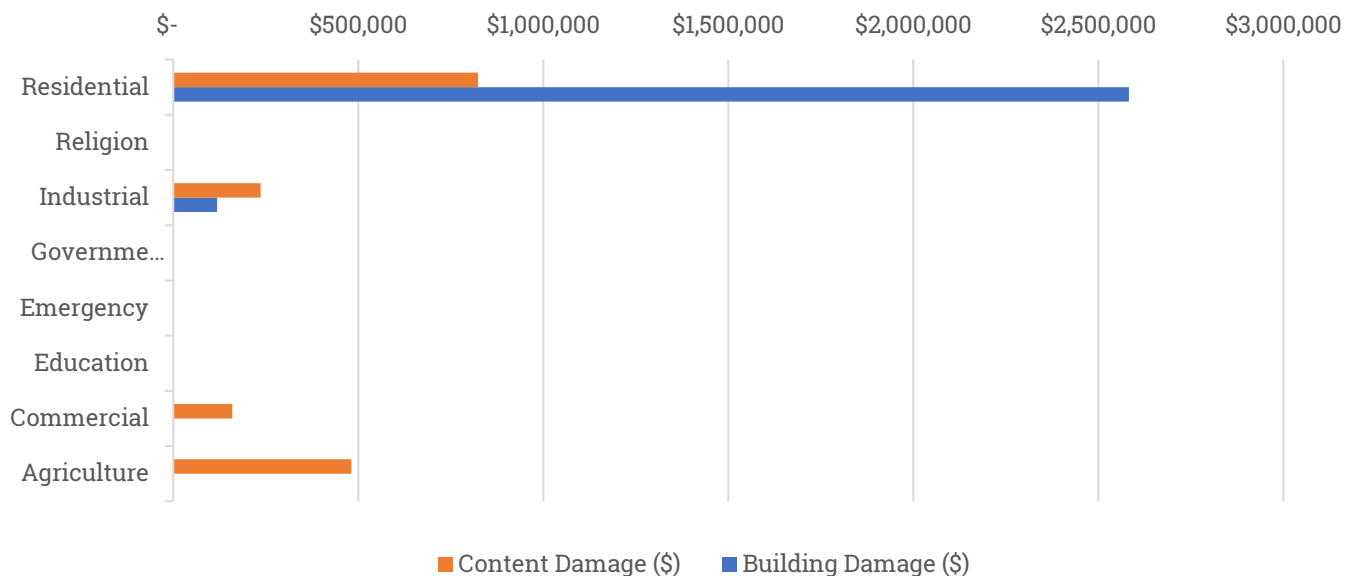


Figure 4-40: 500 YR Flood Damage Estimation by Occupancy Type



4.5.6.11 Future Trends in Development

Infrastructure has been developed to protect communities from flood damage- in particular the Coyote Valley Dam. The County is equipped to handle future growth within flood hazard areas. The County's General Plan offers goals and policies to avoid and mitigation flood impacts from new development. The County's Floodplain Ordinance (§22.17) further limits and mitigates new development in floodplains.

4.5.6.12 Flood Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Flood problem statements for the County are listed in Table 4-61; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee in understanding the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. See Table 5-6 for a full list of mitigation actions and the corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-61 and Table 5-6.



Table 4-61 Flood Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-FL-MC-27	Flood	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	The following critical facilities are located in the 100-YR flood plain: Residential Elder Care Facility (131 Whitmore LN), Mendocino County Mental Health Services (221B S Lenore Ave), Hopland Volunteer FD (151 Henry Station Rd., 21 Feliz Creek Rd.), Ukiah Valley Fire Protection District (1301 Talmage Rd.), Covelo Volunteer FD (75900 Covelo Rd.)	ma-FL-MC-148, ma-FL-MC-213
ps-FL-MC-28	Flood	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	There are approximately 112 County bridges located in the 100- YR flood plain. County bridges of concern include: Tenmile Creek @ Branscomb Rd., C-101, Hulls Creek @ Hulls Valley Rd. ford, Grist Creek @ Dobbie Ln. ford, Mill Creek @ Short Creek Rd. ford, Town Creek @ Airport Rd. ford, Strong Mt. Creek @ Sherwood Rd. ford, Tomki Creek @ Hearst Willits Rd. ford, Cave Creek @ Tomki Rd. eight fords, Busch Creek @ Busch Ln. ford, Davis Creek @ Center Valley Road, Tributary Haehl Creek @ Bray Road, Tributary Garcia River @ Mamie Laiwa Rd.	ma-FL-MC-210
ps-FL-MC-29	Flood	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	The Russian River (E of Ukiah) routinely floods affecting the following County infrastructure and roads: Russian River @ Main Street Potter Valley, C-106, Russian River @ Eastside Potter Valley Rd. C-103. Russian River @ Vichy Springs Rd. C-107, Tributary to Russian River @ East Gobbi St., South Doolin Creek Tributary to Russian River @ Fairview Ct & Norgard Ln., Mill Creek @ Talmage Ct., McClure Creek @ Sanford Ranch Rd., Feliz Creek @ Mt. House Rd. C-2, Feliz Creek @ MacMillian Dr.,	ma-EW-MC-207



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-FL-MC-30	Flood	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	The Noyo Harbor area experiences flooding from high river flows and high tides w/ storm surge that can impact County roads and infrastructure	ma-FL-MC-213
ps-FL-MC-31	Flood	Impact	PRV - Prevention , PPRO - Property Protection , SP - Structural Projects	Mendocino County	Buildings permitted as "class k" structures under the building code could be at a higher risk of flood events	ma-AH-MC-205
ps-FL-MC-32	Flood	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County	There are approximately 6,068 people living in the 100-YR flood plain in the County	ma-FL-MC-148, ma-FL-MC-125



4.5.7 Severe Weather Hazard Profile

Severe weather refers to any dangerous meteorological phenomena with the potential to cause damage, serious social disruption, or loss of human life.

Severe weather events can be categorized into two groups: those that form over wide geographic areas are classified as general severe weather; those with a more limited geographic area are classified as localized severe weather. Severe weather, technically, is not the same as extreme weather, which refers to unusual weather events at the extremes of the historical distribution for a given area. (Crop Insurance Solutions, n.d.)



The MJHMP Planning Committee identified two types of severe weather events that typically impact Mendocino County:

- high wind
- heavy rain

Some other types of severe weather are discussed in the context of climate change. Those include extreme heat and fog. The following are characteristics of severe weather events that can occur in Mendocino County.

High Wind

Damaging winds are classified as those exceeding 60 mph. Damage from such wind accounts for half of all severe weather reports in the lower 48 states and is more common than damage from tornadoes. Wind speeds can reach up to 100 mph and can produce a damage path extending for hundreds of miles. There are seven types of damaging winds:

- **Straight-line winds**—Any thunderstorm wind that is not associated with rotation; this term is used primarily to differentiate from tornado winds. Most thunderstorms produce some straight-line winds as a result of outflow generated by the thunderstorm downdraft.
- **Downdrafts**—A small-scale column of air that rapidly sinks toward the ground.
- **Downbursts**—A strong downdraft with horizontal dimensions larger than 2.5 miles resulting in an outward burst of damaging winds on or near the ground. Downburst winds may begin as a microburst and spread out over a wider area, sometimes producing damage similar to a strong tornado. Although usually associated with thunderstorms, downbursts can occur with showers too weak to produce thunder.
- **Microbursts**—A small, concentrated downburst that produces an outward burst of damaging winds at the surface. Microbursts are generally less than 2.5 miles across and short-lived, lasting only 5 to 10 minutes, with maximum wind speeds up to 168 mph. There are both wet and dry microbursts. A wet microburst is accompanied by heavy precipitation. Dry microbursts, common in places like the high plains and the intermountain west, occur with little or no precipitation reaching the ground.



- **Gust front**—A gust front is the leading edge of rain-cooled air that clashes with warmer thunderstorm inflow. Gust fronts are characterized by a wind shift, temperature drop, and gusty winds out ahead of a thunderstorm. Sometimes winds push up air above them, forming a shelf cloud or detached roll cloud.
- **Derecho**—A derecho is a widespread thunderstorm wind caused when new thunderstorms form along the leading edge of the boundary formed by horizontal spreading of thunderstorm-cooled air. The word “derecho” is of Spanish origin and means “straight ahead.” Thunderstorms feed on the boundary and continue to reproduce. Derechos typically occur in summer when complexes of thunderstorms form over plains, producing heavy rain and severe wind. The damaging winds can last a long time and cover a large area.
- **Bow Echo**—A bow echo is a linear wind front bent outward in a bow shape. Damaging straight-line winds often occur near the center of a bow echo. Bow echoes can be 200 miles long, last for several hours, and produce extensive wind damage at the ground. (The National Severe Storms Laboratory, n.d.)

Heavy Rain

Heavy rain is described as greater than 4 mm per hour, but less than 8 mm per hour. (United States Geological Survey, n.d.) Heavy rain can lead to flooding even on dry soil and especially on impervious surfaces. In urban areas, direct runoff is relatively extensive, not only because of the density of roofs and impermeable pavements which allow less rain to infiltrate the ground but also because storm-sewer systems carry more water directly to the streams and lakes. In a more natural or undeveloped area, direct runoff is considerably less. (United States Geological Survey, n.d.) The average annual rainfall in Mendocino County ranges from slightly less than 35 inches in the Ukiah area to more than 80 inches near Branscomb. Most of the precipitation falls during the winter, and substantial snowfall is limited to higher elevations. Rainfall is often from storms that move in from the northwest. Virtually no rainfall occurs during the summer months.

4.5.7.1 Plans, Policies, and Regulatory Environment

There are very few formal regulations that pertain directly to severe weather events. The California Building Code,¹⁰ adopted by Mendocino County and the participating jurisdictions, is generally adequate to properly address development impacts from severe weather events.

¹⁰ Available at <https://www.dgs.ca.gov/BSC/Codes>.



4.5.7.2 Past Events

Heavy rain and high/strong wind events have been the primary types of severe weather events to occur in Mendocino County since the year 2000. Table 4-62 summarizes severe weather events in Mendocino County since 2000, as recorded by the National Oceanic and Atmospheric Administration (NOAA). Heavy rain events are most common, resulting in property damage 13 years out of 19.

4.5.7.3 Location

Severe weather events have the potential to happen anywhere in the planning area. Wind events are most damaging to areas that are heavily wooded. Heavy rain events can be more impactful in more populous areas with greater impervious surfaces. The following figures show average weather conditions for Mendocino County, including:

- Figure 4-41: Average Annual Precipitation (1981-210), and
- Figure 4-42: Annual Average Wind Speed.

Table 4-63 explains further the classes of wind power density shown in Figure 4-42.

4.5.7.4 Frequency/ Probability of Future Events

Severe weather events since the year 2000 have caused a total of \$34,417,000 worth of property damage in Mendocino County. Severe weather events occur annually in Mendocino County to varying degree, not always with property damage involved.

High Wind: Figure 4-42 displays average annual wind speeds by power class in Mendocino County and Table 4-63 describes wind power classes.

Heavy Rain: Figure 4-21 in the Climate Change hazard profile depicts precipitation departure from average. Even if overall precipitation does not significantly depart from average in the future, heavy rainfall events are predicted to increase with climate change. (United States Geological Survey, n.d.)



Table 4-62: Severe Weather Damage Summary by Year 2000-2019

Year	Total Property Damage Value (\$)	Total Crop Damage Value (\$)
Heavy Rain Events		
2005	0	None reported
2017	2,500,000	None reported
2017	2,000,000	None reported
2017	1,300,000	None reported
2017	7,000,000	None reported
2017	550,000	None reported
2017	3,000,000	None reported
2017	400,000	None reported
2017	2,000,000	None reported
2017	4,500,000	None reported
2017	1,700,000	None reported
2017	1,250,000	None reported
2017	1,200,000	None reported
2017	6,000,000	None reported
2018	0	None reported
2018	0	None reported
2018	0	None reported
2019	0	None reported
2019	0	None reported
High/ Strong Wind		
2000	0	None reported
2001	0	None reported
2001	0	None reported
2002	0	None reported
2002	0	None reported
2002	0	None reported
2004	0	None reported
2005	1,000,000	None reported
2006	0	None reported
2015	0	None reported
2015	0	None reported
2017	17,000	None reported
Total	34,417,000	0

Source: NOAA Storm Events Database



Dynamic Planning + Science
for Mendocino County, 2020



AVERAGE ANNUAL PRECIPITATION (1981-2010, INCHES) MENDOCINO COUNTY

*Data sources: USDA - 1981-2010 Annual Average Precipitation by State.

MAP LEGEND

34	45	60	70	85
44	59	69	84	97

INCHES

Figure 4-41: Mendocino County - Average Annual Precipitation

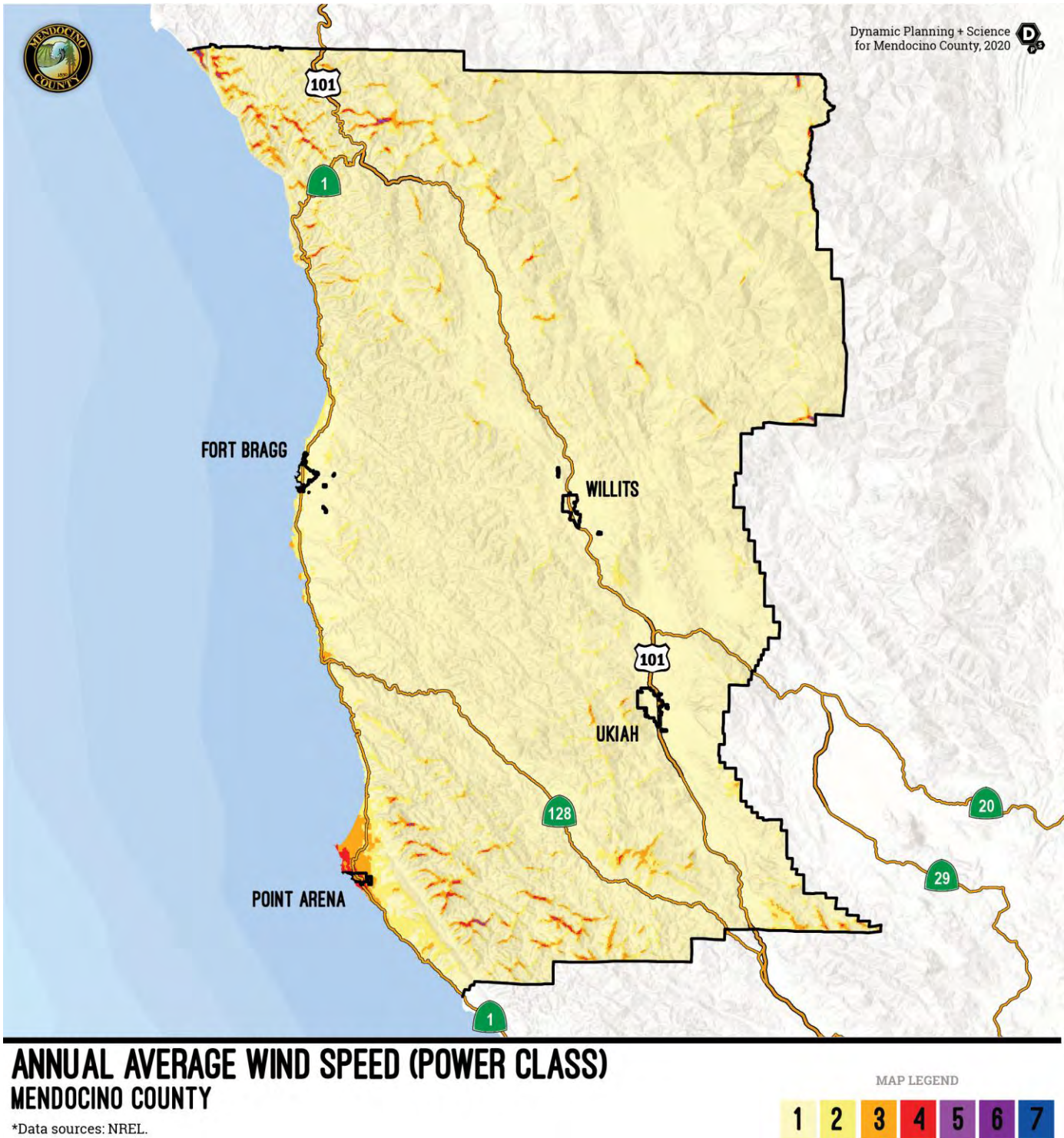


Figure 4-42: Annual Average Wind Speed (Power Class)



Table 4-63: Classes of Wind Power Density at 10 m and 50 m^a

Wind Power Class	10 m (33 ft)		50 m (164 ft)	
	Wind Power Density (W/m ²)	Speed ^b m/s (mph)	Wind Power Density (W/m ²)	Speed ^b m/s (mph)
1	0	0	0	
	100	4.4 (9.8)	200	5.6 (12.5)
2	150	5.1 (11.5)	300	6.4 (14.3)
3	200	5.6 (12.5)	400	7.0 (15.7)
4	250	6.0 (13.4)	500	7.5 (16.8)
5	300	6.4 (14.3)	600	8.0 (17.9)
6	400	7.0 (15.7)	800	8.8 (19.7)
7	1000	9.4 (21.1)	2000	11.9 (26.6)

^a Vertical extrapolation of wind speed based on the 1/7 power law.

^b Mean wind speed is based on Rayleigh speed distribution of equivalent mean wind power density. Wind speed is for standard sea-level conditions. To maintain the same power density, speed increases 3%/1000 m (5%/5000 ft) elevation.

NOTE: Each wind power class should span two power densities. For example, Wind Power Class = 3 represents the Wind Power Density range between 150 W/m² and 200 W/m². The offset cells in the first column attempt to illustrate this concept.

4.5.7.5 Severity and Extent

The most common problems associated with high wind and heavy rain are immobility and loss of utilities. Fatalities are uncommon but can occur. Roads may become impassable due to flooding, downed trees, or a landslide. Power lines may be downed due to high winds, and services such as water or phone may not be able to operate without power.

High Wind: Windstorms can be a problem in the planning area and could cause damage to utilities. It is important to note that the predicted wind speed given in wind warnings issued by the National Weather Service is for a one-minute average; gusts may be 25 to 30 percent higher.

Heavy Rain: Heavy rain has been a problem in Mendocino County and could cause future damage to facilities and utilities in the planning area. From 2000 to 2019, heavy rain events were the most common form of severe weather, resulting in property damage 13 years out of 19.



4.5.7.6 Warning Time

High Wind: Meteorologists can often predict the likelihood of high winds, which can give several days of warning time. However, meteorologists cannot predict the exact time of onset or severity of high winds. Some storms may come on more quickly and have only a few hours of warning time. A Red Flag Warning is issued when warm temperatures, very low humidity, and stronger winds are expected to combine in order to produce an increased risk of fire danger. (National Weather Service)

Heavy Rain: As with high winds, meteorologists can often predict their likelihood of a storm with heavy rains. This can give several days of warning time. However, meteorologists cannot predict the exact time of onset or severity of heavy rain. Some storms may come on more quickly and have only a few hours of warning time.

4.5.7.7 Secondary Hazards

High Wind: The most significant secondary hazards associated with high winds are falling and downed trees, downed power lines, and wildfire. High winds can cause damage to properties and destruction of roadways. It can magnify wildfires and increase their rate of travel.

Heavy Rain: The most significant secondary hazards associated with heavy rains are flooding, which also includes falling and downed trees, landslides, and downed power lines. Heavy rain can cause damage to properties and destruction of roadways. Landslides occur when the soil on slopes becomes oversaturated and fails. Landslides are further outlined as slope failure in Section 4.5.8, while flooding is analyzed in Section 4.5.6.

4.5.7.8 Climate Change

The effects of climate change are varied and include warmer and more varied weather patterns, such as melting ice caps and poor air quality. As a result, climate change will likely worsen a number of natural hazards, including severe weather. The effects of climate change on severe weather are most likely to create more frequent and prolonged periods of extreme heat. However, climate change will result in unpredictable temperature fluctuations that could lead to freezing events during the warmer months of the year, which could have a devastating effect on agriculture. (United States Environmental Protection Agency, 2016)



4.5.7.9 Severe Weather Vulnerability Analysis

4.5.7.9.1 Population

It can be assumed that the entire planning area is exposed to some extent to severe weather events. Certain areas are more exposed due to geographic location and local weather patterns. Populations living at higher elevations with large stands of trees or power lines may be more susceptible to wind damage and blackout.

Vulnerable populations such as the elderly, low income or linguistically isolated populations, people with life-threatening illnesses, and residents living in areas may become isolated from major roads in severe weather events. Power outages can be life-threatening to those dependent on electricity for life support. These populations face isolation and exposure during severe weather events and could suffer more secondary effects of the hazard, and therefore vulnerable populations are of particular concern.

4.5.7.9.2 Property

All property is vulnerable during severe weather events, but properties in poor condition or in particularly vulnerable locations may risk the most damage. Those in higher elevations and on ridges may be more prone to wind damage. Property located under or near overhead lines or near large trees may be vulnerable or may be damaged in the event of a collapse. Crops may be damaged by high wind or heavy rain.

4.5.7.9.3 Critical Facilities and Infrastructure

All critical facilities exposed to flooding are also likely exposed to severe weather. Additional facilities on higher ground may also be exposed to wind damage or damage from falling trees. The most common problems associated with severe weather is the loss of utilities. Downed power lines can cause blackouts, leaving large areas isolated and phone, water, and sewer systems inoperable. Roads may become impassable due to flooding, downed trees, or landslides.

4.5.7.9.4 Lifelines

Loss of roads or power and communication lines are the primary transportation failures resulting from severe weather and are mostly due to secondary hazards such as floods, falling and downed trees, landslides, and wildfire. Landslides caused by prolonged heavy rains can block roads. High winds can cause significant damage to trees and power lines, blocking roads with debris, damaging transportation infrastructure, isolating populations, and disrupting ingress and egress routes.

Prolonged obstruction of major routes due to landslides, debris, or floodwaters can disrupt the shipment of goods and other commerce. Large, prolonged storms can have negative economic impacts on an entire region.



Severe windstorms and downed trees can create serious impacts on power and above-ground communication lines. Loss of electricity and phone connection would leave certain populations isolated because residents would be unable to call for assistance.

4.5.7.9.5 Future Trends in Development

All future development will be affected by severe storms. The ability to withstand impacts lies in sound land use practices and consistent enforcement of codes and regulations for new construction. Planning partners have adopted the California Building Code, which corresponds to the International Building Code, to meet California mandates. This code is equipped to deal with the impacts of severe weather events. Land use policies identified in general plans within the planning area also address many of the secondary impacts, such as flood and landslide, of the severe weather hazard. With these tools, the planning partners are well equipped to deal with future growth and the associated impacts of severe weather.

4.5.7.9.6 Severe Weather Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Severe weather problem statements for Mendocino County are listed in Table 4-64; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee in understanding the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. See Table 5-6 for a full list of mitigation actions and the corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-64 and Table 5-6.



Table 4-64 Severe Weather Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EW-MC-53	Extreme Weather	Impact	PPRO - Property Protection, SP - Structural Projects	Mendocino County	Heavy rains could create localized flooding issues around County infrastructure including buildings and roads, posing a threat to buildings and creating hazardous travel condition. The following areas experience localized flooding due to outdated storm drainage facilities: Village of Mendocino (Howard St., Ukiah St., Calpella St., Albion St., Lansing St., Main St.); Talmage (Talmage Ct., Burk Rd., Glenrob Rd.); Hopland – Old Hopland (1st St., Center St., St. Mary Ave., McDowell St., Sanel St., Howell St.); Redwood Valley at East Road & School Way; Main St. Potter Valley; Gualala Rd.;	ma-EW-MC-207, ma-EW-MC-207, ma-EW-MC-208
ps-EW-MC-54	Extreme Weather	Threat	PPRO - Property Protection, PE&A - Public Education & Awareness, NRP - Natural Resource Protection	Mendocino County	High winds exacerbate the threat of wildfire	ma-AH-MC-134
ps-EW-MC-55	Extreme Weather	Threat	PPRO - Property Protection, NRP - Natural Resource Protection	Mendocino County	High winds can blow trees over presenting hazards for buildings, roads, and pedestrians/cars	ma-WS-MC-118



4.5.8 Slope Failure Hazard Profile

Landslides, mudflow, debris flow, and rockfall, collectively known as slope failure, may cause damage across the County. They rarely present a threat to human life, but often result in a disruption of everyday services, including emergency response capabilities. Landslides can block transportation routes, dam creeks and drainages, and contaminate water supplies. When these hazards affect transportation routes, they are frequently expensive to clean-up and can have significant economic impacts on the County. (United States Geological Survey, 2004)



For this MJHMP update, four types of slope failure (Landslide, Debris Flow, Rockfall, and Alluvial Fans) were identified as concerns to the County and are briefly described below.

Landslide

The many types of landslides are categorized based on form and type of movement. They range from slow-moving rotational slumps and earth flows, which can slowly distress structures but are less threatening to personal safety, to fast-moving rock avalanches and debris flows that are a serious threat to structures and have been responsible for most fatalities during landslide events. Many large landslides are complex and a combination of more than one landslide type. (United States Geological Survey, n.d.)

Mudflow/Debris Flow

When slope material becomes saturated with water, a debris flow may develop. Debris flows can also occur from horizontal seismic inertia forces induced in a slope from ground shaking. From a geologic perspective, there are generally two types of debris flows: debris flows related to shallow landslides and post-wildfire debris flows. (United States Geological Survey, 2005)

Debris flows related to shallow landslides occur on hillslope due to soil failure in which soil liquefies and runs downhill. This type of debris flow generally results from a shallow landslide (less than 10 to 15 feet deep) and has a discrete initiation zone depositional area. Shallow landslides tend to occur in winter but are most likely after prolonged periods of heavy rainfall when soil materials are saturated. Debris flows are typically more dangerous because they are fast-moving, causing both property damage and loss of life. (*Id.*)

Post-wildfire debris flows are a result of post-fire conditions, where burned soil surfaces enhance rainfall runoff that concentrates in a channel and picks up debris as it moves. The post-fire debris flow has a less discrete initiation zone but is similar to a debris flow derived from hillslopes in that it may result in inundation and a detrimental impact on lives and property within its zone of runout and deposition. It can result in downstream flooding. (*Id.*)



An example of a catastrophic slope failure is an event that occurred in Mendocino County on April 20, 2017, when significant rainfall triggered a large landslide on Highway 101. See Figure 4-43 for a photograph of this incident.

Rockfall

Rockfall is the falling of a newly detached mass of rock from a cliff or rock outcrop or a loose rock that erodes out of unconsolidated debris

on a hillside and rolls or falls down a very steep slope. Over-steepened slopes like those along roadcuts or in glaciated terrain are susceptible to rockfall due to the steep slopes that are not highly vegetated or benched, which can help attenuate rockfall. Rock outcrops that are highly fractured and/or undercut by weaker rock layers are also susceptible to rockfall. (CGS, 2020)



Figure 4-43: Landslide on Highway 101

Photo by California Highway Patrol <https://sanfrancisco.cbslocal.com/2017/04/20/massive-landslide-shuts-down-highway-101-in-mendocino-county/>

Alluvial Fan

Alluvial fans consist of sediment deposits leftover from a flood event. The sediment is carried by a flood and distributed in a fan-like shape. Alluvial fans represent a high risk of natural hazards in the form of debris flow as the deposited soil remains unstable after the flood event. Alluvial fan channels are located on footslope landforms in the transition space between valley floodplains and steep mountain slopes and are preceded by high-gradient, contained channels. Coarse material deposits are formed by the rapid change in transport capacity as the high energy mountainslope streams spill onto the valley floor. Riparian areas resemble the shape of the landform which is narrow at the apex and broader at the bottom where the fan widens. (United States Department of Agriculture)



4.5.8.1 Plans, Policies, and Regulatory Environment

Mendocino County General Plan

The 2009 Mendocino County General Plan includes the following policies in the Resource Management Element and the Development Element to mitigate the effects of slope failure:

Resource Management Element

Policy RM-61: Development shall be located, designed, constructed, and managed as follows to protect soil resources, and minimize soil loss and erosion:

- Slopes over 15 percent: Limit land uses, densities, intensities, and disturbances, vegetation removal, and hydrologic modifications on slopes exceeding 15 percent.
- Slopes 20 percent or more: In addition to standards for slopes over 15%, establish slope stability requirements for areas with, or directly adjacent to, slopes of 20 percent or greater within geologic units susceptible to slope failure and areas of mapped landslides.
- Slopes 30 percent or more: In addition to standards for slopes over 20%, discourage road and building site construction in areas that exceed 30 percent slopes or cross slopes.

Action Item RM-61.1: Prior to development, require evaluation of slope stability in areas with the potential for landslides, including structural foundation engineering and potential impacts to adjacent lands. The Building Official may waive this evaluation for existing single-family lots.

Policy RM-62: Discourage development and conversion from rangeland to intensive agriculture in areas of known landslides or slopes where weak geologic materials are susceptible to land sliding.

Development Element

Policy DE-231: Prior to recordation, new or reconfigured lots in areas zoned for residential, commercial or industrial use shall demonstrate sufficient areas with acceptable risk of geologic, seismic, slope and soils-related hazards to accommodate the proposed land uses, densities and intensities.

Regulation of Cut Surfaces in Mendocino County Code, § 18.70

The Mendocino County Code discusses the regulation of slope via its Grading Code, § 17.28. It requires that the slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than two (2) units horizontal to one (1) unit vertical, the exception being if the applicant furnishes a soils engineering or an engineering geology report, or both, stating that the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to public or private property.



4.5.8.2 Past Events

According to NOAA, the most common type of slope failure in Mendocino County is debris flow, which typically occurs during winter months. Table 4-65 lists the slope failure events that took place in the County since the year 2000.

Table 4-65: Slope Failure Events in Mendocino County Since 2000

Date	Type of Event	Property Damage Value (\$)	Crop Damage
12/28/2005	Debris Flow	3,600,000	None reported
12/28/2005	Debris Flow	8,650,000	None reported
12/28/2005	Debris Flow	8,650,000	None reported

Source: NOAA Storm Events Database

4.5.8.3 Location

The best available predictor of where slope failure might occur is the location of past movements. Past landslides can be recognized by their distinctive topographic shapes, which can remain in place for thousands of years. Most landslides recognizable in this fashion range from a few acres to several square miles. Most show no evidence of recent movement and are not currently active. A small proportion of them may become active in any given year, with movements concentrated within all or part of the landslide masses or around their edges.



Figure 4-44: Mudslide on Highway 1 in Mendocino County

Photo by The San Francisco Chronicle, <https://www.sfchronicle.com/bayarea/article/Storm-watch-Scary-moments-as-landslide-takes-out-6884870.php#photo-9612874>

Recognizing ancient dormant mass movement sites is important to identify current areas susceptible to flows and slides because they can be reactivated by earthquakes or by exceptionally wet weather. Those ancient scars also consist of broken materials, frequently involve disruption of groundwater flow, and are vulnerable to construction-triggered sliding.



Mendocino County does have a history of mudflow events that have impacted transportation, access to more remote residences in the unincorporated county, and caused property damage. Figure 4-44 shows a 2016 mudflow that pressed a Caltrans employee and his dump truck against the side of a guard rail on Highway 1 in Mendocino County.

Figure 4-45 shows low, moderate, and high landslide risk exposure. The map depicts a general characteristic of higher risk throughout the county. This map should be used with caution, as site-specific conditions can make some locations in low to moderate instability areas highly unstable and some high instability locations more stable.



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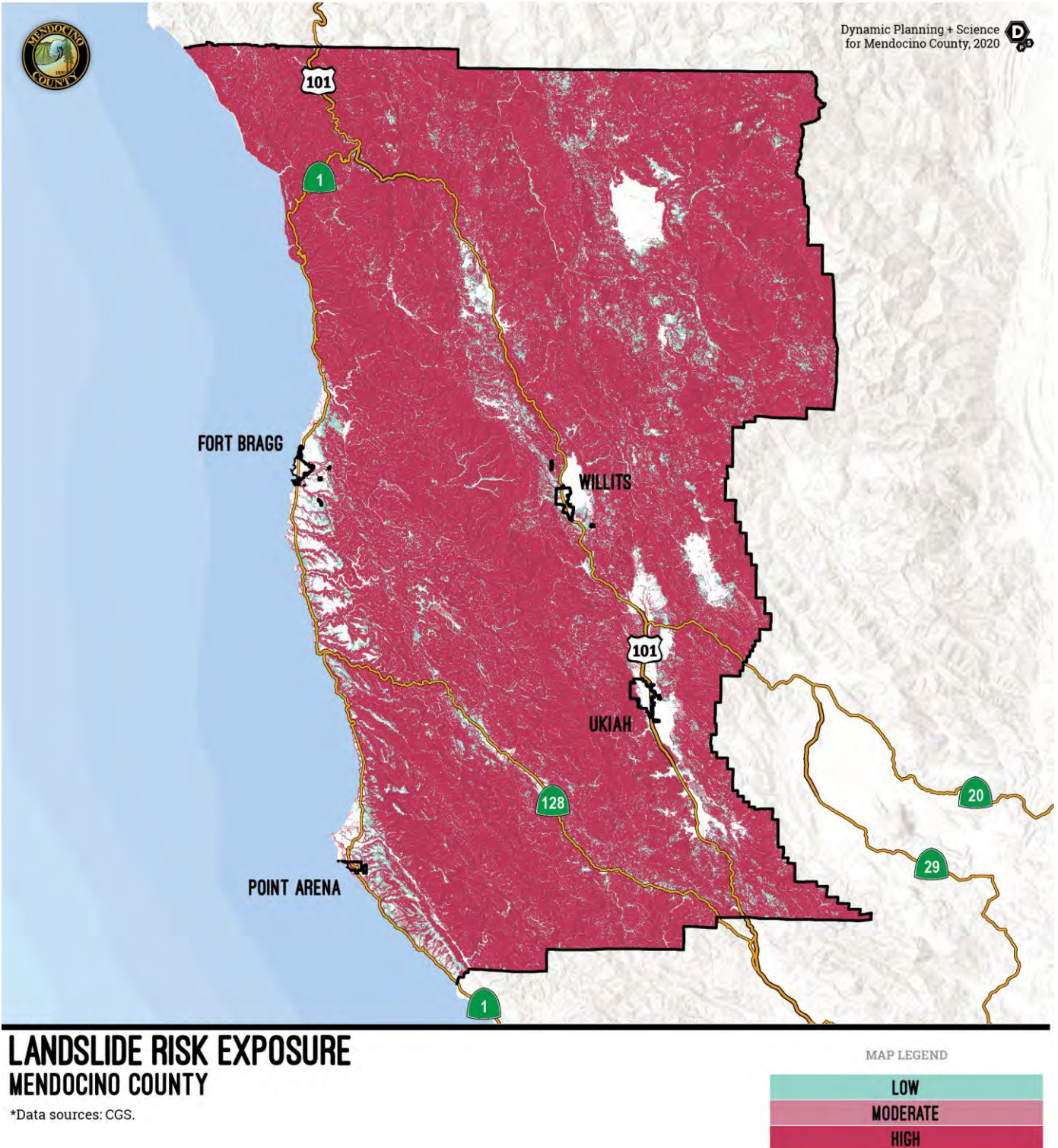


Figure 4-45: Landslide Risk Exposure



4.5.8.4 Frequency/ Probability of Future Occurrences

Slope failures are most frequently triggered in periods of high rainfall. The hazard is greatest in areas with steep slopes, although slides may occur on slopes of 15 percent or less if the conditions are right. Slope steepness and underlying soils are the most important factors affecting the landslide hazard. However, surface and subsurface drainage patterns also affect the landslide hazard, and vegetation removal can increase the likelihood of a landslide. (United States Geological Survey, 2004)

Slope failures are often triggered by other natural hazards such as earthquakes, heavy rain, floods, or wildfires, so landslide frequency is often related to the frequency of these other hazards. The probability of slope failure occurring in Mendocino County is likely (between 10 and 100% annual probability).

4.5.8.5 Severity and Extent

The severity of landslide problems depends upon the local bedrock and soil conditions, including moisture content, slope, and vegetation. Small landslides are common in the County's mountain areas as loose material moves naturally down slope or fires have caused loss of soil-stabilizing vegetative cover. In addition, many human activities tend to make the earth materials less stable and, thus, increase the chance of ground failure. Some of the natural non-seismic causes of ground instability are steam and lakeshore erosion, heavy rainfall, and poor-quality natural materials. Human activities contribute to soil instability through grading of steep slopes or overloading them with artificial fill, by extensive irrigation, construction of impermeable surfaces, excessive groundwater withdrawal, and removal of stabilizing vegetation. (USGS, 2020)

4.5.8.6 Warning Time

Some geologic hazards occur slowly but can have significant property or health consequences, like erosion and some forms of slope movement or land sliding. The identification of those hazards generally takes site-specific analysis to determine if the site soils and geology are susceptible to these hazards and what mitigation is most relevant and prudent for a site. For these types of hazards, warning time is long.

For other hazards, such as debris flows, rockfall, and landslides, warning time is often very short and may not occur at all. Identifying areas where these events are known have occurred, or which have ideal characteristics for these hazards to occur, could help with hazard preparedness when triggering-type events like intense rainfall occur. This identification won't reduce the warning time, but it will make proactive response to potential triggering events more effective. (Manconi, 2016)



4.5.8.7 Secondary Hazards

There are some hazards that can trigger or exacerbate slope failure. Flooding, for example, can undercut the toe of a slope which can remove the support for the slope and cause a landslide or rockfall. Wildfires create an immediate hazard of their own and create long-term impacts by altering the soil structure, impeding its ability to absorb moisture, and destroying vegetation that binds the soil with roots and absorbs rainfall and runoff with foliage. Post-wildfire, even small rainfall events can create devastating mudflows, debris flows, and landslides. Areas that are mapped currently as low to moderate risk of these hazards may have high risk after a wildfire.

4.5.8.8 Landslide Vulnerability Assessment

Figure 4-46 displays landslide susceptibility for population and infrastructure in Mendocino County. This section discusses exposure to this vulnerability.

4.5.8.8.1 Population

An estimated 37,701 persons, or 65.40% of the County population, are exposed to slope failure areas, as shown in Table 4-66 below. Population estimates within slope failure areas were generated by analyzing County assessor and parcel data that intersect with landslide hazard areas identified by California Geological Survey. Using GIS, U.S. Census Bureau information was used to intersect slope failure hazards an estimate of population was calculated by weighting the population within each census block and track with the percentage of slope hazard areas.

Table 4-66: Population Exposure to Landslide Susceptibility

	Total Population	
Unincorporated County	58,995	
Landslide Susceptibility	Population Count	% of Total
High	28,500	48.31%
Moderate	2,820	4.78%
Low	7,265	12.32%
Total	38,586	65.41%



LANDSLIDE RISK EXPOSURE SNAPSHOT

MENDOCINO COUNTY

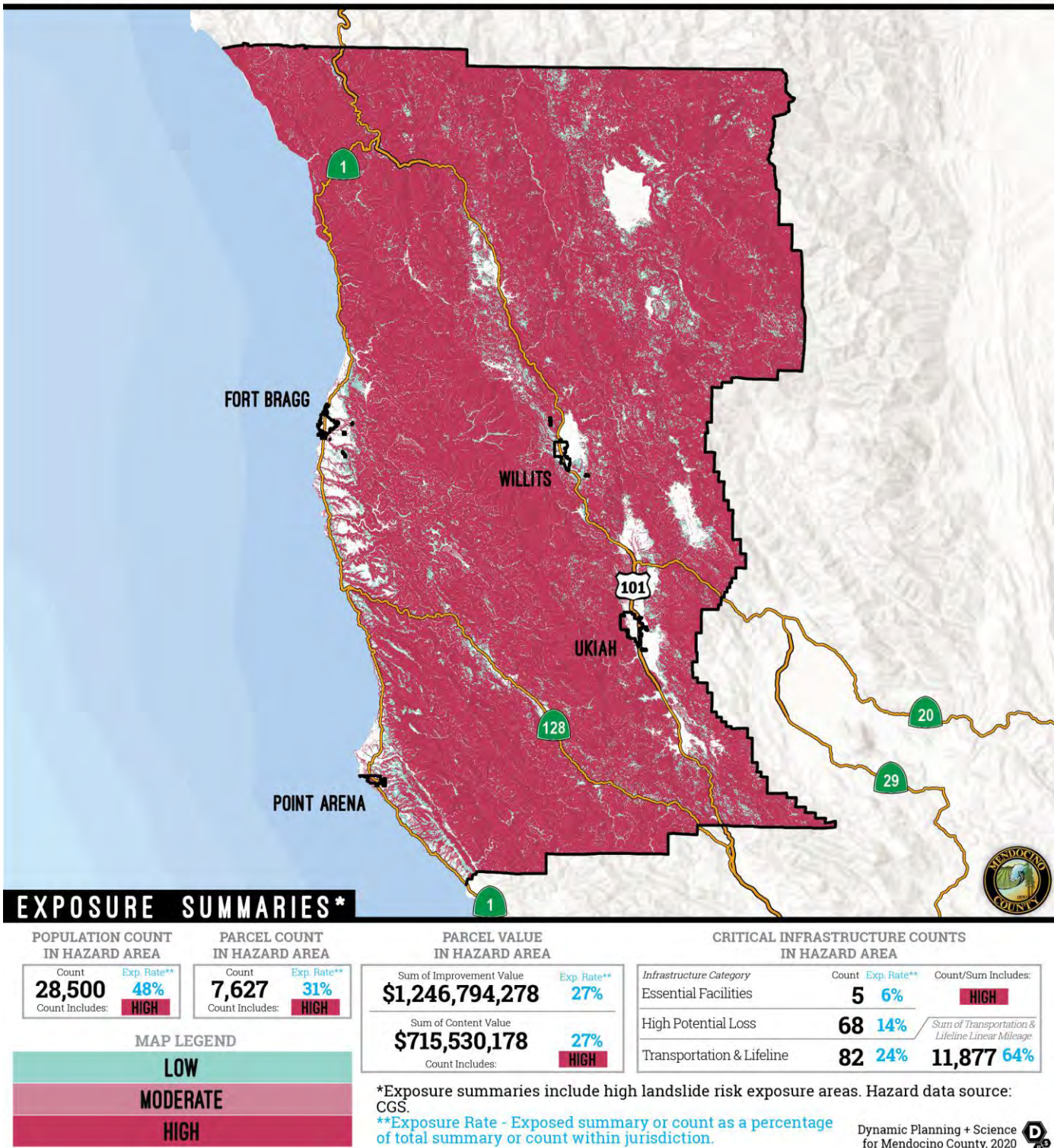


Figure 4-46: Landslide Risk Exposure Snapshot



4.5.8.8.2 Property

Table 4-67 shows the number of parcels, market value exposure and content value exposure in the steep-slope risk areas. The predominant zoning classes in cities are single-family, vacant and manufactured homes.

Table 4-67: Property Value Exposed to Landslides.

	Total Parcels	Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)
Unincorporated County	24,371	\$ 4,544,212,021	\$ 2,693,943,855	\$ 7,238,155,876

Landslide Susceptibility	Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
Low	4,571	18.8%	\$ 888,779,787	\$ 492,127,263	\$ 1,380,907,050	19.1%
Moderate	2,035	8.4%	\$ 445,434,110	\$ 260,278,726	\$ 705,712,836	9.7%
High	7,627	31.3%	\$ 1,246,794,278	\$ 715,530,178	\$ 1,962,324,456	27.1%
Total	14,233	58%	\$ 2,581,008,175	\$ 1,467,936,166	\$ 4,048,944,341	55.9%

4.5.8.8.3 Critical Facilities and Infrastructure

Several types of infrastructure are exposed to mass movements, including transportation, water, sewer, and power infrastructure. At this time, all infrastructure and transportation corridors identified as exposed to the landslide hazard are considered vulnerable until more information becomes available. Table 4-68 and Table 4-69 summarize the critical facilities exposed to the slope failure hazard.

Table 4-68: Critical Facility Points with Slope Failure Hazard Risk (Unincorporated County)

Critical Infrastructure - Landslide Susceptibility			
Infrastructure Type	High	Moderate	Low
Essential Facility	5	9	22
EOC	-	-	-
Fire Station	4	6	21
Law Enforcement	-	1	-
Medical Facility	1	2	1
High Potential Loss	68	40	56
Adult Residential Facility	-	1	-
Alternative Education Program	-	-	-
Animal Control	-	-	-
Child Care Center	1	7	1
Communication Tower	37	1	27
Community Center	1	-	-
Courthouse	-	-	-



Critical Infrastructure - Landslide Susceptibility			
Infrastructure Type	High	Moderate	Low
Dam	15	1	13
Detention Center	-	-	-
Fairground	-	-	-
Family Child Care Home	-	-	-
Foster Family Agency	-	-	-
Historic Building	1	1	3
Historic Site	-	-	1
Library	-	-	-
Museum	-	-	-
Office	-	-	-
Park and Recreation	2	2	-
Power Plant	-	-	2
Real Property Asset*	8	16	1
Residential Child Care	-	-	-
Residential Elder Care Facility	2	-	-
School	1	11	8
Shop	-	-	-
Storage	-	-	-
Wastewater Treatment	-	-	-
Transportation and Lifeline	82	27	76
Airport	-	-	1
Bridge	77	26	73
Bus Facility	-	-	-
Corp Yard	-	-	-
NG Station	-	-	-
Substation	2	1	1
Transfer Station	3	-	1
Hazmat	-	-	-
Hazmat	-	-	-
Grand Total	155	76	154

**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*



Table 4-69: Critical Facilities (Linear) with Slope Failure Hazard Risk (Unincorporated County)

Lifelines (miles) - Landslide Susceptibility			
Infrastructure Type (Linear)	High	Moderate	Low
Levee	0.0	0.4	-
NG Pipeline	13.0	4.2	8.9
Railroad	78.9	4.8	27.1
Street	4,046.1	211.1	1,443.1
<i>4WD trail</i>	800.2	10.3	259.1
<i>4WD trail, major</i>	20.4	-	4.4
<i>Alley</i>	-	-	-
<i>Cul-de-sac</i>	0.2	0.0	0.2
<i>Driveway</i>	165.3	8.7	52.2
<i>Interstate</i>	18.0	2.6	12.0
<i>Local road</i>	2,579.3	126.5	874.4
<i>Local road, major</i>	68.5	3.1	20.8
<i>Primary highway</i>	101.3	28.8	74.9
<i>Ramp</i>	1.8	2.1	2.0
<i>Road, parking area</i>	0.4	-	0.2
<i>State/county highway</i>	289.2	29.0	141.3
<i>Thoroughfare, major</i>	1.7	-	1.6
<i>Traffic circle</i>	-	-	0.0
<i>Walkway</i>	-	-	-
Transmission Line	197.9	13.4	66.8
Grand Total	4,336.0	233.9	1,546.0



4.5.8.8.4 Lifelines

A significant amount of linear infrastructure (or lifelines) can be exposed to mass movements:

- **Roads**—Access to major roads is crucial to life-safety, response, and recovery operations after a disaster event. Landslides can block egress and ingress on roads, causing isolation for neighborhoods, traffic problems, and delays for public and private transportation. This can result in economic losses for businesses.
- **Bridges**—Landslides can significantly impact bridges, by knocking out bridge abutments or significantly weaken the soil supporting them.
- **Power Lines**—Power lines are generally elevated above steep slopes, but the towers supporting them can be subject to landslides. A landslide could trigger the failure of the soil underneath a tower, causing it to collapse and rip down the lines. Power and communication failures due to landslides can create problems for vulnerable populations and businesses.

4.5.8.9 Future Trends in Development

Mendocino County is equipped to handle future growth within landslide hazard areas. The 2009 Mendocino County General Plan addresses development in areas susceptible to slope failure, and the County Code implements the grading ordinance and other protective measures.

4.5.8.10 Slope Failure Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Slope failure hazard problem statements are listed in Table 4-70; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee in understand the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-6 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-70 and Table 5-6.



Table 4-70 Slope Failure Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-SF-MC-22	Slope Failure	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	County transportation routes may be located near high danger landslide areas, which could result in blocked roads and dangerous driving conditions in the event of a landslide.	ma-SF-MC-225
ps-SF-MC-23	Slope Failure	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County	There are approximately 77 County bridges located in high landslide risk areas	ma-SF-MC-225, ma-SF-MC-151
ps-SF-MC-24	Slope Failure	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	The following critical facilities are located in a high landslide risk area: Child Care facility located at 1 School Way Garcia Sub Station Veterans Memorial Building Community Center	ma-SF-MC-225, ma-SF-MC-151
ps-SF-MC-25	Slope Failure	Victim	PE&A - Public Education & Awareness , NRP - Natural Resource Protection	Mendocino County	There are approximately 27,846 people living in a high landslide risk area in the County	ma-SF-MC-225



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-SF-MC-26	Slope Failure	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County	The following County roads are located in high landslide risk areas and have experienced damages from landslides in the past (Albion Little River Rd, Albion Ridge Rd, Albion River Rd, Alder Creek Beach Rd, Bald Mountain Rd, Bell Springs Rd, Black Bart Dr, Blackhawk Dr, Blue Lake Terrace, Branscomb Rd, Briceland Rd, Buckeye Rd, Canyon Rd, Caspar Little Lake Rd, Clover Rd, Comptche Ukiah Rd, Cow Mountain Access Rd, Cutoff Rd, Cypress Rd, Daphne Wy, Deerwood Dr, East Side Calpella Rd, East Side Potter Valley Rd, Eel River Rd, Elkhorn Rd, Eureka Hill Rd, Feliz Creek Rd, Fircrest Dr, Fish Rock Rd, Flynn Creek Rd, Fort Bragg Sherwood Rd, Frontage Rd, Garcia River Rd, Goose Rd, Gualala Rd, Hawk Rd, Hearst Willits Rd, Henry Station Rd, Hulls Valley Rd, Iversen Rd, Lake MendocinoDr, Laytonville Dos Rios Rd, Lilac Rd, Little River Airport Rd, Low Gap Rd, Main St, Marina Dr, Mendocino Pass Rd, Middle Ridge Rd, Mill Creek Rd, Mina Rd, Mountain House Rd, Mountain View Rd, Muir Mill Rd, Navarro Ridge Rd, Nokomis Rd, Oak Knoll Rd, Ocean Dr, Old Coast Hwy, Old River Rd, Old State Hwy, Old Toll Rd, Omega Dr, Orr Springs Rd, Pacific Dr, Peacock Dr, Philo Greenwood Rd, Pine Ave, Pine Mountain Rd, Point Cabrillo Dr, Poonkinney Rd, Poppy Dr, Pratt Ranch Rd, Primrose Dr, Rancheria Rd, Redemeyer Rd, Reeves Canyon Rd, Reynolds Hwy, Ridge Rd, Ridgeway Hwy, Robinson Creek Rd, Sherwood Rd, Shimmins Ridge Rd, Short Creek Rd, Spanish Canyon Dr, Spyrock Rd, Stoneboro Rd, Ten Mile Rd, Tomki Rd, Usal Rd, Van Arsdale Rd, Vichy Springs Rd, Watson Rd, West Rd, West Side Rd, Wilderness Lodge Rd, Windy Hollow Rd, Woodland Terrace & Zenia Rd.	ma-SF-MC-225, ma-SF-MC-151
ps-SH-MC-51	Slope Failure	Threat	NRP - Natural Resource Protection	Mendocino County	A lack of erosion control in areas around steep hillsides will increase the risk of landslide/mudflow/rockslide	ma-SF-MC-225
ps-SH-MC-52	Slope Failure	Threat	NRP - Natural Resource Protection	Mendocino County	A lack of erosion control can contribute to storm water channels becoming clogged w/ sediment and debris	ma-SF-MC-225



4.5.9 Soil Hazard Profile

Hazards associated with soils in Mendocino County include naturally occurring asbestos and erosion.

Naturally Occurring Asbestos

Asbestiform minerals occur naturally in rock and soil as the result of natural geologic processes. Naturally occurring asbestos includes fibrous minerals found in certain types of rock formations and is commonly found in ultramafic rock, including serpentine rock, and near fault zones. The amount of asbestos typically present in these rocks ranges from less than 1% up to about 25%, and sometimes more. Not all ultramafic rock contains asbestos; it only has the potential to contain asbestos. Environmental testing is able to determine if a rock contains asbestos.



Natural weathering or human disturbance can break naturally occurring asbestos down to microscopic fibers, easily suspended in air. Asbestos fibers are too small to be seen by the naked eye. They do not dissolve in water or evaporate; they are resistant to heat, fire, and chemical or biological degradation.

There is no health threat if naturally occurring asbestos remains undisturbed and does not become airborne. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne; when airborne naturally occurring asbestos is inhaled, these thin fibers irritate tissues and resist the body's natural defenses. Asbestos is a known carcinogen and causes cancers of the lung and the lining of internal organs, as well as asbestosis and other diseases that inhibit lung function. Covering naturally occurring asbestos with clean soil or planting grass reduces exposure. (Mendocino County General Plan, 2009)

Erosion

Erosion is the general process whereby the materials of the earth's crust are worn down, removed by weathering, and deposited in other places by water or air. Lakeshore erosion is a special problem involving wave action and can be practically eliminated by proper engineering, construction, and soil stabilization through vegetative cover. Alluvial fans that form at the base of mountain foothills are a product of erosion in the watershed above depositing debris on the gentler valley floors, often associated with debris flows. Development in these areas can be subject to inundation from mud to boulder-sized particles. Within urbanized areas, the major problem of erosion is from the continued need to remove sediment from drainage systems and basins. Sedimentation within these systems decreases the volume of flood flows that the system can handle. (USGS, 2020)

Coastal erosion is classified as either episodic or chronic. Episodic erosion consists of the shore and backshore adjustment that results from short duration, high intensity meteorological and oceanic storm events. This type of event response results in shore adjustment and happens during a single storm or during a series of closely spaced storm events within a storm season. Chronic erosion is associated with slow, gradual shoreline adjustment associated with sea-level rise, land subsidence, changes in sediment



supply which result from watershed modifications or dam building, and decadal adjustments in rainfall and runoff associated with climate change.

Mendocino County may see an increase of 8.3 square miles of erosion with a 1.4-meter sea-level rise increase. (Pacific Institute, 2009) Such erosion would create more new challenges for local habitat as well as property owners who reside near the shoreline. (Sea Grant California, 2017) Coho salmon, Chinook salmon, and steelhead trout habitats are found in large portions of Mendocino County. The status of these species is of concern to federal, state, and local resource agencies. Wind and flood erosion can result in sedimentation, which can impact water quality and aquatic health and can result in habitat loss and general habitat degradation. (Mendocino County General Plan, 2009)

Agriculture is also heavily influenced by erosion. Growers may choose to implement procedures that control dust in order to improve visibility, reduce wind erosion and loss of topsoil, minimize damage to roads and structures, and limit health impacts due to poor air quality. Effective dust control methods conserve your topsoil, protect your downwind cropped acreage, and support compliance with air quality regulations. Soils remain viable for production only when soil loss is held below about 5 tons per acre per year. Figure 4-47 depicts the various stages of erosion typical in agricultural settings.

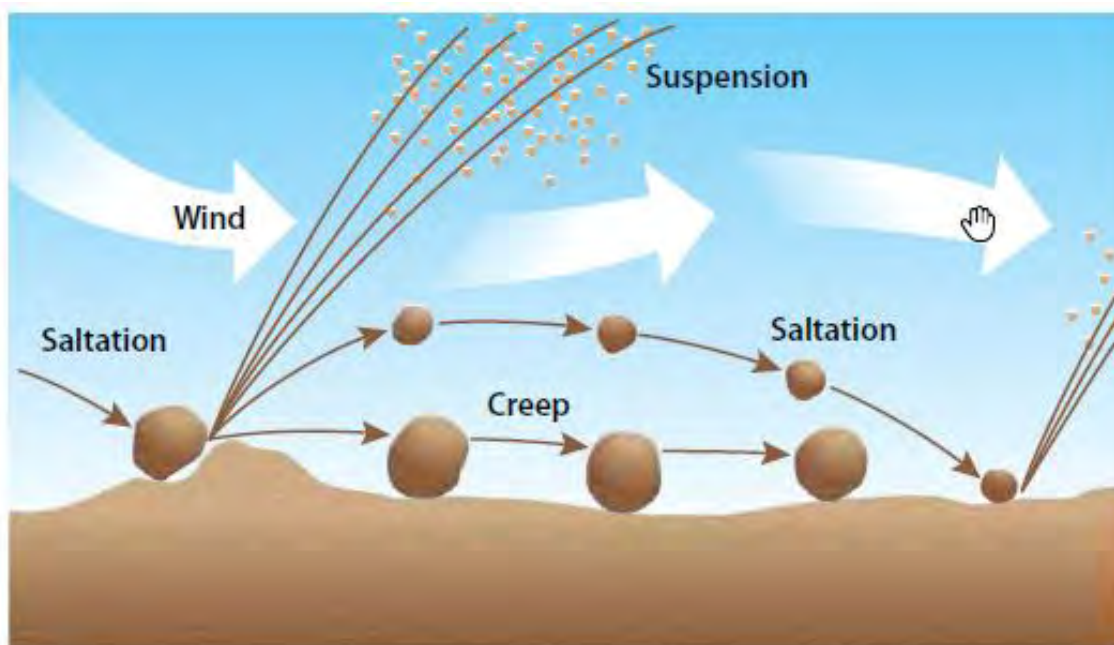


Figure 4-47: Illustration of various stages of erosion.

Source: Antelope Valley Dustbuster's Agricultural Guide to Controlling Windblown Sand and Dust, 2010, http://www.kernair.org/Documents/Dust_Buster/Dustbusters%20Agricultural%20Guide%2010-25-10.pdf



4.5.9.1 Plans, Policies, and Regulatory Environment

Naturally Occurring Asbestos

California State Naturally Occurring Asbestos Regulations: Title 17 CCR 93105

The state of California requires all districts to regulate any grading, quarrying, and surface mining operations, which have the potential to cause public health problems. Districts must either implement and enforce State regulations provided in section one of 17 CCR 93105 or propose their own asbestos airborne toxic control measure as provided in the Health and Safety Code section 39666(d).

Mendocino District Naturally Occurring Asbestos Policy

The District requires an evaluation and report by a State registered geologist to determine that any observed naturally occurring asbestos is below levels of regulatory concern in areas being disturbed. If the levels are above regulatory concern, the District requires applicants to follow mitigation measures detailed in Title 17, CCR, Section 93105(d), and (e).

Erosion

Healthy Soils Action Plan

The California Healthy Soils Action Plan was created by a collaboration of state agencies and departments, which are referred to as the Healthy Soils Initiative. They are headed by the California Department of Food and Agriculture. The California Healthy Soils Action Plan is meant to promote the development of healthy soils on California's farm and ranchlands. The benefits of healthy soil include increased plant health and yields, water retention, greenhouse gas sequestration, and reduced sediment erosion and dust. There are five primary actions which the Healthy Soils Initiative promotes:

- the protection and restoration of soil organic matter in California's soils
- the identification of sustainable and integrated financing opportunities to facilitate healthy soils
- the provision for research, education, and technical support to facilitate healthy soils
- increased governmental efficiencies to enhance soil health on public and private lands
- the promotion of interagency coordination and collaboration to support soils and related state goals

California Local Coastal Program

The California Legislature passed the Coastal Act in 1976, which created a mandate for coastal counties to manage the conservation and development of coastal resources through a planning and regulatory program called the Local Coastal Program. The Local Coastal Program is a planning document that identifies the location, type, densities, and other ground rules for future development in the coastal zone. Mendocino County has incorporated these mandates into the County's General Plan under the Mendocino County Coastal Element, which was adopted by the Board of Supervisors on November 5, 1985 and certified by the California Coastal Commission on November 20, 1985..



Protection of Air, Soil, and Water Quality in Mendocino County Code, § 9.33

The Mendocino County Code includes a provision that prohibits certain open burning to protect air quality by reducing the amount of pollutants in the air. It also prohibits open burning to protect soil and water quality. This code requirement reduces the amount of pollutants in the soil and water and consequently protects the public health and welfare.

Erosion Control in Mendocino County Code, § 18.70.130, § 20.492

The Mendocino County Code provides ordinances for mitigating erosion, which includes preparing and maintaining the faces of cut and fill slopes against erosion and other devices. The preparation and maintenance of cut and fill slope faces include effective planting and the use of check dams, cribbing, riprap, or other devices. (§ 18.70.130) Subsequent standards establish conditions to minimize any disturbance to soils, drainage patterns, geology, and topography. In particular, erosion standards are intended to minimize any impacts to erosion rates. Provisions encourage existing vegetation to be maintained on construction sites, the reseeding of any disturbed soils, and the regulation of development on sloped over 30 percent. (§ 20.492)

Mendocino County General Plan

The 2009 Mendocino County General Plan includes the following policies, implementation measures, and goals in the Resource Management Element and the Coastal Element to mitigate the effects of soil erosion and naturally occurring asbestos:

Resource Management Element

Policy RM-48: Reduce potential health hazards from disturbance in areas classified as likely to contain Naturally Occurring Asbestos (NOA).

Action Item RM-48.1: Work with the Mendocino County Air Quality Management District to enforce standards for development within areas likely to contain Naturally Occurring Asbestos, including road construction, surface mining and grading operations.

Policy RM-49: Prohibit new road construction through areas with known Naturally Occurring Asbestos when feasible alternative transportation modes or routes are available.

Policy RM-59: Promote soil conservation practices by public and private landowners and managers.

Policy RM-63: Promote clustering and density transfers where appropriate to reduce soil loss and impacts to watersheds and fisheries.

Policy RM-64: Continue to identify and reduce soil erosion and sedimentation associated with lands, facilities and operations owned or operated by the County.



Coastal Element

Policy 3.4-1: The County shall review all applications for Coastal Development permits to determine threats from and impacts on geologic hazards arising from seismic events, tsunami runup, landslides, beach erosion, expansive soils and subsidence and shall require appropriate mitigation measures to minimize such threats. . .

4.5.9.2 Past Events

Naturally Occurring Asbestos: Naturally occurring asbestos emerged as a major issue in California beginning in El Dorado County with front-page news on March 29, 1998, resulting in public outcry and concern. As a result of the media attention on this issue, the county began screening sites for naturally occurring asbestos, tightening construction standards and requiring dust control measures on construction sites. The state banned the use of gravel containing asbestos above the detection level of 0.25 percent, conducted an air monitoring program to assess ambient concentrations of asbestos in the community and in other California counties, and produced a detailed geological map of rock formations in western El Dorado County more likely to contain asbestos.

What started in El Dorado County resulted in major changes to rulemaking for all counties in California and stringent requirements for school projects. Agencies involved in oversight and regulation include the California Air Resources Board, the Department of Toxic Substances Control, the Department of Conservation, the U.S. Geological Survey, the Division of Occupational Safety and Health (better known as Cal OSHA), the Agency for Toxic Substances, and the Disease Registry and U.S. Environmental Protection Agency. (Mendocino County MJHMP, 2014)



Figure 4-48: Naturally Occurring Asbestos Formation

Source: Mendocino County Air Quality Management District

<http://www.co.mendocino.ca.us/aqmd/natural-occurring-asbestos.html>

Erosion: Mendocino County has a number of areas susceptible to erosion. Ongoing erosion of local beaches and inland areas where soils possess low-density or low-strength properties. A critical issue related to erosion in Mendocino is sedimentation in local watersheds. Erosion from barren or poorly vegetated soils, erosion from the toes of slides along stream channels, and sediments from roads all contribute to degraded surface water quality issues in the county. Slopes are an additional factor in soil erosion in the County. The greater the slope, the greater the erosion hazard, especially if the soil is bare.



4.5.9.3 Location

Naturally occurring asbestos: In California, ultramafic rock, including serpentine rock, are often located in veins near earthquake faults in the coastal ranges and the foothills of the Sierra Nevada mountains. This type of rock is present in at least 44 of California's 58 counties. NOA is most prevalent in the eastern portion of the county; however, when airborne, it can become a risk for the entire county. The Air Quality Management District is responsible for enforcing state regulations regarding NOA in Mendocino County. Additionally, in 2003 the Natural Resources Conservation Service, the Mendocino County Department of Transportation, and Mendocino County GIS worked to develop a map of the areas in the County with a high probability of encountering serpentine or ultramafic rock formation. Consequently, additional mapping has been completed to track the possible presence of NOA; in 2005, the Mendocino County Air Quality Management District developed a map illustrating areas of concern, and in 2008, the USDA Forest Service released a map of the areas more likely to contain NOA for the Mendocino National Forest. (*Id.*) Figure 4-49 depicts areas where NOA has been found in the County and areas of concern for NOA within the County.

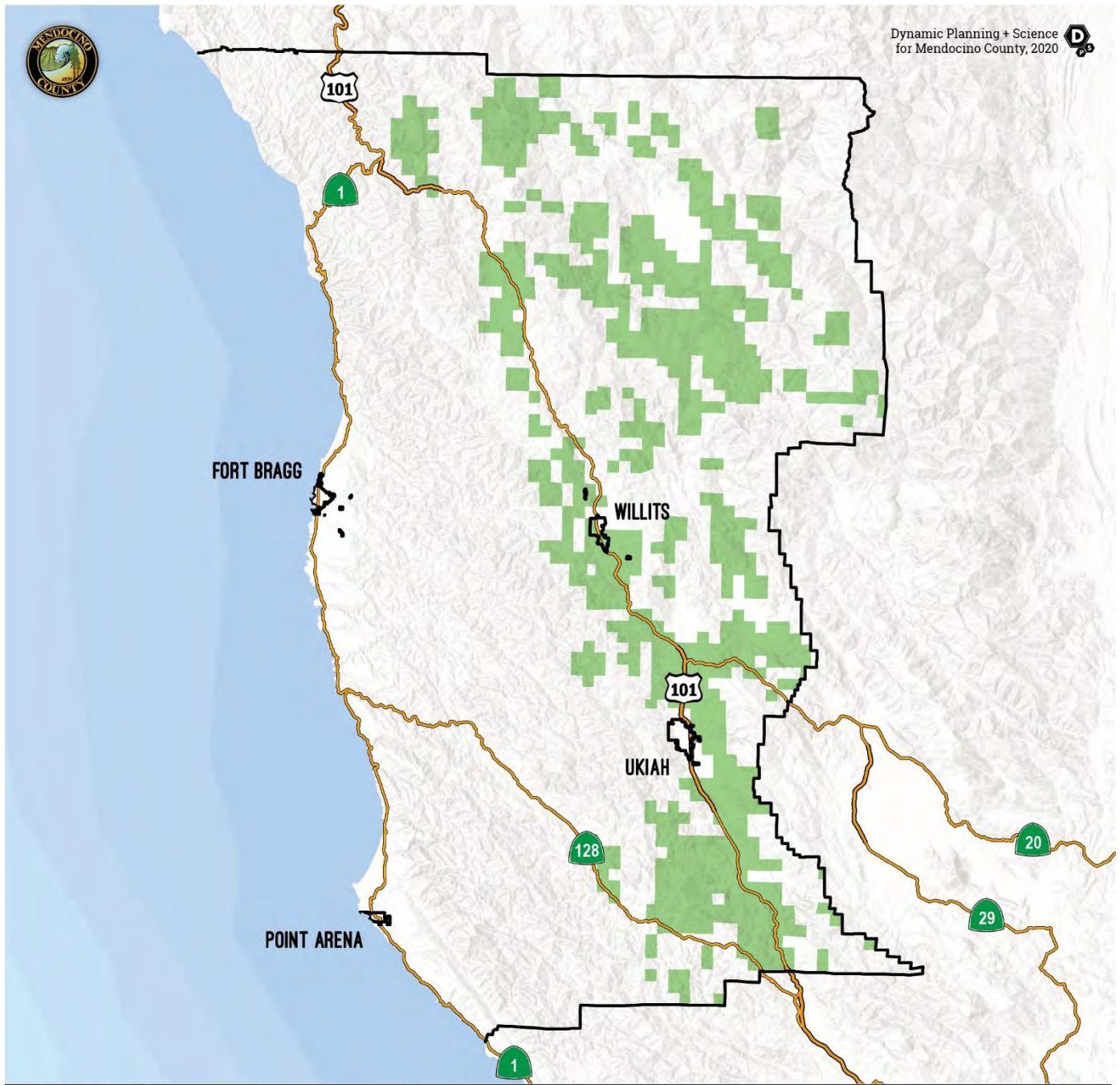
Erosion: Areas susceptible to erosion occur throughout the County, where surface soils possess low-density and low-strength properties. Erosion is generally located along coastal beaches, areas along surface waters, areas that have recently experienced the effects of wildfires, and it is also associated with landslides which occur in areas of the County with steep inclines, generally more inland. (Mendocino County, 2008)

4.5.9.4 Frequency/ Probability of Future Occurrences

Naturally occurring asbestos is present in Mendocino County and will continue to be. Since naturally occurring asbestos by definition is naturally occurring the County cannot control the presence of NOA, but the County can work to reduce the effects of naturally occurring asbestos. A variety of regulations have been put into place to reduce exposure to naturally occurring asbestos and to protect those when there is a potential for exposure. An example of naturally occurring asbestos mitigation includes covering asbestos-containing soils and slopes with dirt, grass or concrete, as appropriate for a site, as well as preventing dust emissions by wetting all soils at a site and those being brought to the site. There is a 100 percent chance that naturally occurring asbestos will continue to be present in Mendocino County; however, the effect of naturally occurring asbestos on the County is unknown due to the variety of factors involved in determining the effect of naturally occurring asbestos exposure.



Dynamic Planning + Science
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NATURALLY OCCURRING ASBESTOS MENDOCINO COUNTY

*Data sources: MCAQMD.

MAP LEGEND

NATURALLY OCCURRING ASBESTOS

Figure 4-49: Naturally Occurring Asbestos



Erosion: Climate change has resulted in sea-level rise which is contributing to coastal erosion throughout California. It will also create a variance in terms of frequency and intensity of rainfall which also causes erosion, and which consequently results in the increased sedimentation of rivers, lakes, and streams. These changes have already been observed. While the impacts of climate change are predicted to increase regionally, the ability to predict their rate of occurrence at local scales is still limited. (United States Environmental Protection Agency, 2016)

4.5.9.5 Severity and Extent

Naturally Occurring Asbestos: If asbestos fibers are in the air, it is possible for the asbestos fibers to enter one's lungs. Breathing in the fibers is the primary way that people are exposed to asbestos. Asbestos fibers may remain in the lungs for a lifetime. In some cases, the fibers might damage the lungs or the membranes that cover the lungs, leading to illness and even death. Most people do not show signs or symptoms of asbestos-related disease until 10 to 20 years or more after they were exposed. (Mendocino County MJHMP, 2014)

Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present. (*Id.*) Figure 4-48 depicts a naturally occurring asbestos formation.

Erosion: Erosion can be a hazard for development, especially for construction near slopes with steep inclines. The greater the slope, the greater the erosion hazard, especially if the soil is bare. Most of the County has only a slight erosion hazard (slopes less than 9 percent), except for Redvine soils, which have a moderate hazard. Soils on 9 percent slopes and greater have a moderate erosion hazard, and soils on slopes greater than 15 percent have a high erosion hazard.

4.5.9.6 Secondary Hazards

Naturally Occurring Asbestos: There are no significant secondary hazards associated with asbestos. Secondary exposure to asbestos causes the same effects as primary exposure.

Erosion: Secondary hazards from erosion can include sedimentation and poor site construction conditions.



4.5.9.7 Soil Hazard Vulnerability Assessment

This soil hazard vulnerability assessment considers both naturally occurring asbestos and erosion. Naturally occurring asbestos has delineated hazard boundaries and quantifiable exposure and damage estimations, and thus tables and snapshot summary maps are included for this subhazard.

4.5.9.7.1 Population

Soil hazards pose a threat to the population of Mendocino County. Asbestos occurring near residential areas threatens the populations that live in those areas. Table 4-71 displays the potential population exposure to naturally occurring asbestos in the unincorporated county. Figure 4-50 displays an accompanying visual of population exposure summaries.

Population throughout Mendocino County may be vulnerable to erosion. The primary county vulnerability comes from coastal erosion along shorelines, in particular along bluffs. Dune erosion is projected to increase in the future due to climate change and sea level rise. 1.4 meters of sea level rise may produce 8.3 miles of erosion in Mendocino County, which leaves 930 people vulnerable to erosion under such a scenario. (Cal. Climate Change Center, 2009, pp. 83-84)

Table 4-71: Population Exposure to Naturally Occurring Asbestos (Unincorporated County)

		Total Population
Unincorporated Mendocino County		58,995

Naturally Occurring Asbestos Area	Population Count	% of Total
Within Risk Zone	20,571	34.87%

4.5.9.7.1 Property

This Section calculates the assets at risk of naturally occurring asbestos in those severity zones. See Table 4-72 that utilizes County parcel information to calculate exposure. In some cases, a parcel will be within multiple zones, and for this exercise every parcel with a square footage value greater than zero was developed in some way. Only improved parcels were analyzed.

Property in Mendocino County may also be vulnerable to erosion. In general, coastal erosion presents more vulnerability. Because much of the County is protected shoreline, there is no data available on the private property impacts from future coastal erosion. Anecdotally, the City of Point Arena experiences impacts to private commercial properties at Arena Cove from coastal erosion and sea level rise, as highlighted in Volume 2.



Table 4-72: Imp. Parcels and Content w/i Nat. Occurring Asbestos Areas (Uninc. Co.)

	Total Parcels	Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)
Unincorporated County	24,371	\$ 4,544,212,021	\$ 2,693,943,855	\$ 7,238,155,876

Naturally Occurring Asbestos Area	Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
Within Risk Zone	7,721	31.7%	\$ 1,444,250,947	\$ 909,637,874	\$ 2,353,888,821	32.5%

4.5.9.7.1 Critical Facilities

Critical facilities can be affected by asbestos and erosion. The indirect effects of asbestos would compromise the health of those responsible for operating and maintaining critical facilities. Table 4-73 and Table 4-74 both display critical infrastructure located in areas with known naturally occurring asbestos.

Erosion can limit the ability of roads to serve as conduits to critical facilities. It can also compromise the facilities themselves if they are built on areas susceptible to it. In Mendocino County, 13 miles of highway are vulnerable to future erosion impacts from a 1.4 m sea level rise along the Pacific Coast. 25 miles of other roads are vulnerable and no railways are vulnerable. (Cal. Climate Change Center, 2009, p. 85)

Table 4-73: Critical Facility Exposure to Naturally Occurring Asbestos Areas (Unincorporated County)

Critical Infrastructure - Naturally Occurring Asbestos Area	
Infrastructure Type	Within Risk Zone
Essential Facility	20
EOC	-
Fire Station	15
Law Enforcement	2
Medical Facility	3
High Potential Loss	116
Adult Residential Facility	3
Alternative Education Program	-
Animal Control	-
Child Care Center	7
Communication Tower	22
Community Center	2
Courthouse	-
Dam	16
Detention Center	-
Fairground	-
Family Child Care Home	1



Critical Infrastructure - Naturally Occurring Asbestos Area

Infrastructure Type	Within Risk Zone
Foster Family Agency	-
Historic Building	1
Historic Site	-
Library	-
Museum	-
Office	4
Park and Recreation	2
Power Plant	9
Real Property Asset*	14
Residential Child Care	-
Residential Elder Care Facility	-
School	27
Shop	2
Storage	6
Wastewater Treatment	-
Transportation and Lifeline	109
Airport	-
Bridge	100
Bus Facility	-
Corp Yard	1
NG Station	-
Substation	6
Transfer Station	2
Hazmat	6
Hazmat	6
Grand Total	251



**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*

Table 4-74: Lifelines in Naturally Occurring Asbestos Areas (Unincorporated County)

Lifelines (miles) - Naturally Occurring Asbestos Area	
Infrastructure Type (Linear)	Within Risk Zone
Levee	2.6
NG Pipeline	33.1
Railroad	60.6
Street	1,476.3
<i>4WD trail</i>	194.5
<i>4WD trail, major</i>	6.1
<i>Alley</i>	-
<i>Cul-de-sac</i>	0.5
<i>Driveway</i>	79.2
<i>Interstate</i>	19.3
<i>Local road</i>	952.7
<i>Local road, major</i>	19.6
<i>Primary highway</i>	75.0
<i>Ramp</i>	6.2
<i>Road, parking area</i>	0.5
<i>State/county highway</i>	122.1
<i>Thoroughfare, major</i>	0.7
<i>Traffic circle</i>	-
<i>Walkway</i>	-
Transmission Line	140.8
Grand Total	1,713.3



NATURALLY OCCURRING ASBESTOS SNAPSHOT

MENDOCINO COUNTY

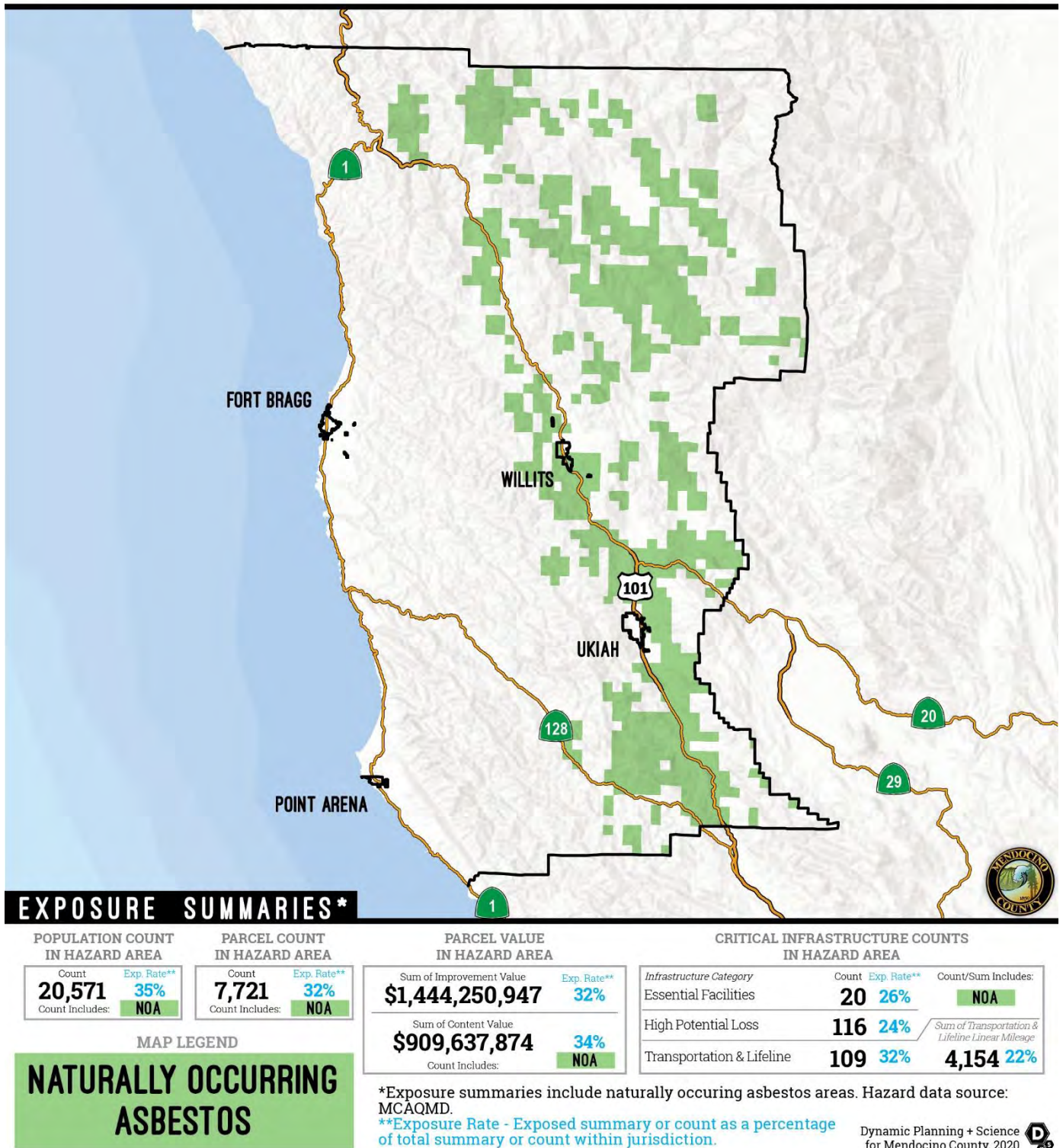


Figure 4-50: Naturally Occurring Asbestos Exposure & Vulnerability and Snapshot Map



4.5.9.8 Future Trends in Development

Naturally occurring asbestos: Future development has the potential to increase asbestos and erosion related issues in Mendocino County. Asbestos in and of itself will increase as a hazard threat; however, as population increases in the county, new residential developments might be located nearer to areas with higher concentrations of naturally occurring asbestos. It is thus important to ensure new development occurs with due consideration of these areas. The Mendocino County General Plan acknowledges asbestos issues throughout Mendocino County, and the County currently permits grading and excavation activities to ensure those activities take proper precautions around naturally occurring asbestos areas.

Erosion: Similarly, the County is well-poised to prevent and mitigate development occurring in highly erodible areas through its General Plan and Code. The County and coastal jurisdictions continue to prepare for predicted and experienced increased coastal erosion in key areas such as Arena Cove in Point Arena.

4.5.9.9 Soil Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Agricultural disaster hazard problem statements are listed in Table 4-75; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee in understand the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-6 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-75 and Table 5-6.

Table 4-75 Ag Disaster Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-SH-MC-49	Soil Hazard	Impact	PRV - Prevention , NRP - Natural Resource Protection	Mendocino County	Areas with natural occurring asbestos presents challenges for construction that involves disturbance of soil	ma-SH-MC-206
ps-SH-MC-50	Soil Hazard	Impact	PRV - Prevention , NRP - Natural Resource Protection	Mendocino County	Coastal erosion can impact infrastructure and buildings located in coastal areas of the County	ma-SH-MC-226



4.5.10 Wildfire Hazard Profile

A wildfire is any uncontrolled fire occurring on undeveloped land that requires fire suppression. Wildfires can be ignited by lightning or by human activity such as smoking, campfires, equipment use, and arson. The 2018 California State Hazard Mitigation Plan defines wildfires as:



any free-burning vegetative fire that initiates from an unplanned ignition, whether natural (e.g., lightning) or human-caused (e.g., powerlines, mechanical equipment, escaped prescribed fires), where the management objective is full suppression. (California Office of Emergency Services, 2018, p. 507)

Wildfires are costly, putting lives and property at risk and compromising rivers and watersheds, open space, timber, range, recreational opportunities, wildlife habitats, endangered species, historic and cultural assets, scenic assets, and local economies. Vulnerability to flooding increases due to the destruction of forest and ground cover within watersheds. The potential for significant damage to life and property increases in areas where development is adjacent to densely vegetated areas, known as wildland-urban interface (WUI) areas. (FEMA, 2020)

While some fires are allowed to burn naturally in order to maintain or restore the health of forest lands, out of control wildfires, need to be prevented through cooperative, community, and land management planning. (United States Forest Service, n.d.)

4.5.10.1 Local Conditions Relating to Wildfire

Mendocino County is bounded by the Pacific Ocean to the west, Sonoma County to the south, Lake County to the southeast and east, Glenn and Tehama Counties to the east and northeast, Trinity County to the north and east, and Humboldt County to the north. The borders with Glenn and Tehama Counties are completely within the Mendocino National Forest in the county's northeastern portion. Jackson State Forest extends throughout all of the western portion of the County. The County possesses many vegetative fuel types including grass, oak woodlands, brush, mixed chaparral, timber, and cut-over slash. Brush consists primarily of chamise on the south and west-facing slopes and mixed chaparral on the north and east-facing slopes. (Mendocino Fire Safe Council, 2019)

Mendocino County has dry summers where little to no rain falls from early June through late October. The weather can also vary greatly between different portions of the County on the same day. Additionally, when the Sacramento Valley experiences warmer temperatures, deeper fog intrudes from the ocean up the coastal drainages, and the inland valleys become windier. The County experiences 40 to 100 inches of annual rainfall, depending on the location, elevation, and weather patterns, and the declared fire season in Mendocino County typically lasts from early June to mid or late October. The fire season is a time of increased risk of conflagration to residential and other development within the County. Conflagration is an extensive fire that destroys a great deal of land or property. The hilly and mountainous terrain on the



east and west side of the Central Valley strongly influences both wildland fire behavior and fire suppression capabilities. (*Id.*)

Wind is also a significant factor in the spread of fire, as fires spread faster, and burning embers are carried with the wind to adjacent exposed areas. In densely-populated areas, flying ember production is the principal driver of wildfire. A related concern in built-out areas is the relative density of vegetative fuels that can serve as sites for new spot fires within the urban core and spread to adjacent structures. (*Id.*)

4.5.10.1.1 Sudden Oak Death

The County is also at risk of increased wildfire due to what is referred to as sudden oak death. Sudden oak death is caused by *Phytophthora ramorum*, a pathogen, which has been responsible for massive die-offs of true oak (*Quercus* spp.) and tanoak (*Lithocarpus densiflorus*) in coastal regions of both California and Oregon. These die-offs become a source of fuel and have consequently become an increasing concern for their potential to increase fire intensity throughout the region. (Yana S. Valachovic et al., 2011) Climate change, more frequent droughts, and pathogen exposure are all necessary risks to consider when taking a proactive approach to ensuring long-term oak health and mitigating wildfire risk.

4.5.10.1.2 Human-caused Wildfires and Urban Conflagration

One of the primary causes of wildfire ignition are humans. Nearly 85% of wildland fires in the United States are caused by humans. Human-caused fires can be caused by campfires that are left unattended, equipment use and malfunction, intentional acts of arson, and carelessly discarded cigarettes. (National Park Service, 2018)

Conflagration is typically characterized as a fire that occurs in the built environment, beginning with one structure and quickly spreading to many more. It can be caused by criminal acts such as illegal explosives, or civil unrest, or residential accidents such as improper user of electrical and heating appliance, by industrial accidents such as transportation accidents, or acts of nature such as lightning. Within Mendocino County, the cities of Fort Bragg, Point Arena, Ukiah, and Willits do not have a significant history of urban conflagration. Fires within these urban areas have for the most part been quickly contained. However, the 1906 earthquake resulted in a fire that threatened the entire City of Fort Bragg. The fire downtown burned the entire block bordered by Franklin, Redwood, and McPherson streets, plus the west side of Franklin. The west Franklin block burned down to approximately one half a block beyond the intersection of Redwood and Franklin. (Mendocino 2014 MJHMP, 2014) Many jurisdictions in Mendocino County to have historic, dense, wood-built downtowns that are susceptible to conflagration events. Since this Hazard Mitigation Plan focuses on natural hazards, urban conflagration is not profiled.



4.5.10.1.3 Lightning

While humans cause the vast majority of wildfires, lightning-triggered wildfires burn about 60% of all acreage. (Climate Central, 2013) Climate change is predicted to increase the occurrence of lightning as much as 12 percent per every degree Celsius (about 2°F) rise in global temperatures, which could be as much as a 50 percent increase in lightning by the end of the century. (Thompson, 2014) This prediction is a blanket average increase across the continental United States; increases could be higher or lower depending on the distribution of increases over seasons or geographically. (*Id*)

4.5.10.1.4 Wildland-urban interface

Human-caused wildfires are often prevalent in the wildland-urban interface (WUI). As development in many places in California has encroached on wildlands, wildfire risks have increased. Forests and grasslands are located throughout Mendocino County, side by side with residences and small communities. Even some of the more urban areas, such as of the lands surrounding Ukiah, are at risk from wildland fires. The potential fire hazard is exacerbated by the hot, dry summers typically experienced throughout most of the county and by the mountainous terrain. (Mendocino County General Plan, 2009) These are boundary areas where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels. (National Wildfire Coordinating Group, n.d.)

4.5.10.1.5 De-energization/ PSPS Events

Recent wildfire events have been linked to faulty electric transmission equipment, which in turn has led to public safety power shutoffs (PSPS), also referred to as de-energization. (California Public Utilities Commission, 2020) Pacific Gas and Energy (PG&E) reached a 13.5 billion dollar settlement and pled guilty to 84 counts of manslaughter as its transmission facilities sparked wine country blazes in 2017 and the fire that nearly destroyed the town of Paradise in 2018. (Blume, 2019) In order to avoid these catastrophic wildfire events, electric utility companies have started massive, and preemptive power shutoffs in high wind events to avoid sparking fires. This leaves communities and essential facilities without power, a particular challenge in preparing for and responding to hazard events and assisting vulnerable populations. (California Public Utilities Commission, 2020, p. 5) The increased frequency of PSPS events has renewed focus addressing the loss of power in hazard mitigation in Mendocino County as well as around the state.



4.5.10.2 Plans, Policies, and Regulatory Environment

Wildfire Protection Responsibility in California

Local, state, tribal, and federal organizations all have legal and financial responsibility for wildfire protection. In many instances, two fire organizations have dual primary responsibility on the same parcel of land—one for wildfire protection and the other for structural fire protection. To address wildfire jurisdiction responsibilities, in 1981 the California State Legislature outlined various wildfire responsibilities, described below, in Cal. Pub. Res. Code § 4291.5 and Cal. Health & Safety Code § 13108.5:

- **Federal Responsibility Areas (FRAs)**—FRAs are fire-prone wildland areas that are owned or managed by a federal agency such as the U.S. Forest Service, National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, or U.S. Department of Defense. Primary financial and rule-making jurisdiction authority rests with the federal land agency. In many instances, FRAs are interspersed with private land ownership or leases. Fire protection for developed private property is usually the responsibility of the relevant local government agency, not the relevant federal land management agency.
- **State Responsibility Areas (SRAs)**—SRAs are lands in California where the California Department of Forestry and Fire Protection (CAL FIRE) has legal and financial responsibility for wildfire protection. CAL FIRE administers fire hazard classifications and building standard regulations in these areas. SRAs are defined as lands that:
 - o are in the unincorporated county areas,
 - o are not federally-owned,
 - o have wildland vegetation cover rather than agricultural or ornamental plants,
 - o have row crops or seasonal crops, or
 - o have watershed, range, or forage values.

CAL FIRE adopts SRA boundaries and updates them every 5 years. Where SRAs contain structures or development, the relevant local government agencies have fire protection responsibility for those improvements.

- **Local Responsibility Areas (LRAs)**—LRAs include land in cities, cultivated agriculture lands, unincorporated non-flammable areas, and lands that do not meet the criteria for SRA or FRA. LRA fire protection is typically provided by city or county fire departments, fire protection districts, or by CAL FIRE under contract to local governments. LRAs may still include areas of flammable vegetation and WUI.

In 2012, as part of local General Plan requirements, California began requiring local governments in State Responsibility Areas (SRAs) and Very High Fire Hazard Severity Zones (VHFHSZ) to:

- Update their general plan safety elements to recognize specific wildfire risks in such areas,
- Adopt special findings when approving subdivisions in such areas, and



- Use wildfire safety guidelines and California Environmental Quality Act (CEQA) initial study wildfire hazards checklist updates issued by the Governor's Office of Planning and Research (OPR) when those become available. Cal. Gov. Code § 65040.20 and § 65302.5.

For further information on the details and implications of these Safety Element requirements, see Progress Summaries 3.F and 8.A of the 2018 California State Hazard Mitigation Plan.

CAL FIRE/ Mendocino County Cooperative Fire Protection Agreement

Since the 1940s, local government entities such as cities, counties and districts have contracted with CAL FIRE to provide many forms of emergency services for their communities. CAL FIRE provides full-service fire protection to many of the citizens of California through the administration of 145 cooperative fire protection agreements in 33 of the State's 58 counties, 30 cities, 32 fire districts and 25 other special districts and service areas. As a full-service fire department CAL FIRE responds to wildland fires, structure fires, floods, hazardous material spills, swift water rescues, civil disturbances, earthquakes, and medical emergencies of all kinds. Mendocino County and Ukiah have Cooperative Fire Protection Agreements with CAL FIRE.

Healthy Forests Restoration Act (2003)

The federal Healthy Forests Restoration Act (HFRA) appropriates funding to address five main sub-categories of the National Fire Plan (NFP): preparedness, suppression, reduction of hazardous fuels, burned-area rehabilitation, and state and local assistance to firefighters. Mendocino County Community WPPs have integrated these sub-categories through the following four best practices:

1. identifying and prioritizing fuels reduction opportunities across the landscape
2. addressing structural ignitability
3. assessing community fire suppression capabilities
4. collaborating with stakeholders

California Fire Code (2019)

Mendocino County has adopted the 2019 Edition of the California Fire Code to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Section (§18.04.025) of the Mendocino County Code applies the 2019 California Fire Code, which describes what is required for a Fire Protection Plan, applicable to all new development within the Wildland-Urban Interface Fire Area. It stipulates that such a plan addresses water supply, access, fire resistance of buildings, fire protection systems and equipment, defensible space, and vegetation management.

California Building Code (2019)

The 2019 California Building Code, adopted by the County in 2020, includes materials and construction methods for exterior wildfire exposure and standards of quality for fire-resistant buildings. See Cal. Building Codes, Chapter 7a (2019).



Title 24 California Code of Regulations

The California Building Standards Code, Title 24, which incorporates the California Fire Code, is adopted every three years by order of the California Legislature with supplements published in intervening years. Title 24 mandates specific requirements for new building construction placing strong emphasis on proper address signage, apparatus access, water requirements, and defensible space.

California Code, Public Resources Code § 4290

These regulations became effective in September of 1991. They require the future design and construction of structures, subdivisions and developments in SRA to provide, for basic emergency access and perimeter, wildfire protection measures. These measures provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification.

California Code, Public Resources Code § 4291

These regulations require property owners in mountainous areas, forest-covered lands, or any land that is covered with flammable material to create at minimum a 100-foot defensible space (or to the property line) around their homes and other structures.

Mendocino County Community Wildfire Protection Plan

The Mendocino County Community Wildfire Protection Plan was collaboratively developed in order to identify and prioritize areas for hazardous fuel reduction treatments. It recommends the types and methods of treatment that will protect Mendocino County, and it recommends measures to reduce the ignitability of structures throughout the area addressed by the plan. The plan was updated in 2015.

Mendocino County Fire Vulnerability Assessment & Emergency Evacuation Preparedness Plan (2020)

The Mendocino County Fire Vulnerability Assessment and Emergency Evacuation Preparedness Plan includes three components: the Fire Vulnerability Assessment, the Public Outreach Plan, and the Evacuation Plan. The Vulnerability Assessment identifies high fire risk areas in the County. It reviews existing adaptation methods and actions for remedying wildfire vulnerabilities, and it recommends specific mitigation strategies for dealing with wildfire vulnerabilities. The Evacuation Plan describes strategies for managing evacuations relating to wildland fire threats. The Public Outreach Plan serves as an opportunity for public input, and it identifies ways for educating local communities about fire safety and emergency evacuation.

Mendocino County General Plan

The 2009 Mendocino County General Plan includes the following goals and policies in the Development Element and Resource Element to mitigate the effects of wildfires:

Resource Element

Policy RM-82: Promote the conservation and use of native species or drought-tolerant, fire resistive and noninvasive vegetation.



Policy RM-83: In rural areas, promote vegetation and landscape management programs that protect wildlife and livestock habitat, discourage pest species and non-native species, reduce wildfire risk, and conserve water resources.

Development Element

Goal DE-25 (Fire): To protect life, property and natural resources by ensuring that development is compatible with fire protection capabilities.

Policy DE-212: The General Plan Land Use and zoning maps shall limit development potential commensurate with wildland fire hazards.

Policy DE-213: Development, densities, intensities, and type shall be consistent with the state wildfire hazard rating system and Fire Safe Guidelines (addressing weather, fuel and slope, access, water and other factors).

Policy DE-214: The County shall deny development proposals that present substantial fire hazard risk to residents and safety providers responding to a wildland fire.

Action Item DE-214.1: Work with CalFire to administer the Fire Safe Guidelines and fire protection programs for State Responsibility Areas and development interfaces.

Policy DE-215: Development shall be located, designed and managed to reduce fire risk to life, property and natural resources, and incorporate adequate fire protection consistent with the General Plan and adopted regulations.

Policy DE-216: Development shall facilitate and integrate the ability for fire protection agencies to access and maintain fuel and firebreaks, water supplies, and emergency access routes.

Policy DE-217: New development in State Responsibility Areas and urban/rural interfaces should incorporate:

- Fuelbreaks or greenbelts coordinated with water supplies and access providing maximum circulation consistent with topography.
- Adequate and accessible defensible space.
- At least two ingress-egress routes to a public roadway, unless alternative routes accessible to fire equipment are provided.
- Access to publicly maintained evacuation routes at regular intervals.
- Access routes sufficient to accommodate evacuating vehicles, fire equipment and vegetation management zones.
- Primary traffic lanes to all building sites with turnarounds to accommodate fire equipment.
- Water supplies within short distance of fire equipment access.
- Fire flows with adequate duration.
- Develop fire safe plans for communities to assist in qualifying for grants.



Policy DE-218: The County supports effective and economically viable fire protection and emergency response provided by fire protection agencies.

Policy DE-219: Encourage fire protection districts to determine and report capabilities to adequately serve existing and potential development.

Policy DE-220: Developments shall be approved only if sufficient fire fighting resources, such as fire stations, equipment, personnel, hydrants and water supplies, will be available to serve all phases of development.

Action Item DE-220.1: Work with fire protection organizations to achieve funding stability necessary to maintain adequate staffing, facilities and equipment.

Action Item DE-220.2: Collaborate with fire protection authorities, land managers, private landowners, and others to improve fire management strategies for reducing the impacts of wildfires on forest and watershed ecosystems.

Action Item DE-220.3: Work with fire protection providers (i.e., CalFire, U.S. Forest Service, local fire protection districts, and cities) to ensure development is compatible with fire protection capabilities.

Policy DE-223: Encourage the Air Quality Management District to coordinate with CalFire when providing public information about "burn" or "no burn" days.

Fire Protection Features in Mendocino County Code, §17-64

The Mendocino County Code aids in reducing fire risks by ensuring the provision of protection features including access roads, fire breaks, and accessibility to sufficient and available water. These protection features are provided with the approval from a qualified fire officer.

Fire Hazard-Development Standards in Mendocino County Code, §20.500.025

The California Department of Forestry's Fire Hazard Severity Classification System is used to identify hazard areas. The Fire Hazard Severity Classification System categorizes hazards into moderate, high, or extreme hazard classifications. The Fire Hazard Development Standards also provide land use restrictions which stipulate that all new development shall be sited taking into consideration the fire hazard severity of the site, the type of development and the risk added by the development to the fire hazard risk. Areas of extreme risk should be avoided, where feasible, for development except agricultural and open space uses.



4.5.10.3 Past Events

There are four major factors that contribute to historic wildfire events:

1. Extreme vegetation diversity
2. Diverse fire weather and fire behavior
3. Dynamic fire history
4. Complex land use patterns

From 2002-2018, there were 27 wildfires in Mendocino County, some of which overlapped with neighboring counties, each burning over 1,000 respective acres in the region. These events are listed in Table 4-76 and displayed in Figure 4-52.

Table 4-76: Fire Perimeter Sizes and Dates (1000 Acres or Greater 2000-2018)

Date	Name	Size in Acres
2002	Pine	1,024
2006	Noble	1,014
2006	Hunter	13,477
2008	Lost Pipe	1,187
2008	Low Gap	1,347
2008	Jack Smith	1,538
2008	Monkey Rock	1,849
2008	Navarro	1,901
2008	Middle	2,067
2008	Indian	2,096
2008	Butch	2,367
2008	Big	2,490
2008	Mill	3,042
2008	Orr Series	3,416
2008	Mallo Series	4,466
2008	Cliff	4,658
2008	Cowshed Series	4,992
2008	Hardy Series	5,354
2008	Sugarloaf	7,079
2008	Red Mountain Series	7,513
2012	Scotts	4,509
2012	Pass	4,804
2012	North Pass	41,818
2014	Lodge Complex	12,533
2017	Redwood Valley Incident	36,523
2018	River	48,920
2018	Ranch	410,202

Source: California Fire, Incident Database



Recent Large Wildfire Events

August Complex Fire (2020)

The August Complex Fire has made State history as the largest fire on record. As of September 2020, it has burned approximately 859,966 acres in both Mendocino and Humboldt Counties. The August Complex Fire started on August 16th, 2020 during a series of lightning strikes which ignited portions of the Mendocino National Forest. As of September 2020, the fire has only been 39% contained. (CAL FIRE, 2020)

Mendocino Fire Complex (2018)

The Mendocino Fire Complex was a recent large event in Mendocino County that occurred near Clear Lake in 2018. An investigation revealed that the fire began as a result of a spark or hot metal fragment from a hammer, which was being used to drive a metal stake into the ground. Ultimately, the Mendocino Fire Complex consumed over 459,123 acres and destroyed more than 280 structures. It was the most devastating fire in Mendocino County history, until the more recent August Complex Fire, and was California's largest wildfire in modern history. (Insurance Information Institute, 2020)

Redwood Valley Fire (2017)

The Redwood Valley Fire was started on October 8, 2017, by trees falling on powerlines. The fire destroyed about a fourth of the homes in the rural community between Ukiah and Willits as it burned through Redwood Valley. It burned a total of 36,523 acres and was contained on October 26, 2017. (San Francisco Chronicle, 2020)



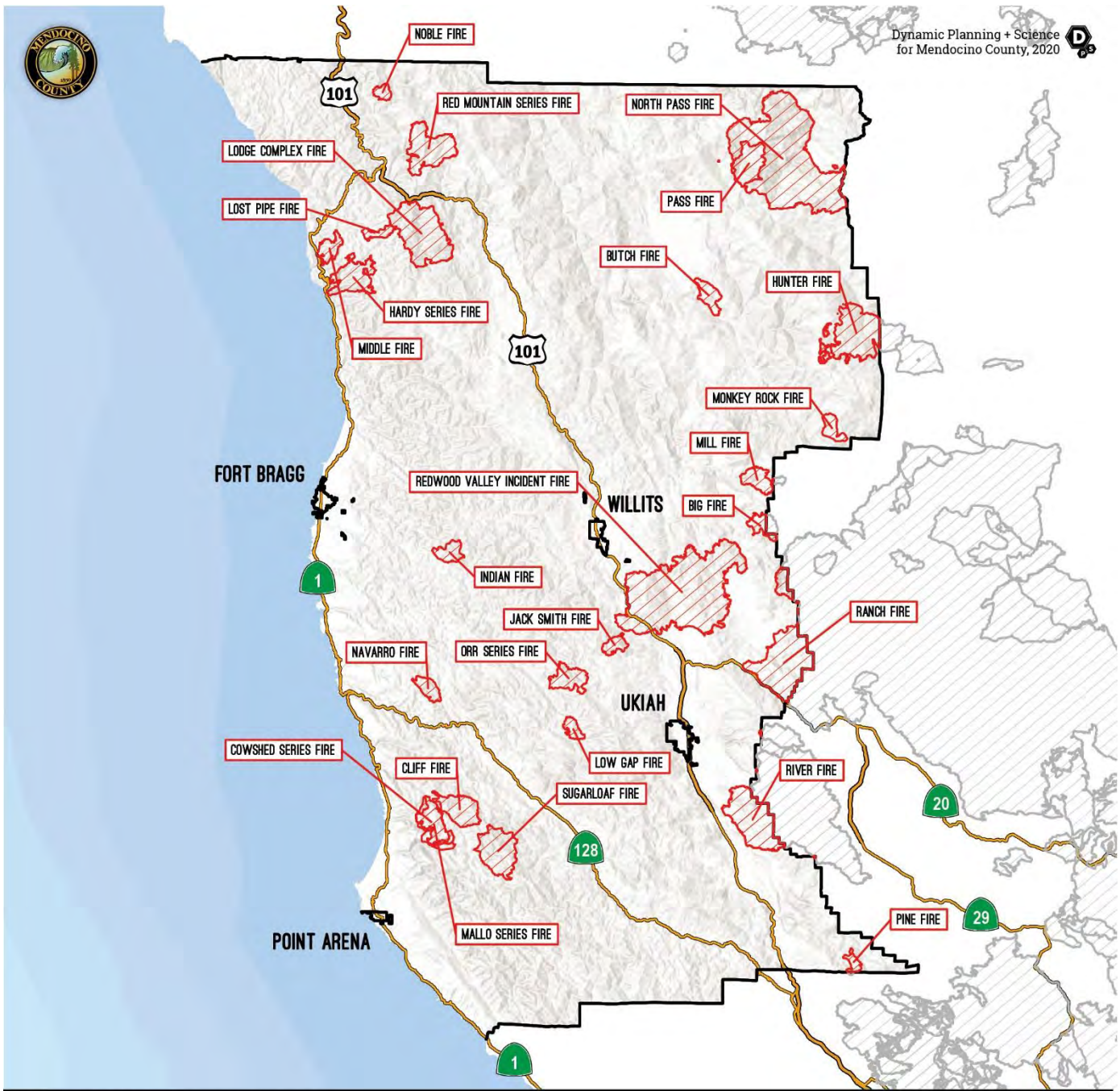
Figure 4-51: 2018 Mendocino Fire Complex

Photo: Mark McKenna (Patch, August, 2013)

See Figure 4-52 for locations of historic fires.



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HISTORIC LARGE FIRES MENDOCINO COUNTY

*Data sources: NIFC (>1000acres 2000-2019).

MAP LEGEND

— JURISDICTION FIRE PERIMETER

Figure 4-52: Historic Fire Occurrence Map (Fires Greater than 2,000 acres, 2000-2018)



4.5.10.4 Fire Hazard Severity Zones (FHSZs)

The County's hilly areas contain the major wildland fire hazard risks for residential structures and other development, characterized by steep slopes, poor fire suppression delivery access, inadequate water supply, and highly flammable vegetation.

To help better refine areas of wildfire concern, CAL FIRE establishes and maps **Fire Hazard Severity Zones (FHSZ)**, or areas of significant fire hazards based on factors such as fuel, weather, terrain, and the number of days of moderate, high and extreme fire hazard. These zones define the application of various mitigation strategies to reduce the risk associated with wildfires.

The FHSV model inputs frequency of fire weather, ignition patterns, expected rate-of spread, and past fire history. It also accounts for flying ember production based on the area of influence where embers are likely to land and cause ignitions. The FHSZ model also is built from existing data and hazard constructs and thus does not necessarily take into consideration significant land use and structural resiliency. The geography, weather patterns, and vegetation in the planning area provide ideal conditions for recurring wildfires.

See Figure 4-53 and Figure 4-54 for wildfire return intervals and fire severity zones. These maps are the basis for this wildfire risk assessment.

4.5.10.5 Frequency/ Probability of Future Occurrences

Generally, Mendocino County faces a wildland fire threat annually. Fire conditions arise from a combination of hot weather, an accumulation of vegetation, and low moisture content in the air. These conditions, when combined with high winds and years of drought, increase the potential for a wildfire to occur. Urban Wildfires often occur in those areas where development has expanded into the rural areas. A fire along this urban/rural interface can result in major losses of property and structures. Generally, there are three major factors that sustain wildfires and allow for predictions of a given area's potential to burn; fuel, topography, and weather.

Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel is generally classified by type and by volume. Fuel sources are diverse and include everything from dead tree needles and leaves, twigs, and branches to dead standing trees, live trees, brush, and cured grasses. Also, to be considered as a fuel source, are man-made structures and other associated combustibles. The type of prevalent fuel directly influences the behavior of wildfire. Light fuels such as grasses burn quickly and serve as a catalyst for fire spread. The volume of available fuel is described in terms of Fuel Loading. Certain areas in and surrounding Mendocino County are extremely vulnerable to fires as a result of dense grassy vegetation combined with a growing number of structures being built near and within rural lands. (Mendocino Fire Safe Council, 2019)

An area's topography affects its susceptibility to wildfire spread. Fire intensities and rates of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. The natural



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MEAN FIRE RETURN INTERVAL MENDOCINO COUNTY

*Data sources: USGS LANDFIRE.

MAP LEGEND

AVERAGE PERIOD BETWEEN FIRES (YEARS)

0-5
6-10
11-15
16-20
21-25
26-30
31-35
36-40
41-45
46-50
51-60
61-70
71-80
81-90
91-100
101-125
126-150
151-200
201-300
301-500
501-1000
>1000

Figure 4-53: Mean Wildfire Return Intervals

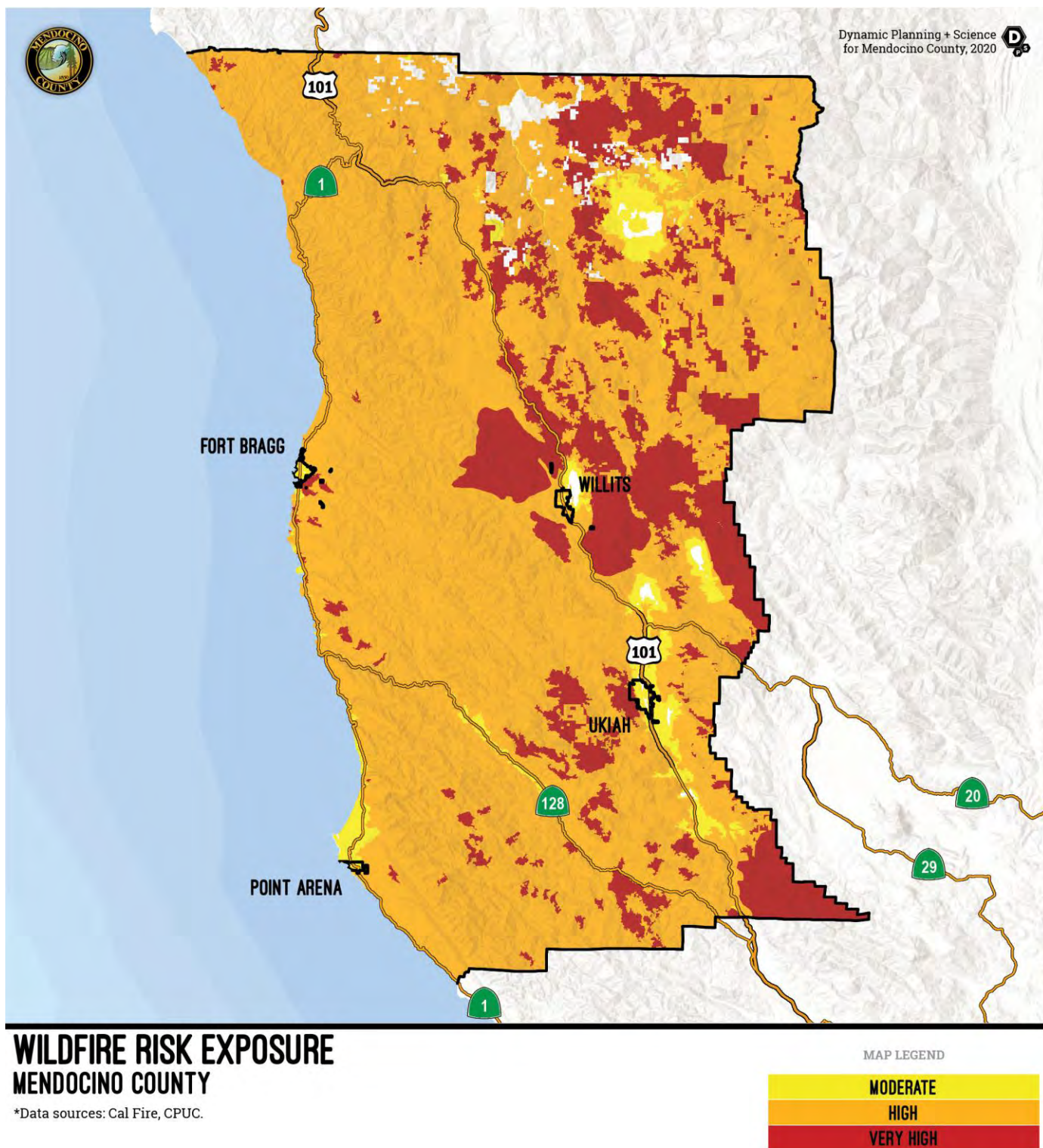


Figure 4-54: Wildfire Risk Exposure



arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes. Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. High temperatures and low relative humidity dry out the fuels that feed the wildfire creating a situation where fuel will more readily ignite and burn more intensely. Wind is the most treacherous weather factor. The greater a wind, the faster a fire will spread, and the more intense it will be. Winds can be significant at times in Mendocino County. In addition to high winds, wind shifts can occur suddenly due to temperature changes or the interaction of wind with topographical features such as slopes or steep hillsides. Related to weather is the issue of recent drought conditions contributing to concerns about wildfire vulnerability. During periods of drought, the threat of wildfire increases. (NOAA, 2018)

The majority of past wildfire events in Mendocino County were in the late summer months (typically June through October). Frequency of wildfire events may increase because of increasingly drier conditions caused by climate change. Fire risk will also continue to grow as more people build in WUI areas, which increases fuel loads and the risk of human-caused fires. (FEMA, 2020)

As seen in Figure 4-52, fire occurrences are the most common in mountainous areas in the eastern portion of Mendocino County. The probability of a wildfire occurring in Mendocino County is highly likely (100% annual chance).

4.5.10.6 Severity and Extent

The severity of the wildland fire hazard is determined by the relationship between three factors: fuel classification, topographic slope, and critical fire weather frequency. Mendocino County has a large amount of wildfire fuels. Critical fire weather conditions occur in periods of low relative humidity, high heat, and high winds.

Smoke and air pollution from wildfires can be a health hazard, especially for sensitive populations including children, the elderly and those with respiratory and cardiovascular diseases. Wildfire may also threaten the health and safety of those fighting the fires. First responders are exposed to the dangers from the initial incident and after-effects from smoke inhalation and heat stroke. In addition, wildfire can lead to ancillary impacts such as landslides in steep ravine areas and flooding due to the impacts of silt in local watersheds.

4.5.10.7 Warning Time

Response time can be rapid and warning time short for wildfires. Wildfires are often caused by humans, intentionally or accidentally. There is no way to predict when one might occur. The Fourth of July can be a time of heightened concern and outreach around wildfires since fireworks can cause fires and usage is high. Dry seasons and droughts greatly increase fire likelihood. Dry lightning may trigger wildfires. Severe weather can be predicted, so special attention can be paid during weather events that may include lightning or wind events. Reliable National Weather Service lightning warnings are available on average 24 to 48 hours prior to a significant electrical storm.



If a fire does break out and spread rapidly, residents may need to evacuate within days or hours. A fire's peak burning period generally is between 1 p.m. and 6 p.m. Once a fire has started, fire alerting is reasonably rapid in most cases. The rapid spread of cellular and two-way radio communications in recent years has contributed to a significant improvement in warning time. (California Fire, 2020)

4.5.10.8 Secondary Hazards

Wildfires can generate a range of secondary effects, which in some cases may cause more widespread and prolonged damage than the fire itself. Fires can cause direct economic losses in the reduction of harvestable timber and indirect economic losses in reduced tourism and commerce. Wildfires cause the contamination of reservoirs, destroy transmission lines, and contribute to flooding. They strip slopes of vegetation, exposing them to greater amounts of runoff, weakening soils, and causing slope failures. Major landslides can occur several years after a wildfire. Most wildfires burn hot and for long durations that can bake soils, especially those high in clay content, thus creating hydrophobic soils that repel water. When it rains in burned areas, more soil washes off the hills and into roads, ditches, and streams and increases flooding. (United States Department of Agriculture, n.d.)

4.5.10.9 Climate Change Impacts

Fire in western ecosystems is determined by climate variability, local topography, and human intervention. Climate change has the potential to affect multiple elements of the wildfire system: fire behavior, ignitions, fire management, and vegetation fuels. Hot, dry spells create the highest fire risk. Drought and increased temperatures intensify wildfire danger by warming and drying out vegetation. Climate change also may increase winds that spread fires. Faster fires are harder to contain, and thus are more likely to expand into residential neighborhoods. (Center for Climate and Energy Solutions, n.d.)

A changing climate is expected to subject forests to increased stress due to drought, disease, invasive species, and insect pests. These stressors are likely to make forests more vulnerable to catastrophic fires. While periodic fires are natural processes and fulfill an important ecological function, catastrophic fire events that cannot be contained or managed can cause serious threats to homes and infrastructure, especially for properties located at the wildland-urban interface.

Moreover, rain events are predicted to become more severe in our changing climate. This could worsen post-rain flood events. (*Id.*) With or without rain, climate change also may bring an increased occurrence of lightning, responsible for a significant amount of wildfires and acreage burned from wildfires, as discussed above in Section 4.5.10.1.3.

It is predicted that Mendocino County will see higher daily temperatures, more heatwaves, increased wildfires, and a diminished snowpack within this century, as a result of climate change. The northwestern portion of Mendocino County is projected to experience an increase in wildfire risk by the year 2085. A low emission scenario projects an increase of 2.7 degrees Fahrenheit while a high emission scenario projects an increase of 4.9 degrees Fahrenheit by the year 2085. (California Department of Public Health, 2017)



4.5.10.10 Wildfire Vulnerability Analysis

This section describes vulnerabilities to wildfire in terms of population, property, and infrastructure. Wildfire population, parcel value, critical facilities and lifeline exposure numbers were generated by overlaying the inventory outlined in Section 4.3 with CalFire Wildfire Hazard Severity Zones. Figure 4-56 shows a snapshot of wildfire vulnerability in Mendocino County. All data sources have a level of accuracy acceptable for planning purposes. Details for each snapshot can be found in this section.

4.5.10.10.1 Population

Smoke and air pollution from wildfires can be a severe health hazard, especially for sensitive populations including children, the elderly, and those with respiratory and cardiovascular diseases. Smoke generated by wildfire contain visible and invisible emissions that contain particulate matter such as soot, tar, water vapor, and minerals; gases such as carbon monoxide, carbon dioxide, and nitrogen oxides; and toxins such as formaldehyde, benzene. Emissions from wildfires depend on the type of fuel, the moisture content of the fuel, the efficiency or temperature of combustion, and the weather. Public health impacts associated with wildfire include difficulty in breathing, odor, and reduction in visibility. First responders likewise are exposed to the dangers from the initial incident and after-effects from smoke inhalation and heat stroke.

Wildfire is of greatest concern to populations residing in the moderate, high and very high fire hazard severity zones. U.S. Census Bureau block data was used to estimate populations within the CAL FIRE identified hazard zones. See Figure 4-56, Figure 4-55, and Table 4-77 for detail on populations residing in wildfire risk areas.



Table 4-77 Populations Exposed to Wildfire Risk (Unincorporated County)

		Total Population
Unincorporated Mendocino County		58,995

Wildfire Severity Zone	Population Count	% of Total
Very High Intensity	9,163	15.53%
High Intensity	33,720	57.16%
Moderate Intensity	14,679	24.88%
Total	57,562	97.57%

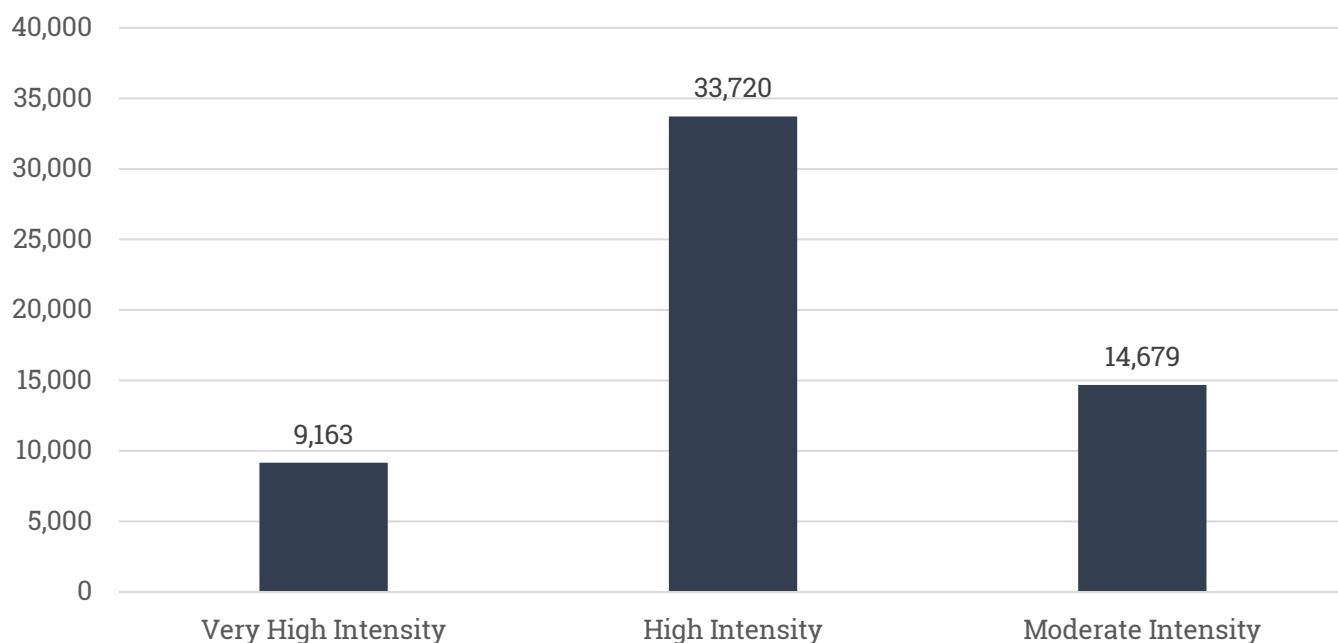


Figure 4-55: Population Exposed to Wildfire Risk



WILDFIRE RISK EXPOSURE SNAPSHOT

MENDOCINO COUNTY

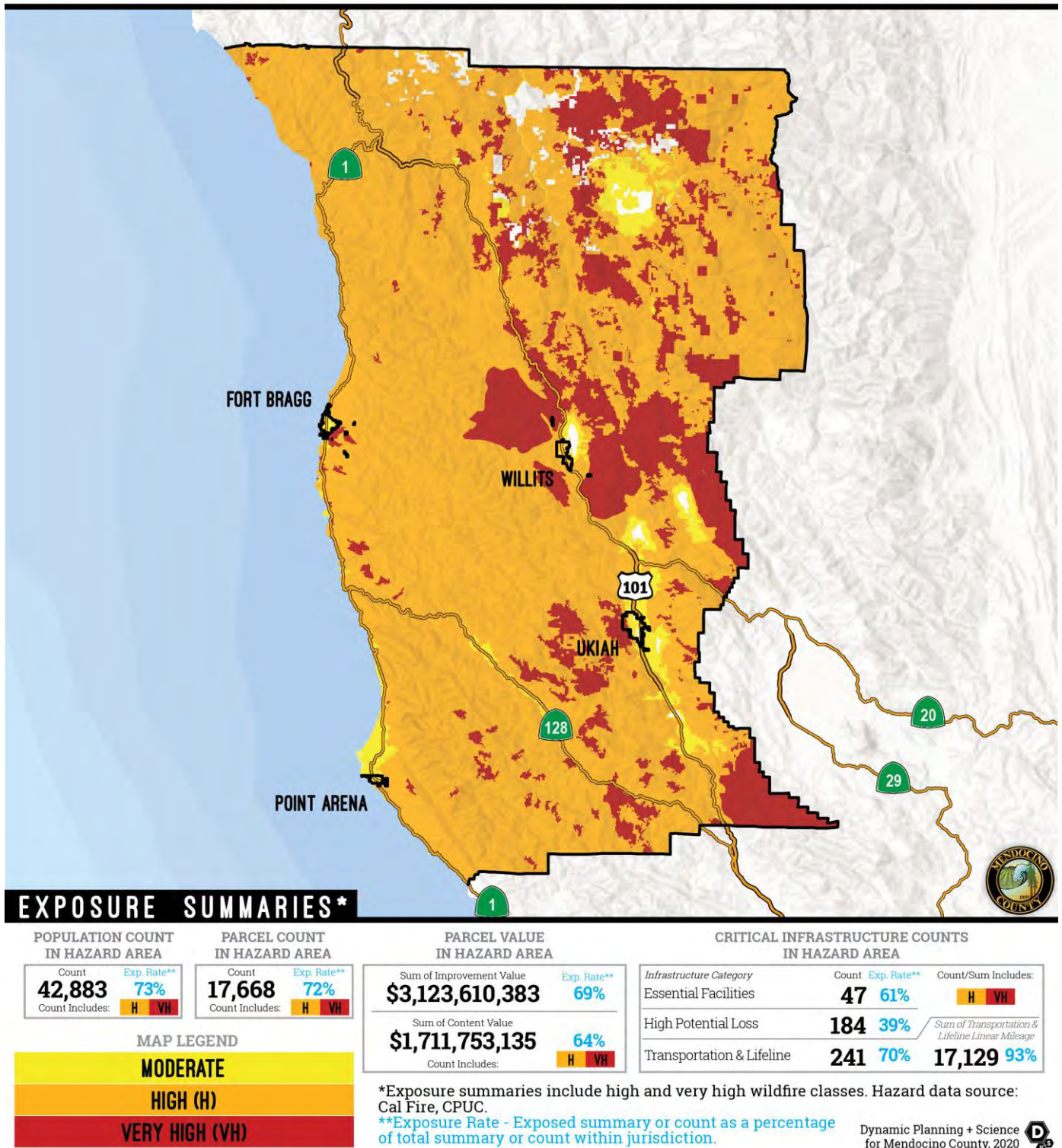


Figure 4-56: Exposure Wildfire Vulnerability and Snapshot Map



4.5.10.10.2 Property

This Section calculates the considerable assets at risk of wildfire in those severity zones. See Table 4-78, which utilizes County parcel information to calculate exposure. In some cases, a parcel will be within multiple fire threat zones, and for this exercise every parcel with a square footage value greater than zero was developed in some way. Only improved parcels were analyzed.

Table 4-78: Improved Parcel and Content within Wildfire Severity Zones (Unincorporated County)

	Total Parcels		Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)	
Unincorporated County	24,371		\$ 4,544,212,021	\$ 2,693,943,855	\$ 7,238,155,876	

Fire Hazard Severity Zone	Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
Very High	3,954	16.2%	\$591,917,815	\$313,396,608	\$905,314,423	12.5%
High	13,714	56.3%	\$2,531,692,568	\$1,398,356,527	\$3,930,049,095	54.3%
Moderate	6,081	25.0%	\$1,315,302,628	\$918,662,698	\$2,233,965,326	30.9%
Total	23,749	97%	\$ 4,438,913,011	\$ 2,630,415,832	\$ 7,069,328,843	97.7%

Critical Facilities and Infrastructure

Critical facilities of wood frame construction are especially vulnerable during wildfire events; power lines are also at risk from wildfire because some poles are made of wood and are susceptible to burning.

In many cases, roads and railroads would not be susceptible to damage except in the worst scenarios, but a wildfire event could create response issues, if affected. Fires can create conditions that block or prevent access and can isolate residents and emergency service providers. Wildfire typically does not have a major direct impact on bridges, but it can create conditions in which bridges are obstructed. Many bridges in areas of high to moderate fire risk are important because they provide the only ingress and egress to large areas and, in some cases, to isolated neighborhoods. Additionally, wildfires may cause the loss of function of cellular phone sites, or cell towers, which can limit emergency services such as tracking and evacuation.

Critical facilities data was overlain with fire hazard severity zone data to determine the type and number of facilities within each risk classification. Table 4-79 lists the critical facilities in wildfire hazard severity zones for Mendocino County, and Table 4-80 similarly lists critical infrastructure.


Table 4-79: Critical Facility Exposure to Wildfire Severity Zones (Unincorporated County)

Critical Infrastructure - Wildfire Severity Zone			
Infrastructure Type	Very High	High	Moderate
Essential Facility	5	42	30
EOC	-	-	1
Fire Station	5	34	19
Law Enforcement	-	3	3
Medical Facility	-	5	7
High Potential Loss	43	141	267
Adult Residential Facility	1	-	3
Alternative Education Program	-	-	-
Animal Control	-	-	-
Child Care Center	-	5	13
Communication Tower	26	51	11
Community Center	-	1	4
Courthouse	-	-	-
Dam	8	16	5
Detention Center	-	-	-
Fairground	-	-	1
Family Child Care Home	-	-	2
Foster Family Agency	-	-	-
Historic Building	-	6	5
Historic Site	-	1	-
Library	-	-	1
Museum	-	-	-
Office	-	-	6
Park and Recreation	1	6	1
Power Plant	-	2	8
Real Property Asset*	4	26	127
Residential Child Care	-	-	-
Residential Elder Care Facility	-	2	4
School	3	25	55
Shop	-	-	3
Storage	-	-	16
Wastewater Treatment	-	-	2
Transportation and Lifeline	28	213	97
Airport	1	1	2
Bridge	25	201	81
Bus Facility	-	1	-
Corp Yard	-	1	2



Critical Infrastructure - Wildfire Severity Zone			
Infrastructure Type	Very High	High	Moderate
NG Station	-	-	1
Substation	1	4	9
Transfer Station	1	5	2
Hazmat	-	-	13
Hazmat	-	-	13
Grand Total	76	396	407

**Real Property Assets are digitized insurance rolls for demonstrating value and ownership and may have overlapping points with other categories such as fire stations and law enforcement.*

Table 4-80: Lifelines in Wildfire Severity Zones (Unincorporated County)

Lifelines (miles) - Wildfire Severity Zone			
Infrastructure Type (Linear)	Very High	High	Moderate
Levee	-	0.89	2.24
NG Pipeline	6.62	17.14	19.81
Railroad	27.30	84.47	26.38
Street	1210.49	4885.07	501.09
4WD trail	283.09	824.49	20.19
4WD trail, major	7.41	17.98	-
Alley	-	-	-
Cul-de-sac	-	0.54	0.33
Driveway	63.14	174.20	41.80
Interstate	3.50	30.86	21.55
Local road	722.56	3115.53	302.81
Local road, major	26.10	75.97	3.16
Primary highway	28.74	198.88	37.06
Ramp	0.11	5.36	7.18
Road, parking area	0.33	0.30	0.19
State/county highway	71.56	437.02	66.78
Thoroughfare, major	3.94	3.92	0.02
Traffic circle	-	0.04	-
Walkway	-	-	-
Transmission Line	49.76	245.69	37.77
Grand Total	1294.16	5233.26	587.29



4.5.10.11 Changes in Development and Future Trends

Fuel reduction projects are ongoing on federal, state, and private lands in Mendocino County. Such projects include vegetation management, broadcast burning, pre-commercial thinning, and the removal of dead, dying, and diseased trees. The Mendocino County Community Wildfire Protection Plan (CWPP), updated in 2015, specified many completed and ongoing projects that reduce the hazard risk throughout the County.

The Mendocino County Fire Safe Council (MCFSC) continues to support wildfire mitigation efforts and implement the CWPP throughout the County. MCFSC is a nonprofit partnership of people, agencies, and organizations. Its mission is to aid people, property, and resources thrive in environments with associated wildfire risk. MCFSC manages the Ukiah Valley Fire Fuels Reduction Project, which reduces wildfire risk by performing roadside clearing, creating shaded fuel breaks, and holding neighborhood chipper days. MCFSC is also responsible for the Ukiah Valley Fire Fuels Reduction Chipper Program, which aims to reduce flammable space by covering a portion of chipping costs for groups that clear and prepare brush correctly. A third program, the Redwood Complex Fire: Hazardous Tree Removal Project, reached capacity but was also initiated to provide hazardous tree removal services. (Mendocino Fire Safe Council, 2019)

4.5.10.12 Wildfire Problem Statements

As part of the mitigation action identification process, the Planning Committee for the County and for each jurisdiction identified issues and weaknesses, also called problem statements, for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping tool and flood data. Wildfire problem statements for all planning partners are listed in Table 4-81; problem statements for all other planning partners are accessed in Volume 2 of this plan.

Identifying these common issues and weaknesses assists the Planning Committee in understanding the realm of resources needed for mitigation. The goal is to have at least one mitigation action for every problem statement. See Table 5-6 for a full list of mitigation actions and the corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-81 and Table 5-6.



Table 4-81 Wildfire Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-WF-MC-42	Wildfire	Impact	PRV - Prevention , PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	In the event of a large fire, residents and responding agencies could face many problems. Evacuation down steep and narrow roads could impede responding fire apparatus, causing road blockage and long response times for personnel	ma-WF-MC-238, ma-WF-MC-300
ps-WF-MC-43	Wildfire	Impact	PRV - Prevention , PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	Lack of home addresses and road signage is a huge problem throughout Battalion 4 (NW portion of Mendocino County)	ma-WF-MC-228, ma-AH-MC-299
ps-WF-MC-44	Wildfire	Impact	PRV - Prevention , PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	Buildings permitted as "class k" structures under the building code may be at higher risk of wildfire	ma-AH-MC-205, ma-WF-MC-301
ps-WF-MC-45	Wildfire	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	There are approx. 8 Child Care Centers, 6 Residential Elder Care Facilities, and 1 Adult Residential Care Facility located in High or Very High Wildfire Severity Zones.	ma-WF-MC-227, ma-WF-MC-287, ma-WF-MC-300, ma-WF-MC-302
ps-WF-MC-47	Wildfire	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	Mendocino County	There are approx. 8,954 people living in the very high wildfire intensity zone	ma-WF-MC-123, ma-WF-MC-138, ma-WF-MC-287, ma-WF-MC-300, ma-WF-MC-302
ps-WF-MC-48	Wildfire	Threat	PPRO - Property Protection , NRP - Natural Resource Protection	Mendocino County	Understory brush and fuels are present and encroaching on established evacuation routes	ma-WF-MC-239, ma-WF-MC-287, ma-WF-MC-301



Section 5. Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration for the County and all other participating jurisdictions, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success. The Planning Committee conducted the hazard mitigation planning process through typical problem-solving, as did the Steering Committees for each participating jurisdiction. Those steps included:

- Estimate the impacts (*See Vulnerability Assessment*);
- Describe the problem (*See Problem Statements*);
- Assess what resources exist to lessen impacts and problem (*See Capability Assessment*);
- Develop Goals and Objectives to address the problems (*See Goals and Objectives*); and
- Determine what can be done and develop actions that are appropriate for the community (*See Mitigation Action Matrix*).

5.1 Mitigation Alternatives

During Planning Committee Meeting #3 on June 24th, 2020, the MJHMP Planning Committee developed and reviewed mitigation actions with a wide range of alternatives, using FEMA's six broad categories of mitigation alternatives described below. The MJHMP Planning Committee considered many mitigation alternatives for implementation under each mitigation category, both county-wide and for individual participating jurisdictions. The County and participating jurisdictions also met several times after the large group meeting to review specific hazard-related problem statements and develop mitigation actions. These meeting relied on the following framework to explore mitigation actions.

PREVENTION (PRV):

Preventative activities keep hazard problems from getting worse and typically are administered through government programs or regulations addressing building and land development. Preventative actions are particularly effective in reducing a community's future vulnerability in areas where development has not occurred, or capital improvements have not yet been substantial. Examples of preventative activities include:

- Planning and zoning ordinances
- Building codes
- Open space preservation
- Floodplain regulations
- Stormwater management regulations
- Drainage system maintenance



- Capital improvements programming
- Riverine or fault zone setbacks

PRV ALTERNATIVES:

- Establish ingress/ egress standards for future development.
- Enhance the County's GIS database and capabilities related to hazards information.
- Assist dam owners in updating their Emergency Action Plans.
- Maintain detention basins.
- Conduct detailed study and mapping of floodplains for Mendocino River and its tributaries, targeting problematic floodplains.
- Update and distribute wildfire risk mapping for Mendocino County.
- Restrict new development in dam inundation zones.
- Amend or revise water conservation regulations for landscape design for commercial and residential development with the goal of limiting outdoor watering.

PROPERTY PROTECTION (PPRO):

Property protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- Building elevation
- Critical facilities protection
- Retrofitting (e.g., seismic design techniques, etc.)
- Safe rooms, shutters, shatter resistant glass
- Insurance

PPRO ALTERNATIVES:

1. Continue to work with the Mendocino County Fire Safe Council to conduct mitigation projects with homeowners. Provide homeowners easily accessible resources for mitigating the risk of wildfire around their homes.
2. Implement additional fuel reduction projects.
3. Remove existing structures from flood areas whenever and to the greatest extent possible; Relocate farm work centers from flood risk areas.
4. Encourage privately owned critical facilities (e.g. Churches, Hotels, other gathering facilities) to evaluate the ability of the buildings to withstand earthquakes and to address any deficiencies identified.
5. Identify and harden critical lifeline systems (i.e., critical public services such as utilities and roads) to meet "Seismic Design Guidelines and Standards for Lifelines" or equivalent standards such as American Lifelines Alliance (ALA) guidance.



6. Consider participation in the Community Rating System or other ways to increase participation in NFIP.
7. Review construction plans for all bridges to determine their susceptibility to collapse and retrofitting problem bridges.
8. Use flexible piping when extending water, sewer, or natural gas service.
9. Strengthening and retrofitting non-reinforced masonry buildings and non-ductile concrete facilities that are particularly vulnerable to ground shaking
10. Install shutoff valves and emergency connector hoses where water mains cross fault lines.
11. Continue to incentivize drought-tolerant landscape design.

PUBLIC EDUCATION AND AWARENESS (PE&A):

Public education and awareness activities advise students, staff, parents, nearby residents, and elected officials about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Measures to educate and inform the public include:

- Outreach projects including neighborhood and community outreach
- Speaker series/demonstration events
- Hazard mapping
- Real estate disclosures
- Materials library
- School children educational programs
- Hazard expositions

PE&A ALTERNATIVES:

1. Continue to work with the County of Mendocino local Fire Safe Councils, educating homeowners on reducing the risk of wildfire on their property, including understanding their wildfire risk and free site visits.
2. Distribute public education materials relating to natural hazards as well as emergency notifications in both English and Spanish.
3. Partner with local water agencies such as the Mendocino County Water Agency, the Russian River Watershed Association, the Mendocino County Inland Water and Power Commission, Point Arena Water Works Inc., and Potter Valley Irrigation District, in their public education and conservation campaigns (in English and Spanish).
4. Encourage businesses to build financial reserves as part of economic development.
5. Improve floodplain management, earthquake preparedness, wildfire mitigation and preparedness, and other information on participating jurisdiction's websites.
6. Distribute National Flood Insurance Program and floodplain development information in County libraries for access by the public
7. Focus a public education program around neighborhoods with egress/ingress issues and narrow roads.



8. Improve interactive hazard mapping resources available to the public.
9. Develop a public information campaign on 72-hour kits.
10. Develop a "Natural Hazard Awareness Week" campaign and conduct corresponding outreach to the community and all interested parties.
11. Conduct outreach to builders, architects, engineers, and inspectors about building susceptibility to earthquakes and proper design and building requirements.
12. Educate on the importance of drought-tolerant landscaping, low flow indoor fixtures, and other water savings techniques to better withstand periods of drought.
13. Partner with local organizations such as the Mendocino County Water Agency education farmers on soil and water conservation practices.
14. Offer agricultural disaster training and networking opportunities for farmers and ag regulatory agencies.

NATURAL RESOURCE PROTECTION (NRP):

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, steep slopes, and sand dunes. Parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples include:

- Floodplain protection
- Watershed management
- Vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.)
- Erosion and sediment control
- Wetland and habitat preservation and restoration

NRP ALTERNATIVES:

1. Protect and restore wetlands, riparian areas, and natural buffers to sea level rise, in particular continuing to implement restoration of Mendocino County rivers.
2. Continue to implement the County of Mendocino Storm Water Resource Plan.
3. Complete vegetation management projects as prescribed in Community Wildfire Protection Plans.
4. Encourage and incentivize drought-tolerant landscape design.
5. Establish a priority list of slope failure locations and implement slope stabilization projects in the highest risk areas.

EMERGENCY SERVICES (ES):

Although not typically considered a "mitigation" technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:



- Warning systems
- Construction of evacuation routes
- Sandbag staging for flood protection
- Installing temporary shutters on buildings for wind protection

ES ALTERNATIVES:

1. Construct/Install back up power generators for fire stations, pump houses, emergency shelters, and cooling centers.
2. Develop a website for vulnerable populations to register information such as where the individual in question lives, medications, restrictions, etc. Map registrants or tie information to Nixle alert system
3. Focus capital improvements on evacuation or emergency access routes needing attention.
4. Increase the capacity of existing hospitals through retrofits or upgrades such as isolation wings.
5. Construct or improve egress for wildfire emergencies in wilderness-urban interface (WUI) areas.

STRUCTURAL PROJECTS (SP):

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environment and natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- Stormwater diversions / detention / retention infrastructure
- Utility Upgrades
- Seismic Retrofits

SP ALTERNATIVES:

1. Continue the Eel River Recovery project and the associated Tenmile Creek Pilot Project.
2. Continue to work with the Russian River Watershed Association on clean water, habitat restoration, and watershed enhancement.
3. Improve water supply and delivery systems to be more resilient during times of drought.
4. Construct and develop alternative water supplies to augment single sources of water delivery.
5. Construct rainwater catchment systems to recharge groundwater in government ROWs.
6. Install water monitoring devices and drought-tolerant landscaping on government-owned facilities.
7. Improve stormwater drainage capacity; construct/improve stormwater basins County-wide to accomplish 100-YR protection.
8. Construct, install, and maintain warning gauges on local dams as the opportunity or need arises.
9. Create an inventory and establish a priority list for culvert replacement that takes into account fish passage, flood depth reduction, and future losses avoided.
10. Retrofit critical care facilities with enhanced HVAC and isolation areas.



5.2 Identifying the Problem

As part of the mitigation action identification process, the MJHMP Planning Committee identified the areas of concern and potential impacts of each of the identified hazards on the community. Developing these “problem statements” for areas of concern, which describe the nature of the consequences or effects of a hazard occurrence on the community and its assets, ensures the identified mitigation actions are tailored to the specific problems created by various hazard scenarios and are specific to each participating jurisdiction. Each jurisdiction’s problem statements are available as part of the Mitigation Action Support Tool (MAST), which is summarized in Section 3, STEP 3: Develop a Mitigation Strategy, available on mitigatehazards.com, and summarized in individual planning partners in Volume 2 of this plan.

See Section 5.5 for County-wide mitigation actions and Volume 2 for mitigation actions for each participating jurisdiction.

5.3 Capabilities Assessment

This section examines the County’s planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards. Volume 2 of this HMP includes a capabilities assessment for each participating jurisdiction as part of their annexes.

Capabilities assessments in this Volume 1 and in Volume 2 include considerations of a community’s adaptive capacity for climate change, as outlined in Cal OES’ 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region’s existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity. (Cal. Adaptation Planning Guide, 2020, p. 94)

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Section 4.5. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (*Column 1, Status*)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (*Column 2, Current Mitigation Use*)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (*Column 3, Future Opportunity*)

The capabilities assessment is easily-digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.



5.3.1 Planning and Regulatory Mitigation Capabilities

The information in Table 5-1 is used to align mitigation actions with the existing planning and regulatory capabilities of the County. Planning and regulatory tools typically used by local jurisdictions to implement hazard mitigation activities are building codes, zoning regulations, floodplain management policies, and other municipal planning documents.

Table 5-1: Mendocino County Planning and Regulatory Mitigation Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Construction and Future Development Regulations				
Building Codes				2019 California Building Code
BCEGS Rating				BCEGS class 3
Public Protection (ISO Class)				Rating of 4
Hazard Related Development Standards				Regulations for Limited Density Rural Dwellings (Ch. 18); Fire Safety Requirements (18.23.345)
Zoning Ordinance				
Hazard-Specific Ordinance				Unreinforced Masonry Buildings Article 1 (Ch. 18); Mitigation Program (18.30.060)
Growth Management Ordinance				Chapter 4.13 of the Coastal Element for the County includes growth management policies.
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				FY 2018-19 Proposed Budget page 18.
Erosion/Sediment Control Program				County provides documents such as Erosion and Sediment Control Best Management Practices and Erosion and Sediment Control Practices for Construction Projects..
Hazard-Related Public Outreach Program				



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Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Stormwater Management Program (Annual Inspections)				Mendocino County Storm Water Management Program Annual Report.
Seismic Safety Program (Non-structural)				
Earthquake Modernization Plan (Building Safety)				
Hazard Plans				
General Plan Safety Element				Part of the Development Element, adopted 2009.
Community Wildfire Protection Plan (CWPP)				2016 County-wide CWPP in existence.
Floodplain Management Plan				
Stormwater Management Plan				Coastal Mendocino Co Storm Water Resource Plan, 2019 Update, applies to the County Unincorp. and Fort Bragg.
Emergency Operations Plan				Mendocino County Operational Area Emergency Operations Plan (2016)
Climate Action Plan				The County is developing a new 2020 Climate Vulnerability Assessment.
Ground Water Management Planning / Plans				Ukiah Valley is the only groundwater basin required to have a groundwater sustainability plan in the County.
National Flood Protection Program (NFIP)				
Floodplain Management Regulations				Floodplain Requirements (Ch. 20.420).
Flood Insurance Education and Technical Assist.				
Flood Hazard Mapping / Re-Mapping				
Community Rating System (CRS)				



5.3.2 Financial Capabilities

Table 5-2 identifies the financial tools or resources that the County has used to fund mitigation activities.

Table 5-2: Mendocino County Fiscal Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				
Utilities Fees				
Benefit assessments				
System Development Fee				For example: the Building Division Master Fee Schedule.
General Obligation Bonds to Incur Debt				Mendocino County Comprehensive Annual Financial Report, June, 2019.
Special Tax Bonds to Incur Debt				
Withheld Spending in Hazard-Prone Areas				
Stormwater Service Fees				
Capital Improvement Project Funding				Fiscal Year 2018-19 Proposed Budget.



5.3.3 Education and Outreach

Table 5-3 lists the local citizen groups that communicate hazard risks.

Table 5-3: Mendocino County Education/ Outreach Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				
Dedicated Social Media				
Hazard Info. Avail. at Library/ Planning Desk				
Annual Public Safety Events				
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				County Newsletter.
Fire Safe Councils				The Mendocino County Fire Safe Council assists local Councils a variety of needs. These Councils include: the Caspar Community and Island Cove Estates (south of Point Arena) on the coast; Pine Mountain, Ridgewood Park, and Willowbrook/Sherwood Forest Hills (past Brooktrails) in the Willits area; and Deerwood, Oak Knoll Road, Upper Parducci Road, Black Bart Trail and Robinson Creek Road in the Ukiah area.
Resource Conservation Districts				The Mendocino County Resource Conservation District has implemented a wide range of programs across the County
Other	N/A	N/A	N/A	



5.3.4 Administrative and Technical Capabilities

Table 5-4 shows the administrative and technical capabilities of Mendocino County.

Table 5-4: Mendocino County Administrative and Technical Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Community Planning and Development Services				
Community Planner				Department of Planning and Building Services.
Civil Engineer				
Building Code Official (Full time or Augmented)				Department of Planning and Building Services.
Floodplain Administrator				Building Official serves as Floodplain Administrator
Fire Marshal				Fire Marshall is with Ukiah Valley District
Dedicated Public Outreach Personnel				Division of Information Services.
GIS Specialist and Capability				Mendocino County Public GIS Portal.
Emergency Manager				Emergency Services Coordinator.
Full-Time Building Official				Department of Planning and Building Services.
Grant Manager, Writer, or Specialist				
Other	N/A	N/A	N/A	
Warning Systems/Services				
General				Mendocino County Citizen Emergency Alert and Notification System (MendoAlert).
Flood				Included in MendoAlert.
Wildfire				Included in MendoAlert.
Geological Hazards				Included in MendoAlert.



5.3.5 Federal and State Funding Opportunities

Table 5-5 is a list of available funding sources from state and federal agencies. This includes the FEMA Hazard Mitigation Assistance grant program, which is described in more detail in Section 6.3.5. This list serves as a resource and is not exclusive.

Table 5-5: Federal and State Funding Opportunities

Agency / Grant Name	Potential Programs/ Grants
FEMA Hazard Mitigation Assistance Grants	See Section 6 for FEMA/ HMA grant details. For more information on current grants visit https://www.fema.gov/hazard-mitigation-assistance - Hazard Mitigation Grant Program (HMGP): https://www.fema.gov/hazard-mitigation-grant-program - Building Resilient Infrastructure and Communities (BRIC): https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities - Flood Mitigation Assistance Grant Program (FMA): https://www.fema.gov/flood-mitigation-assistance-grant-program
FEMA other grant programs	Including: - Assistance to Firefighters Grant Program. Assistance to Firefighters Grants, Fire Prevention & Safety, and Staffing for Adequate Fire and Emergency Response. https://www.fema.gov/welcome-assistance-firefighters-grant-program - Emergency Management Performance Grants (EMPG). Good for Equipment, Back Up Generators, Etc. https://www.fema.gov/emergency-management-performance-grant-program - Regional Catastrophic Preparedness Grant Program (RCPGP). Housing and Logistics and Supply Chain Management, encouraging innovative regional solutions to issues related to catastrophic incidents, and building on existing regional efforts. https://www.fema.gov/regional-catastrophic-preparedness-grant-program
U.S. Dept. of Energy / Energy Efficiency and Conservation Block Grant Program	<i>Provides funding for weatherization of structures and development of building codes/ordinances to ensure energy efficiency and restoration of older homes.</i> https://www.energy.gov/eere/wipo/energy-efficiency-and-conservation-block-grant-program
State and County Community Development Dept. Block Grants (CDBG)	Through Cal. Dept. of Housing and Community Development Dept. (HCD) Programs Include: - Community Development (CD) - Economic Development (ED) - Disaster Recovery Initiative (DRI) - Neighborhood Stabilization Program (NSP) https://www.hcd.ca.gov/grants-funding/active-funding/cdbg.shtml



Agency / Grant Name	Potential Programs/ Grants
Cal OES Proposition 1B Grants Programs	The Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, approved by the voters as Proposition 1B at the November 7, 2006 general election, authorizes the issuance of \$19,925,000,000 in general obligation bonds for specified purposes, including grants for transit system safety, security, and disaster response projects. http://www.caloes.ca.gov/cal-oes-divisions/grants-management/homeland-security-prop-1b-grant-programs/proposition-1b-grant
California Proposition 1: the Water Bond (AB 1471)	Authorize \$7.545 billion in general obligation bonds for state water supply infrastructure projects, such as public water system improvements, surface and groundwater storage, drinking water protection, water recycling and advanced water treatment technology, water supply management and conveyance, wastewater treatment, drought relief, emergency water supplies, and ecosystem and watershed protection and restoration. The State Water Resources Control Board (State Water Board) will administer Proposition 1 funds for five programs. The estimated implementation schedule for each is outlined in Five Categories: ▪ Small Community Wastewater ▪ Water Recycling ▪ Drinking Water ▪ Stormwater ▪ Groundwater Sustainability http://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1.shtml
Assistance to Firefighters Grant Program (AFG); Fire Prevention and Safety (FP&S)	The primary goal of the FP&S Grants is to enhance the safety of the public and firefighters with respect to fire and fire-related hazards. The Grant Programs Directorate administers the FP&S Grants as part of the AFG Program. FP&S Grants are offered to support projects in two activity areas: 1). Fire Prevention and Safety (FP&S) Activity Activities designed to reach high-risk target groups and mitigate the incidence of death and injuries caused by fire and fire-related hazards. 2). Research and Development (R&D) Activity To learn more about how to prepare to apply for a project under this activity, please see the FP&S Research and Development Grant Application Get Ready Guide. https://www.fema.gov/fire-prevention-safety-grants
California Housing and Community Development (HCD) Emergency Solutions Grant (ESG) Program	<i>To fund projects that serve homeless individuals and families with supportive services, emergency shelter/transitional housing, assisting persons at risk of becoming homeless with homelessness prevention assistance, and providing permanent housing to the homeless population. The Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act of 2009 places new emphasis on assisting people</i>



Agency / Grant Name	Potential Programs/Grants
	<i>to quickly regain stability in permanent housing after experiencing a housing crisis and/or homelessness.</i> http://www.hcd.ca.gov/fa/esg/index.html
CalTrans Division of Local Assistance / Safe Routes to School Program	California Dept. of Transportation. Federal funding administered via Caltrans. Local 10% match is the minimum requirement. http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm Active transportation grant program. Creating mobility and connectivity. Prioritize projects, and preparation of PED for active transportation projects.
Property Assessed Clean Energy (PACE) Programs	PACE financing allows property owners to fund energy efficiency, water efficiency and renewable energy projects with little or no up-front costs. With PACE, residential and commercial property owners living within a participating district can finance up to 100% of their project and pay it back over time as a voluntary property tax assessment through their existing property tax bill.
HazMat Emergency Preparedness Grant	The purpose of this grant program is to increase effectiveness in safely and efficiently handling hazardous materials accidents and incidents; enhance implementation of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA); and encourage a comprehensive approach to emergency training and planning by incorporating the unique challenges of responses to transportation situations. http://www.caloes.ca.gov/cal-oes-divisions/fire-rescue/hazardous-materials/hazmat-emergency-preparedness-grant
CERT Program Manager Course	The purpose of this Community Emergency Response Team (CERT) Program Manager course is to prepare CERT Program Managers for the tasks required to establish and sustain an active local CERT program. http://www.californiavolunteers.org/index.php/CERT/PM/
California Residential Mitigation Program	The California Residential Mitigation Program (CRMP) was established to carry out mitigation programs to assist California homeowners who wish to seismically retrofit their houses. http://www.californiaresidentialmitigationprogram.com/
Earthquake Brace + Bolt (EBB)	EBB, part of the California Residential Mitigation Program, was developed to help homeowners lessen the potential for damage to their houses during an earthquake by offering eligible homeowners up to a \$3,000 incentive to seismically retrofit their homes. https://www.earthquakebracebolt.com/



Agency / Grant Name	Potential Programs/ Grants
California Air Resources Board Air Pollution Incentives, Grants and Credit Programs	These programs have hundreds of millions of dollars in grants available over the next several years to reduce emissions from on- and off-road vehicles and equipment. https://www.arb.ca.gov/ba/fininfo.htm
California Department of Water Resources Grants and Loans	https://water.ca.gov/Work-With-Us/Grants-And-Loans Agency offers a variety of grants and loans related to integrated regional water management, flood mitigation, water conservation and efficiency, environmental restoration, groundwater, water quality, and water supply.
US Bureau of Reclamation WaterSMART Grants	Annual funding available for: ▪ Water Reclamation and Reuse funding ▪ Drought Resiliency Project funding ▪ Water and Energy Efficiency Grant funding https://www.usbr.gov/watersmart/



5.4 Mitigation Goals

Hazard mitigation plans must identify goals for reducing long-term vulnerabilities to identified hazards (44 C.F.R. § 201.6(c)(3)(i)). The Steering Committee established a set of goals for this plan, based on data from the preliminary risk assessment and the results of the public involvement strategy.

Goals discussed in this section describe what actions should occur. Specific, measurable mitigation actions explain how to accomplish the goals. The goals and actions form the basis for the development of the Mitigation Action Strategy and specific mitigation projects. The process consists of 1) setting goals, 2) considering mitigation alternatives, 3) identifying strategies or "actions", and 4) developing a prioritized action plan resulting in a mitigation strategy.

The goals and mitigation actions in this plan all support each other. Actions were prioritized based on their ability to achieve multiple goals. A mitigation strategy is considered effective based on how well the goals of the strategy are achieved. The following are the goals for this plan:

Goal 1: Reduce loss of life, injuries, and structural and economic damage through the use of planning, regulations, and preventative measures.

Goal 2: Reduce loss of life, injuries, and structural and economic damage through the use of property protection measures.

Goal 3: Reduce loss of life, injuries, and structural and economic damage through the use of public education and awareness programs.

Goal 4: Reduce loss of life, injuries, and structural and economic damage through the use of natural resource/ systems protection.

Goal 5: Reduce loss of life, injuries, and structural and economic damage through the use of structural/ infrastructure projects.

Goal 6: Reduce loss of life, injuries, and structural and economic damage through the use of emergency services in relation to natural hazards.



5.5 County Wide Mitigation Actions

Mitigation actions were developed based upon planning committee priorities, risk assessment results, and mitigation alternatives. Most importantly, the newly-developed mitigation actions acknowledge updated risk assessment information outlined in Section 4.

Mitigation actions are available on MAST linked through mitigatehazards.com; the format allows for regular updating and easy sorting by jurisdiction and hazard. Figure 5-1 illustrates the mitigation actions entered through MAST.

Table 5-6 establishes mitigation actions for the County. Each participating jurisdiction developed mitigation actions specifically tailored to their vulnerabilities and capabilities. Those mitigation actions are available as part of the planning process library, which is summarized in Section 3, STEP 3 (County Planning Process Library), are available on the Mitigation Action Application, and available for each individual participating jurisdiction in Volume 2 of this plan.

Some mitigation actions support ongoing activities of participating jurisdictions, while other actions are intended to be completed when funding is available. All mitigation actions will be reviewed annually.



MAST Mitigation Strategy Details



PowerPoint Exercise

IMPACT		VICTIM		THREAT	
Prob. #	Problem Description	Prob. #	Problem Description	Prob. #	Problem Description
1	Lorem ipsum Lorem ipsum dolor sit amet, consectetur	1	Lorem ipsum Lorem ipsum dolor sit amet, consectetur	1	Lorem ipsum Lorem ipsum dolor sit amet, consectetur
2	Lorem ipsum Lorem ipsum dolor sit amet, consectetur	2	Lorem ipsum Lorem ipsum dolor sit amet, consectetur	2	Lorem ipsum Lorem ipsum dolor sit amet, consectetur

Figure 5-1: Mitigation Action Application

5.5.1 Prioritization of Mitigation Actions

Implementing the identified mitigation can be overwhelming for any local jurisdiction or district, especially with limited staffing and fiscal resources; prioritizing the identified mitigation actions can help greatly with this. To ensure this MJHMP realistically reflects available resources, mitigation actions are prioritized by considering benefit cost review, public input, and MJHMP Planning Committee agreement.

5.5.1.1 Cost/ Benefit Review

The action plan must be prioritized according to a benefit/cost analysis of the proposed projects and their associated costs (44 C.F.R. §201.6(c)(3)(iii)). The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. This review does not meet FEMA Hazard Mitigation Grant Program (HMGP) and Building Resilient Infrastructure and Communities (BRIC) grant program requirements. A less formal, less costly approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and



benefits of these projects. Cost ratings were defined as follows:

- **High**—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
- **Medium**—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- **Low**—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.

Benefit ratings were defined as follows:

- **High**—Project will provide an immediate reduction of risk exposure for life and property.
- **Medium**—Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.
- **Low**—Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly. For many of the strategies identified in this action plan, the partners may seek financial assistance under the HMGP or BRIC programs, both of which require detailed benefit/cost analyses. These analyses will be performed on projects at the time of application using the FEMA benefit-cost model. For projects not seeking financial assistance from grant programs that require detailed analysis, the partners reserve the right to define “benefits” according to parameters that meet the goals and objectives of this HMP.



5.5.1.2 Public Input

An 8-question community survey was distributed to the public, yielding 376 survey responses and useful insight into the community's perception of natural hazards affecting Mendocino County. Specific question responses heavily influenced the prioritization of mitigation actions, including:

- 79% of participants believe their property is at risk from a natural hazard disaster.
- 44.3% of respondents have experienced earthquakes, 37.9% experienced wildfire, 53.1% experienced a pandemic, and 45.1% experienced drought. Only 9.9% of respondents (or someone in their household) had not experienced a natural hazard.
- 50.8% of participants considered the risk of naturally occurring hazards when choosing their home.
- 60.4% of respondents felt they were well-informed about the dangers of natural hazards, while 33.5% felt somewhat informed and 6.1% felt uninformed.
- When asked what incentives would encourage additional home protection from possible natural hazards, the top responses were insurance premium discounts (63.3%), rebate programs or reimbursement of upfront costs (62.5%), and building permit fee waivers (49.2%).
- Respondents indicated top mitigation projects that local government agencies should focus on:
 - o Retrofit and strengthen essential facilities (54.8%)
 - o Replace inadequate or vulnerable bridges and roadways (61.4%)
 - o Retrofit or upgrade drainage systems (36.7%)
 - o Work on improving damage resistance of utilities (71.8%)
 - o Ensure emergency shelters, the Emergency Operations Center, and communication towns have backup power generators (63.3%)
 - o Assist vulnerable property owners with securing funding to mitigate impacts to their properties (51.3%)

The complete survey results can be found in Appendix B.



5.5.2 Mitigation Action Plan

Table 5-6 lists each mitigation action for the County. Each participating jurisdiction developed unique mitigation actions as well, targeted at their own unique priorities and vulnerabilities; these are available on MAST and in Volume 2 of this MJHMP. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST.

The detail provided in MAST and captured in Table 5-6 meets the regulatory requirements of FEMA and DMA 2000.

The actions detailed in Table 5-6 and MAST contain both new action items developed for this plan Update as well as old actions that were yet to be completed from the 2014 Plan. The action numbers indicate whether the action is new or from the 2014 plan. A sample of the action number nomenclature is presented in Figure 5-2.

Section 2, What's New, illustrates progress towards new and previous mitigation action and indicates how many actions have been completed, deleted, or are ongoing or pending.

Important to note: The Planning Committee realizes that new needs and priorities may arise as a result of a disaster or other circumstances and reserves the right to support new actions and edit existing actions as necessary as long as they conform to the overall goals of the plan.

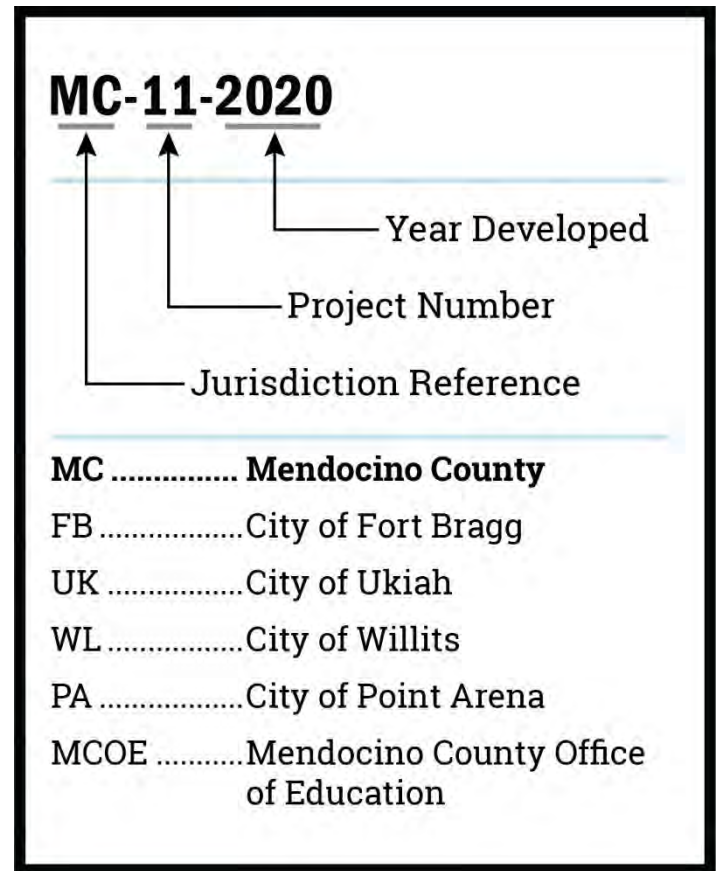


Figure 5-2: Mitigation Action Number Key



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Table 5-6: County Wide Mitigation Action Tracker

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-AH-MC-134	All Hazard	PE&A - Public Education & Awareness	Pending	2008	Mendocino County	Develop a public outreach program that distributes consistent hazard mitigation content and mitigation tips for property owners. For example, wildfire outreach should focus on necessary ignition resistance and home hardening features - including defensible space - for county residents.	Mendocino County	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	Ongoing	5%	HMGP / BRIC	Low	ps-EQ-MC-40, ps-EQ-MC-38, ps-EQ-MC-39, ps-CC-MC-59, ps-EW-MC-54
ma-AH-MC-205	All Hazard	PE&A - Public Education & Awareness	Pending	2020	Mendocino County	Develop an education program to inform both existing Class K structure owners and applicants of building permits for Class K structures of the inherent risks of such structures to all natural hazards	Planning and Building Services	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	5%	HMGP / BRIC	High	ps-EQ-MC-40, ps-FL-MC-31, ps-WF-MC-44
ma-AH-MC-299	All Hazard	ES - Emergency Services	Pending	2020	Mendocino County	Construct evacuation routes as needed to ensure multiple egress routes from neighborhoods.	Mendocino County Department of Transportation	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	Funding Dependent	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-43, ps-EQ-MC-36, ps-EW-MC-53
ma-CC-MC-221	Climate Change	PE&A - Public Education & Awareness	Pending	2020	Mendocino County	Offer agricultural disaster training and networking opportunities for farmers and agricultural regulatory agencies.	Mendocino County	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	3-5 Years	5%	HMGP / BRIC	Medium	ps-CC-MC-58
ma-CC-MC-298	Climate Change	PE&A - Public Education & Awareness	Pending	2020	Mendocino County	Develop public outreach to educate the public on household practices that can lessen the impacts of climate change.	Mendocino County	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	Ongoing	5%	HMGP / BRIC	Medium	



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-DF-MC-126	Dam Failure	PE&A - Public Education & Awareness	Pending	2014	Mendocino County	Develop a public outreach program that informs property owners located in the dam or levee inundation areas about voluntary flood insurance.	Planning and Building Services	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	5%	HMGP / BRIC	Medium	
ma-DF-MC-199	Dam Failure	ES - Emergency Services	Pending	2020	Mendocino County	Design and implement County-wide warning system program, with all other HMP participating jurisdictions as secondary participants, to warn everyone within a dam inundation zone of impending dam failure	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA	Medium	ps-DF-MC-56, ps-DF-MC-57, ps-DF-UK-173
ma-DR-MC-196	Drought	PE&A - Public Education & Awareness	Pending	2020	Mendocino County	Develop a public education campaign to encourage water conservation during drought.	Planning and Building, Env. Health,	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	5%	HMGP / BRIC	Medium	ps-DR-MC-18, ps-DR-MC-19
ma-DR-MC-197	Drought	PRV - Prevention	Pending	2020	Mendocino County	Amend land use codes to incorporate regulations that encourage and incentive water savings for development.	Planning and Building Services	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-DR-MC-21, ps-CC-MC-60
ma-DR-MC-198	Drought	NRP - Natural Resource Protection	Pending	2020	Mendocino County	Replace existing turf grass and water intensive landscaping with drought resistant landscaping	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years		HMGP / BRIC	Medium	ps-DR-MC-20
ma-EQ-MC-127	Earthquake	SP - Structural Projects	Pending	2014	Mendocino County	Seismically retrofit or replace County and local ramps and bridges that are categorized as structurally deficient by Caltrans, identified as needing replacement by the County, are located in an high ground shaking areas, and/or are necessary for first responders to use during and/or immediate after a disaster or emergency.	Planning and Building Services	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-MC-36



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EQ-MC-200	Earthquake	PE&A - Public Education & Awareness	Pending	2020	Mendocino County	Encourage privately owned critical facilities (e.g. churches, hotels, other gathering facilities) to evaluate the ability of the buildings to withstand earthquakes and to address any deficiencies identified.	Mendocino County	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	5%	HMGP / BRIC	High	ps-EQ-MC-33, ps-EQ-MC-38, ps-EQ-MC-39, ps-EQ-MC-41
ma-EQ-MC-201	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County	Retrofit / Harden County-owned critical facilities (including water & sewer infrastructure) and buildings and their ability to withstand earthquakes.	Planning and Building Services, Mendocino County Dept. of Transportation	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC	High	ps-EQ-MC-34, ps-EQ-MC-37, ps-EQ-MC-36
ma-EQ-MC-202	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County	Retrofit non-compliant suspended ceilings in County buildings. This includes Non-Structural Suspended Gypsum Dry-Wall & Cement Plaster Ceilings built 1950-1974.	Mendocino County	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-MC-33, ps-EQ-MC-34
ma-EQ-MC-203	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County	Install seismic gas shut-off valves on County buildings to prevent the flow of gas into buildings during a seismic event	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EQ-MC-35
ma-WS-MC-118	Extreme Weather	PPRO - Property Protection	Pending	2014	Mendocino County	Manage vegetation in areas within and adjacent to rights- of-way and in close proximity to critical facilities in order to reduce the risk of tree failure and property damage and avoid creation of wind acceleration corridors within vegetated areas.	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EW-MC-55
ma-EW-MC-207	Extreme Weather	NRP - Natural Resource Protection	Pending	2020	Mendocino County	Routinely inspect storm water channels for vegetation build up or encroachment, trash and debris, silt and gravel build up, and erosion or bank failure.	Mendocino County Department of Transportation	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC , FMA	High	ps-EW-MC-53, ps-EW-MC-53, ps-FL-MC-29



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EW-MC-208	Extreme Weather	SP - Structural Projects	Pending	2020	Mendocino County	Perform a feasibility study for flood proofing options and analyze the drainage systems County-wide.	Mendocino County DOT	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA	High	ps-EW-MC-53
ma-FL-MC-125	Flood	PPRO - Property Protection	Pending	2014	Mendocino County	Acquire, relocate, or elevate residential structures, in particular those that have been identified as Repetitive Loss (RL) properties that are located within the 100-year floodplain.	Planning and Building Services	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	FMA	High	ps-FL-MC-32
ma-FL-MC-210	Flood	SP - Structural Projects	Pending	2020	Mendocino County	Elevate and retrofit bridges and culverts to allow proper stormwater / 100-YR flows.	Mendocino County DOT	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC , FMA	High	ps-FL-MC-28
ma-FL-MC-213	Flood	NRP - Natural Resource Protection	Pending	2020	Mendocino County	Draft a Floodplain Management Plan to address County-wide flooding and identify specific mitigation projects to reduce the magnitude, frequency, and severity of flooding in Mendocino County.	Mendocino County	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Planning	HMGP / BRIC , FMA	High	ps-FL-MC-27, ps-FL-MC-30, ps-FL-MC-174
ma-FL-MC-215	Flood	PRV - Prevention	Pending	2020	Mendocino County	Adopt higher regulatory standards (including but not limited to freeboard, comp storage, lower substantial damage thresholds, setback and fill restrictions) as means to reduce future flood risk and support a no-adverse-impact (NAI) philosophy to floodplain management.	Mendocino County	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC , FMA	Medium	
ma-PN-MC-222	Pandemic	SP - Structural Projects	Pending	2020	Mendocino County	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic, including adequate ventilation and physical barriers	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-MC-115, ps-PN-MC-61



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-PN-MC-223	Pandemic	SP - Structural Projects	Pending	2020	Mendocino County	Institute necessary structural improvements to evacuation centers/sheltering locations to allow for proper ventilation, space for staff, and structural barriers to be used during pandemic and hazard event.	Mendocino County	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-MC-115, ps-PN-MC-61
ma-PN-MC-224	Pandemic	ES - Emergency Services	Pending	2020	Mendocino County	Develop alternative sheltering/evacuation locations for social distancing required during pandemic and other hazard event	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	High	ps-PN-MC-114, ps-PN-MC-61
ma-SF-MC-139	Slope Failure	PPRO - Property Protection	Pending	2008	Mendocino County	Construct a lightweight fill prism under roads to prevent the slip plain from further movement and subsequent damage to roads.	Mendocino County	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	
ma-SF-MC-225	Slope Failure	PPRO - Property Protection	Pending	2020	Mendocino County	Establish a priority list of slope failure locations and implement slope stabilization projects in the highest risk areas.	Mendocino County Department of Transportation	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-SF-MC-22, ps-SF-MC-23, ps-SF-MC-24, ps-SF-MC-25, ps-SF-MC-26, ps-SH-MC-51, ps-SH-MC-52
ma-SH-MC-206	Soil Hazard	PE&A - Public Education & Awareness	Pending	2020	Mendocino County	Develop educational outreach during the building permit process to raise awareness about the presence naturally occurring asbestos.	Planning and Building Services	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	5%	HMGP / BRIC	Medium	ps-SH-MC-49
ma-SH-MC-226	Soil Hazard	PPRO - Property Protection	Pending	2020	Mendocino County	Establish a priority list of coastal erosion locations and implement slope stabilization projects in the highest risk areas.	Mendocino County	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	Medium	ps-SH-MC-50



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-WF-MC-123	Wildfire	PPRO - Property Protection	Pending	2014	Mendocino County	Create and/or help strengthen existing vegetation management programs that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Office of Emergency Services	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-47
ma-WF-MC-227	Wildfire	PPRO - Property Protection	Pending	2020	Mendocino County	Retrofit critical facilities (adult care, child care, schools, railways) with fire-resistant materials and create defensible space around structures.	Mendocino County	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-45
ma-WF-MC-228	Wildfire	ES - Emergency Services	Pending	2020	Mendocino County	Ensure addresses and locations are easily accessed during emergency, especially in the WUI. Methods include installation of high visibility address markers, partnering wiht County Fire Chief to reduce overlapping, duplicate, or misordered street and address markings, and developing GPS-based locating options for more remote or hard to find locations.	Mendocino County	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-43
ma-WF-MC-238	Wildfire	PRV - Prevention	Pending	2020	Mendocino County	Update County Code/ Land Use Regulations/Subdivision Design Guidelines to include design and siting standards to incorporate, for example, emergency response access and turn around space or fire suppression water needs.	Planning and Building Services	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	High	ps-WF-MC-42
ma-WF-MC-239	Wildfire	NRP - Natural Resource Protection	Pending	2020	Mendocino County	Coordinate with fire protection agencies to develop vegetation management program to remove understory brush, hazardous trees, and excessive fuels around County roads and evacuation routes.	Mendocino County Department of Transportation	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-48



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-WF-MC-287	Wildfire	PPRO - Property Protection	Pending	2020	Mendocino County	Implement and continue to re-prioritize Mendocino County CWPP Mitigation Projects and support smaller scale neighborhood and community plans as appropriate.	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , AFG , FP&S	High	ps-WF-MC-47, ps-WF-MC-48, ps-WF-MC-45
ma-WF-MC-300	Wildfire	PPRO - Property Protection	Ongoing	2020	Mendocino County	Identify and develop a plan and maintenance schedule for key fuel breaks currently existing around population centers and other key resources; develop new fuel breaks as identified.	County in partnership with MCFSC	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC	Medium	ps-WF-MC-42, ps-WF-MC-45, ps-WF-MC-47
ma-WF-MC-301	Wildfire	PRV - Prevention	Ongoing	2020	Mendocino County	Continue to support programs to reduce fuel loads in the County, including but not limited to continuing the chipper program, mastication and removal of fuels, and encouraging prescribed burns when practicable.	County in partnership with MCFSC	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-48, ps-WF-MC-44
ma-WF-MC-302	Wildfire	PRV - Prevention	Ongoing	2020	Mendocino County	Develop a program to map and manage emerging high risk fuel sources.	County in partnership with Mendocino Fire Safe Council	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Planning	HMGP / BRIC , FP&S	Medium	ps-WF-MC-45, ps-WF-MC-47

Note: As a living document, project descriptions and actions in the tables above will be modified to reflect current conditions over time in MAST.



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Section 6. Plan Implementation and Maintenance

It is important that this plan becomes a usable, used tool for all planning partners to ensure reductions in possible damage from a natural hazard event. This section discusses adopting, implementing, monitoring, evaluating, and updating the MJHMP, which should help ensure that the MJHMP remains relevant. This section describes the incorporation of the MJHMP into existing planning mechanisms, and how the jurisdictions will continue to engage the public.

6.1 Plan Adoption

To comply with DMA 2000, the Mendocino County Board of Supervisors has officially adopted the Mendocino County Multi-Jurisdiction Hazard Mitigation Plan. The adoption of the MJHMP recognizes the County's commitment to reducing the impacts of natural hazards within the County. A copy of the MJHMP adoption resolution is included immediately following the Executive Summary.

6.2 Plan Implementation

Over time, implementation strategies for mitigation actions will become more detailed. MAST will be extremely useful to plan for updates to this MJHMP and to update individual mitigation actions as implemented or revised. In conjunction with the progress report processes, implementation strategy worksheets will be extremely useful as a plan of record tool for updates. Each implementation strategy worksheet provides individual steps and resources need to complete each priority mitigation action. The following are considerations for developing future implementation strategies:

- **Use processes that already exist.** Take advantage of the tools and procedures identified in the capability assessment in Section 5.3. Using planning mechanisms already in use and familiar to planning partners will give the planning implementation phase a strong initial boost.
- **Updated work plans, policies, or procedure.** Incorporating hazard mitigation concepts and activities can help integrate the HMP into daily operations. These changes can include how major development projects and subdivision reviews are addressed in hazard-prone areas or ensure that hazard mitigation concerns are considered in the approval of major capital improvement projects.
- **Job descriptions.** Working with department or agency heads to revise job descriptions of government staff to include mitigation-related duties, including designating a "mitigation lead" within a department, can further institutionalize hazard mitigation with little financial expenditure or programmatic overhaul.

6.2.1 Steering Committee

The Steering Committee oversaw the development of the plan and made recommendations on key elements of the plan, including the maintenance strategy. The Steering Committee recommended that an



oversight committee referred to herein as the MJHMP Steering Committee, should have an active role in the plan maintenance strategy. Therefore, it is recommended that the MJHMP Steering Committee become involved in key elements of the plan maintenance strategy. The new MJHMP Steering Committee should strive to include representation from the planning partners, as well as other stakeholders in the planning area.

The new MJHMP Steering Committee will review the annual progress report and provide input to Mendocino County on possible improvements or action steps to be considered at the next update. Keeping this new MJHMP Steering Committee intact will also jump-start future updates. Completion of a progress report is the responsibility of each participating jurisdiction, not the responsibility of the steering committee. It will simply be the MJHMP Steering Committee's role to review the progress report in an effort to identify issues needing to be addressed by future plans..

6.3 Monitoring, Evaluating and Updating the MJHMP

This section describes the schedule and process for monitoring, evaluating, and updating the MJHMP. The Mitigation Action Support Tool (MAST), has been developed as a primary resource for updating and monitoring mitigation actions. See subsection 6.3.2 below for more information on MAST.

6.3.1 Schedule

Monitoring the progress of the mitigation actions will be ongoing throughout the five-year period between the adoption of the MJHMP and the next update effort. The newly-formed MJHMP Steering Committee will meet biannually to monitor the implementation of mitigation actions and develop updates as necessary.

The MJHMP will be updated every five years, as required by DMA 2000. The update process will begin at least one year prior to the expiration of the MJHMP. However, should a significant disaster occur within the County, the MJHMP Steering Committee will reconvene within 30 days of the disaster to review and update the MJHMP as appropriate. The Board of County Commissioners will adopt written updates to the MJHMP as a DMA 2000 requirement.

6.3.2 Mitigation Action Support Tool (MAST) Updates

Hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for Mendocino County, available on the project website, (<https://mitigatehazards.com/mendocino-county/>), to ensure this MJHMP remains a living document.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdiction staff and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts. Users can update the status of their mitigation projects throughout the planning lifecycle and this web-based tool will improve participating jurisdiction's ability



to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including the initial grant application processes through Cal OES.

6.3.3 Process

The MJHMP Steering Committee will coordinate with responsible agencies/organizations identified for each mitigation action. These responsible agencies/organizations will monitor and evaluate the progress made on the implementation of mitigation actions and report to the MJHMP Steering Committee on an annual basis. These responsible departments will assess the effectiveness of the mitigation actions and modify them as appropriate. MAST will assist mitigation project managers in reporting on the status and assessing the effectiveness of the mitigation actions. Most updates to the HMP will occur easily through MAST.

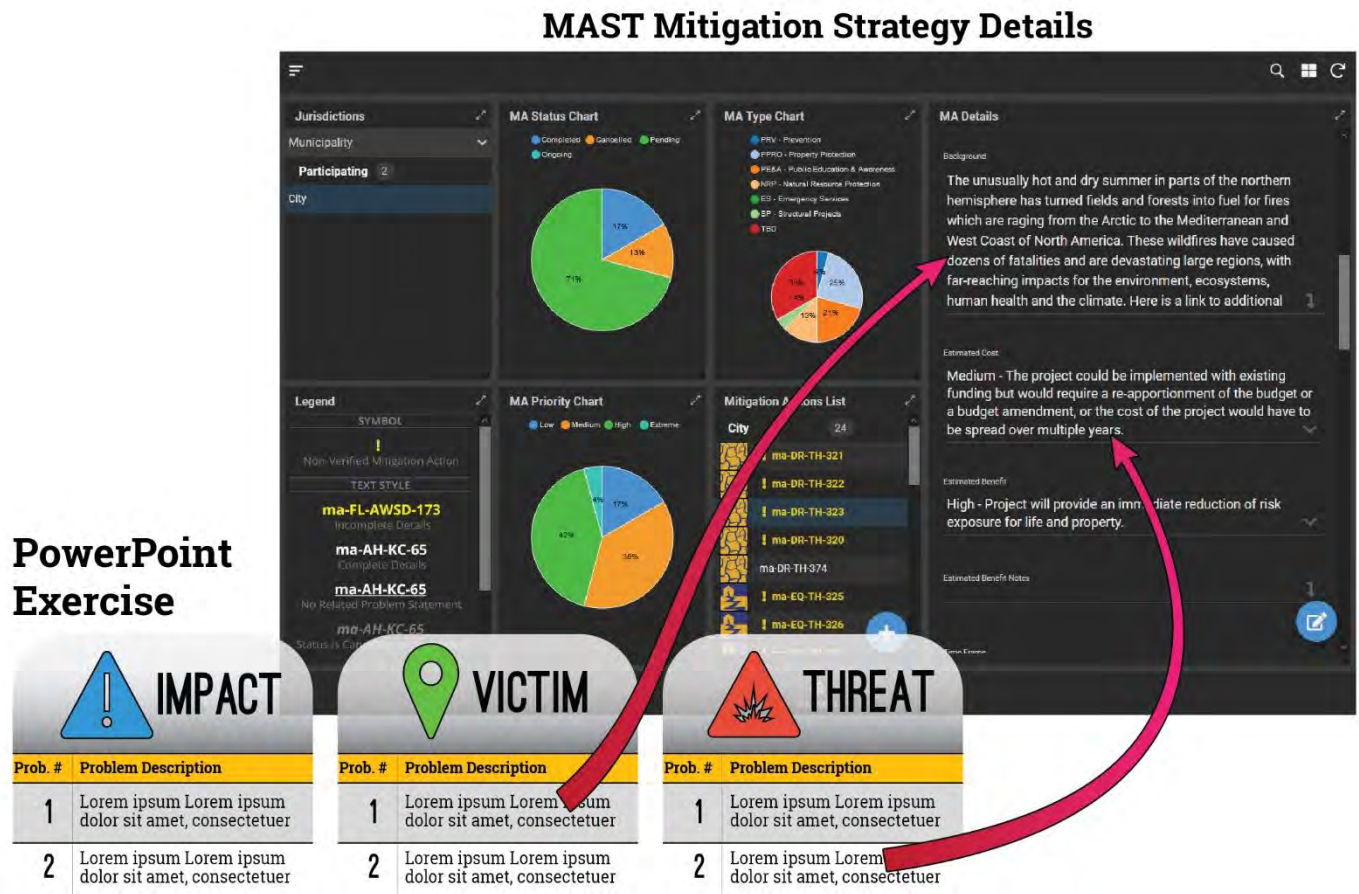


Figure 6-1: Diagram of MAST viewing details



Information from the mitigation leads within responsible departments will be used to monitor mitigation actions and annual evaluation of the MJHMP. The following questions will be considered in evaluating MJHMP effectiveness:

- Has the nature or magnitude of hazards affecting the County and other jurisdictions changed?
- Are there new hazards that have the potential to impact the County and other jurisdictions?
- Do the identified goals and actions address current and expected conditions?
- Have mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the MJHMP?
- Should additional local resources be committed to address identified hazards?

Future updates to the MJHMP will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. Issues that arise or updates made during monitoring and evaluating the MJHMP will be incorporated into the next update of the MJHMP in 2025. The questions identified above would remain valid during the preparation of the 2025 update.

6.3.4 Continuing Public Involvement

During the five-year update cycle, County staff will involve the public through public workshops and meetings. Information on upcoming public events related to the MJHMP or solicitation for comments will be announced via newspapers, mailings, and on the County MJHMP website (<https://mitigatehazards.com/mendocino-county/>). An electronic copy of the current MJHMP document will be accessible through the County website as well as at the County Courthouse in the City of Mendocino. The MJHMP Planning Committee will, as much as practicable, incorporate the following concepts into its public outreach strategy to ensure continued public involvement in the MJHMP planning process:

- Work with public service clubs, i.e., the Rotary Club of Mendocino, and the Mendocino County Library.
- Collaborate with faith-based organizations, i.e., Mendocino Presbyterian Church, Mendocino Baptist Church, Sant Anthony Roman Catholic Church, Mendocino Coast Jewish Community, etc.
- Create story ideas for media outlets, such as newspapers, local radio, and TV
- Distribute emails and postcards/mailers to County/ City/ Town residents about hazard mitigation updates
- Post meeting announcements at City Halls, community centers, coffee houses, grocery stores, etc.
- Educate and collaborate with insurance companies.
- Participate in other existing local community meeting places, i.e., Mendocino Farmers Market, Ukiah Farmers Market, Point Arena Farmers Market, etc.
- Distribute information through K-12 schools
- Continue to use the County website as a distribution point of hazard mitigation information



6.3.5 HMA Monitoring

FEMA's Hazard Mitigation Assistance (HMA) Program is the catalyst that drives increased understanding and supports proactive community action to reduce losses from natural hazards. To support this vision, FEMA funds three grant programs under HMA. The three programs are the Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance (FMA) Program, and Building Resilient Infrastructure and Communities (BRIC) Program.¹¹

- **HMGP** assists in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration
- **BRIC** provides funds for hazard mitigation planning and projects on an annual basis
- **FMA** provides funds for planning and projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP) on an annual basis.

HMGP funding is generally 15% of the total amount of Federal assistance provided to a State, Territory, or federally-recognized tribe following a major disaster declaration. BRIC and FMA funding depends on the amount congress appropriates each year for those programs. The HMGP supports cost-effective post-disaster projects and is the longest-running mitigation program among FEMA's three grant programs. A 2017 study by the National Institute of Building Sciences' (NIBS) Multihazard Mitigation Council has shown that every federal dollar spent on mitigation saves six dollars in response and recovery costs.

MAST will be extremely useful in applying for Cal OES funding. Plan maintenance will be primarily done through MAST. Figure 6-2 demonstrates how MAST information will translate into Cal OES NOIs and grant Sub application requests.

¹¹ In August of 2020, the BRIC program replaced Pre-Disaster Mitigation (PDM) grant program.



MAST Mitigation Strategy Details

Grant Application Information



Figure 6-2: MAST and Cal OES Grant Applications

Following a disaster, California Office of Emergency Services (Cal OES) and local Mendocino County officials in a joint effort with FEMA will perform Preliminary Damage Assessments (PDA) of the areas that sustained damage. Cal OES submits, through the FEMA Regional Office, the information collected along with a damage estimate to request a declaration from the President. A Presidential Major Disaster Declaration provides for the availability of HMGP funds at the request of a state's Governor in eligible communities within a state, tribe, or territory. Figure 6-3 depicts this.

Figure 6-3 shows a timeline of how projects should be developed and administered by local government and FEMA under the HMGP program. HMGP grant recipients will have 36 months from the close of the application period to complete projects.



Figure 6-3: HMGP Timeline

For More information on HMGP project development process visit:
www.fema.gov/hazard-mitigation-grant-program-guide-state/local-governments

6.3.6 Incorporation into Other Planning Mechanisms

For the HMP to be successful, the recommendations and underlying principles of the MJHMP should be incorporated into community planning and development such as capital improvement budgeting, building and zoning codes, general plans and regional plans. Integration into a variety of departments at the County and participating jurisdiction level provides an opportunity to network, identify, and highlight mitigation activities and opportunities at all levels of government. It is also important to monitor funding opportunities that can be leveraged to implement the mitigation actions.

Information from this MJHMP can be incorporated into:

- **Mendocino County and Municipal General Plans:** The MJHMP will provide information that can be incorporated into the Safety, Land Use, and Conservation Elements of General Plans for municipalities and the County as they are updated. Many jurisdictions will update the Safety Element of the General Plan to incorporate the MJHMP in compliance with AB 2140. Specific risk and vulnerability information from the Mendocino County MJHMP will assist in identifying areas where development may be at risk to potential hazards, which in turn can be incorporated into General Plans. For example, jurisdictions may consider instituting a hazard overlay zone that requires additional scrutiny because of close proximity to certain hazards.
- **Building / Development Codes and Zoning Ordinances:** The MJHMP provides information to enable the County and municipalities to make decisions on appropriate building/development codes and ordinances. Appropriate building codes and ordinances can increase resilience against natural disasters. Some County and municipal mitigation actions directly recommend updates or new regulations as mitigation for hazard risks; those mitigation actions indicate priorities for regulatory updates in participating jurisdictions.



- **Community Wildfire Protection Plans (CWPP):** The MJHMP will provide information that can be incorporated into CWPPs and Strategic Fire Plan updates for areas within the County. The MJHMP likewise captured mitigation actions derived from CWPPs.
- **Water/ Flood Management Plans:** The MJHMP will provide information that can be included in updates of the Mendocino County Groundwater Monitoring Plan, Stormwater Management Plan, the Mendocino River Flood Management Plan, and other water/ flood management plans. While the process for updating these types of plans will vary by jurisdiction, the flood data developed for the MJHMP can be used in other mechanisms along with exposure and damage estimation information.
- **Planning Mechanisms for Special Districts.** Special districts and other participating jurisdictions likely have specific planning documents that will incorporate elements of the MJHMP as well. These will vary by jurisdiction and are explored more specifically in each Annex Capability Assessment. These include capital improvement plans, maintenance plans, emergency response or operations plans, and other relevant planning documents. Mitigation actions prioritize what plans may need to be updated to reflect this MJHMP information. Valuable information includes exposure and damage estimation and granular spatial footprint information from RAMP.

6.1.1 Planning Integration Processes

With adoption of this plan, Mendocino County and planning partners will be responsible for the plan implementation and maintenance. The County and the MJHMP Steering Committee will continue to:

- Act as a forum for hazard mitigation issues,
- Disseminate hazard mitigation ideas and activities to Mendocino County communities,
- Ensure hazard mitigation risk assessments and maps remain a consideration for safety decisionmakers,
- Report on plan progress and recommended changes, and
- Inform and solicit input from the public.



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Appendix A. Analysis Methodology

MENDOCINO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



A GIS-based vulnerability assessment was conducted for each of the priority hazards identified by the Planning Committee. Several sources of data are necessary to conduct a vulnerability analysis. This appendix presents an outline of the data inputs, processing steps, and outputs used to create the vulnerability analysis results presented in the Hazard Mitigation Plan. The analysis methodology is presented first, followed by an overview of the analysis data.

A.1. Natural Hazard Exposure

The natural hazard exposure analysis (see C. Natural Hazard Exposure in Figure 7-4) is an inventory of population, parcels, critical facilities, and other assets within each natural hazard area. As shown in Figure 7-1, the presence of a structure inside a natural hazard area (the flood zone in this example) qualifies that structure as exposed to the natural hazard.



Figure 7-1: Hazard Exposure

The total counts of parcels, people, facilities, assets and the sum of values within the planning area which could be exposed to a hazard event is referred to as the “exposure” in this plan. A natural hazards overlay was developed to reflect the combination of many known natural hazard spatial footprints. The spatial overlay method enables summarization of building values, parcel counts, population exposure, and critical facility exposure within a hazard’s geographic extents (see C. Natural Hazard Exposure in Figure 7-4). The input data is used to evaluate exposure for earthquakes, landslides, flooding, dam inundation, wildfire, tsunami, sea-level rise, and areas of naturally occurring asbestos.

A.1.1. Damage Estimation with Hazus

FEMA’s Hazus software was implemented to conduct a detailed loss estimation for flood, earthquake, and dam inundation. Hazus is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. Hazus uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. For purposes of this planning effort, Hazus was used to generate damage estimations due to possible earthquakes, flooding, and dam inundation depths. The estimated damage and losses provided by the Hazus Software



provide the ability to understand possible widescale damage to buildings and facilities (see D. Hazus Damage Estimations in Figure 7-4).

In the hypothetical geography shown in Figure 7-3, even though both structures are exposed to flooding, it is expected that the structure with a first floor height below the depth of flooding will receive significantly more damage than the structure with a first floor height above the expected water depth. Note that not all building data contains first floor height and first floor height is an example of the type of field utilized by Hazus in calculating damage estimates.

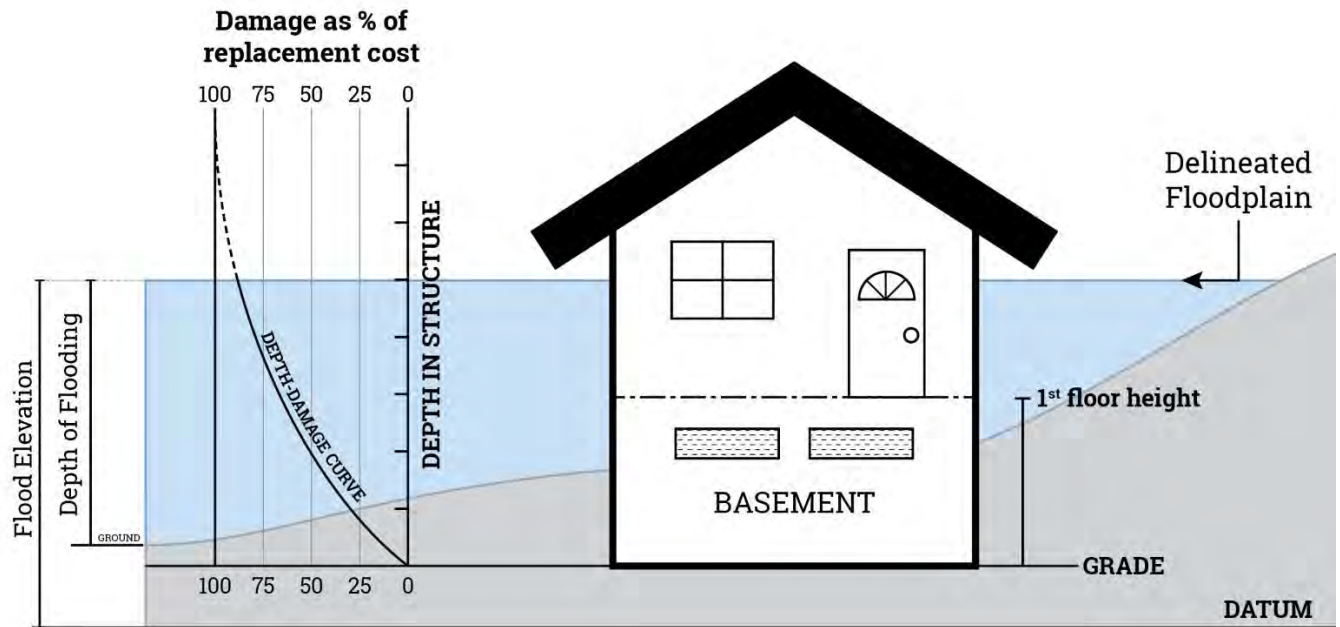


Figure 7-2: Flood Depth and Damage Curves



Figure 7-3: Hazus Damage Estimations

Hazus is a FEMA product with highly detailed documentation provided on the analysis steps and algorithms performed against the input data and associated scenarios in the process of obtaining loss



estimates. The explanation in this appendix section is simplified. Refer to the full documentation and technical manuals from FEMA for greater explanation on Hazus specifics.

A.1.2. Distinguishing Results – Natural Hazard Exposure Analysis vs Hazus Results

Table and chart references throughout the hazard mitigation plan are explicitly called out for Hazus results as “Damage Estimates”. There are expected differences in the results between estimations of Natural Hazard overlays and detailed Hazus results. Snapshot tables and Natural Hazard Exposure sections do not contain Hazus estimates.

A.2. Analysis Data

A.2.1. Assets, Value, and Population

A.2.1.1. Parcels

County provided parcel geometry was joined with county assessor data. Centroids were created to represent parcels at a single location. Fields required by Hazus that were not present in the parcel data provided were given default values based on the mapped use-codes of each parcel. Earthquake building design level attribution was based on year built (where the default was 1972) and building code adaptation chronology. Improved parcels were chosen for the parcels dataset by a query of improvement value presence and use-code descriptors.

A.2.1.2. Asset Insurance Schedules

County and jurisdictional insurance schedules were used in developing Real Property Asset data with valuations and structural data for analyses. The county owned assets were utilized in Hazus analysis. County owned real property assets and individual participating jurisdiction asset data were used in exposure analysis. The tabular data were geocoded and quality checked for building placement. These data are presented in the exposure analysis as “Real Property Assets” and in Hazus results as appropriate general use code type or specific building location description.

A.2.1.3. Population

Population estimates were derived from 2013-2017 5-year Census American Community Survey (ACS) numbers as applied to Census block groups and Census Place geographies, then processed through GIS modeling in order to break down the proportional population for smaller units of area in relation to natural hazards.



A.2.1.4. Critical Infrastructure

Critical facilities and transportation/lifeline typically include hospitals, fire stations, police stations, storage of critical records, and similar facilities. These data came from a collection of sources including but not limited to: County GIS, County and local jurisdiction insurance data, CDSS, CEC, FCC, Hazus, USACE, FEMA, and NPS. All data sources have a level of accuracy acceptable for planning purposes. See Table 7-2 for a list of Critical Infrastructure data used in the analysis.

A.2.1.5. Hazus Inputs

Hazus data inputs include hazard scenario data and detailed building data. The GIS team conducted a Level 2 analysis utilizing user-defined buildings with refined building characteristic parameters as inputs for the damage estimation calculations (See A.2.1.1 and A.2.1.2). Both countywide building data and government assets were used as inputs in this level 2 analysis. The customized user defined building dataset allows for more accurate results for damage estimation based upon detailed building characteristics.

Note: FEMA's Hazus software utilizes different user defined building information inputs to develop loss estimates depending on the hazard module. The Hazus flood and earthquake modules use fragility curves based upon the user's definition of building characteristics including but not limited to:

- ***Area***
- ***Year Built***
- ***Construction Type***
- ***Number of Stories***
- ***EQ Design Level***
- ***Occupancy Type (Residential, Government, etc)***
- ***Building Values***

Defaults were used for missing fields and values based on use-code and other available information for that input.

A.2.2. Natural Hazard Data

A.2.2.1. Dam Inundation Zones

Dam inundation zone GIS data were provided by Cal OES and DWR. These represent the estimated flood extent in the event of dam failure for individual dams.

A.2.2.2. Dam Inundation Depth Grids

Flooding depth grids of dam inundation events is provided by DWR. This is an evolving collection of site-specific studies. The timing of availability is dictated by dam risk classification.



A.2.2.3. Earthquake Shaking

The CGS 2 percent chance – 50-yr probability map was used as a qualitative guide in selecting an earthquake epicenter based shakemap scenario for analyses. The M7.4 Maacama Garberville and M7.8 N. San Andreas -N. Coast – Peninsula – SC MTN Scenario were chosen for use in Hazus damage estimations.

A.2.2.4. Flood Zones

The input parameters for Hazus analysis of Flood exposure included depth grids created with the FEMA Flood Zone data mentioned in section A.2.2.4. 100-YR and 500-YR were scenarios that were used to analyze the exposure to inputs as depicted in Figure 7-4. 100-YR Coastal zones were analyzed in the exposure analysis with limited findings of exposure.

A.2.2.5. Landslide Susceptibility

GIS layer with geographic boundaries defining the likelihood of deep-seated landslides. Underlying geology and slope angle are used in the creation of this layer by the California Geological Society. Low, Medium, and High landslide classes were chosen as summary classes for this plan.

A.2.2.6. Naturally Occurring Asbestos

GIS layer provided by Mendocino County Air Quality Management District outlining areas likely to contain naturally occurring asbestos. These areas are locations where asbestos is more likely, but not necessarily present.

A.2.2.7. Sea-level rise

GIS layer composite from NOAA sea-level rise data. Zero to ten feet of rise were classified based on Global Mean Sea Level (GMSL) Scenarios where low rise is 0-1', intermediate-low 2', intermediate 3', intermediate-high 4-5', high 6-7', and extreme $\geq 8'$.

A.2.2.8. Tsunami Run-up

GIS layer obtained from DWR that outlines ten-foot tsunami run-up inundation area.



A.2.2.9. Wildfire Hazard Severity

A proprietary DP+S composite GIS layer derived from Wildland-urban interfaces, California Public Utilities Commission fire threat areas and Fire Hazard Severity Zones. See Table 7-1.

Table 7-1: Wildfire Hazard Severity Classification

Hazard	Native Class	Description
Moderate	Tier 1	HHZs are zones in direct proximity to communities, roads, and utility lines, and are a direct threat to public safety.
	1	WUI is the potential treatment zone in which projects could be conducted to reduce wildland fire threats to people.
	1 / Moderate	See Cal Fire FHSZ (State Responsibility Area [SRA] & Local Responsibility Area [LRA])
High	Tier 2	Tier 2 fire-threat areas depict areas where there is an elevated risk (including likelihood and potential impacts on people and property) from utility associated wildfires.
	High	See Cal Fire FHSZ (State Responsibility Area [SRA] & Local Responsibility Area [LRA])
Very High	Tier 3	Tier 3 fire-threat areas depict areas where there is an extreme risk (including likelihood and potential impacts on people and property) from utility associated wildfires.
	Very High	Classification of a zone as moderate, high or very high fire hazard is based on a combination of how a fire will behave and the probability of flames and embers threatening buildings. Each area of the map gets a score for flame length, embers, and the likelihood of the area burning. Scores are then averaged over the zone areas. Final zone class (moderate, high and very high) is based on the averaged scores for the zone.

Source: Moderate - Cal Fire Tree Mortality, WUI, FHSZ; High - CPUC Utility Threat, Cal Fire FHSZ; Very High - High - CPUC Utility Threat, Cal Fire FHSZ (SRA & LRA)



A.2.3. Methodology Overview

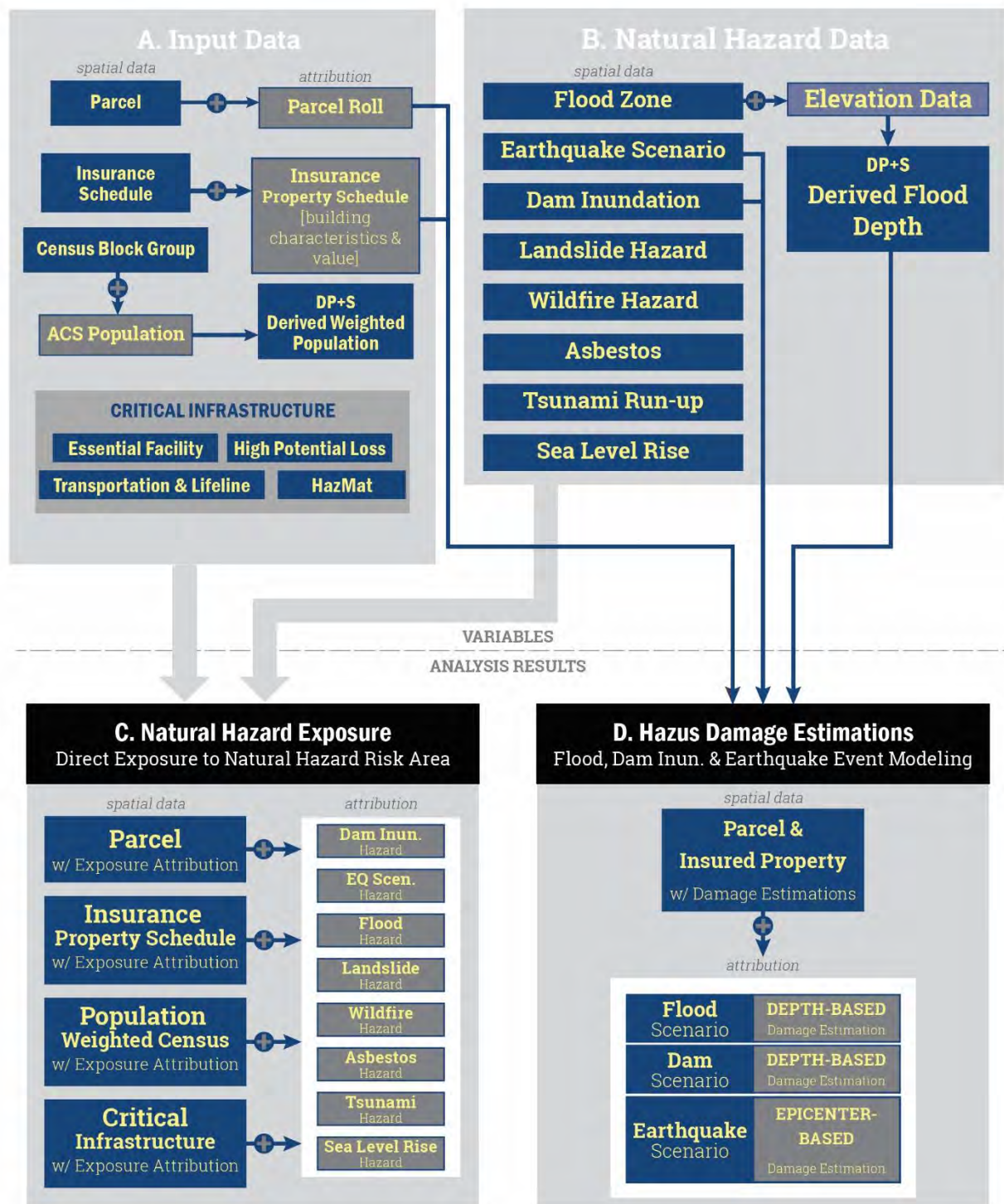


Figure 7-4: Data Analysis Methodology



A.2.4. Data Dictionary

Table 7-2: Data Dictionary

Dataset	Data Steward	Notes
Jurisdictional/Municipal Boundaries	Local Jurisdiction	Local jurisdiction
Aerial Imagery	USDA	NAIP
County Boundary	Local Jurisdiction	Local jurisdiction
Elevation Model	NED	1/3 arc second
GNIS	USGS	Get from Census
School Districts	Census	Can get census school districts
Stream	Esri, NHD	Rivers and Streams
Water	Esri, NHD	Bodies of water
Building Outlines	MS	MS
Parcel Geometry	Local Jurisdiction	Default lookup tables applied for some HAZUS fields
Parcel Roll	Local Jurisdiction	Default lookup tables applied for some HAZUS fields
Emergency Operations Center	Local Jurisdiction	951 Low Gap Rd / Sheriff Office
Fire	Local Jurisdiction	Provided by county
Law Enforcement	Local Jurisdiction	This is a consolidated layer of law enforcement provided by local jurisdiction
Adult Residential Facility	CA Department of Social Services	CDSS likely most complete source
Alternative Education Program	Local Jurisdiction	Provided by county
Animal Control	Local Jurisdiction	Provided by county
Child Care Center	CA Department of Social Services	Geocoded CDSS data
Communication Tower	Local Jurisdiction	Wireless Towers and emergency repeater Provided by County
Community Center	Local Jurisdiction	Provided by county
County/Municipality Insured Assets	Insurance Provider	Municipality / County insured assets. Source noted below. County - Mendocino County Executive Office, Heather Correll Rose, Property Schedule Willits - Community Development, Dusty Duley, Property Schedule Fort Bragg - Public Works, Tom Varga,



Dataset	Data Steward	Notes
		Property Schedule Ukiah - Community Services, Tami Bartolomei, Property Schedule Point Arena - City Admin, Paul Andersen, Property Schedule
Court House	Local Jurisdiction	Provided by county
Dam	USACE NID and DWR	Cross referenced DSOD in 2014 HMP and consolidated with NID and DWR table
Detention Center	Local Jurisdiction	Provided by county
Fairground	Local Jurisdiction	Provided by county
Family Child Care Home	CA Department of Social Services	Geocoded CDSS data
Foster Family Agency	CA Department of Social Services	Geocoded CDSS data
Historic Building	NPS	National Park Service Data
Historic Site	NPS	National Park Service Data
Library	Local Jurisdiction	Provided by county
Medical Facility	Local Jurisdiction	In Medical Facility Dataset also contains hospitals
Museum	Local Jurisdiction	Provided by county
Office	Local Jurisdiction	Provided by county
Park and Recreation	Local Jurisdiction	In park dataset from county
Power Plant	CEC	Includes non-traditional power plants
Residential Child Care	CA Department of Social Services	Geocoded CDSS data
Residential Elder Care Facility	CA Department of Social Services	Geocoded CDSS data
School	CDE	Department of Education
Shop	Local Jurisdiction	Provided by county
Storage	Local Jurisdiction	Provided by county
Airport	Local Jurisdiction	Provided by county
Bridge	NBI	National bridge inventory
Bus Facility	HAZUS	From Hazus regional dataset
Corp Yard	Local Jurisdiction	Provided by county
Levee	FEMA	From NFHL
Levee Flood Wall	USACE NLD	No long available from WFS



Dataset	Data Steward	Notes
Levee Levee Centerline	USACE NLD	Centerlines match levees from NFHL
NG Pipeline	CEC	CEC likely best source
NG Station	CEC	CEC likely best source
Railroad	Esri	Provided by county
Road	Local Jurisdiction	Provided by county
Street	Esri	ESRI streets has the subcategories utilized in lifeline analysis
Substation	CEC	Only large ones from CEC
Transfer Station	Local Jurisdiction	Provided by county
Transmission Line	CEC	CEC data is limited
Transmission Line Tower	CEC	CEC data is limited
Wastewater Treatment	Hazus	Have data from Hazus
Hazmat	Hazus	Have data from Hazus
Census Block	US Census Bureau	Census Tiger geometry
Census Block Group	US Census Bureau	Census Tiger geometry and ACS 2017 5-year estimates
Census Place	US Census Bureau	Census Tiger geometry and ACS 2017 5-year estimates
Census Tract	US Census Bureau	Census Tiger geometry and ACS 2017 5-year estimates
Dam Inundation	Cal OES	Consolidated from DWR and Cal OES data
Shake Potential	USGS, CISM	Utilized in scenario selection
EQ Scenarios 1-X	USGS, CISM	Chosen qualitatively from shake potential map
Flood Hazard	FEMA	Regional study from FEMA
Sea-level rise	NOAA	NOAA Office for Coastal Management Sea-level rise Data: 1-10 ft Sea-level rise Inundation Extent
Landslide Susceptibility	CGS	Low medium and high classifications
Naturally Occurring Asbestos	MCAQMD	Mendocino GIS Dept - Obtained from KML download on county website (http://www.co.mendocino.ca.us/aqmd/natural-occurring-asbestos.html).
Tsunami Runup	CGS	10' tsunami run-up inundation zone.
Wildfire Hazard Severity Zone	Cal Fire / CPUC	Composite fire layer: Fire Threat CPUC, Tree Mortality, WUI, FHSZ
EQ Fault Zones	CGS	Locally obtained
Fire Perimeter Calfire	NIFC	Statewide for burn perimeters 2000-2019 (Geomac Archive)



Dataset	Data Steward	Notes
Fire Regime MFRI	USGS	https://www.landfire.gov/NationalProductDescriptions13.php
Qfaults	USGS	Locally Obtained

A.2.5. Insured Assets Roll

Building/ Site Name	# Bldg.	Site Value		
		Structure	Content	Total
Administration	3	\$11,963,350	\$7,257,925	\$19,221,275
County Administration Office	1	\$11,567,360	\$7,085,361	\$18,652,721
Modular Office	1	\$85,378	\$22,094	\$107,472
Storage Building	1	\$310,612	\$150,470	\$461,082
Agricultural	2	\$4,432,589	\$2,647,120	\$7,079,709
Enviromental Health Building	1	\$3,488,557	\$2,306,252	\$5,794,809
Office Building	1	\$944,032	\$340,868	\$1,284,900
Airport	4	\$852,073	\$83,647	\$935,720
Airport Hangar	2	\$385,991	\$16,358	\$402,349
Airport/Radio Equipment	1	\$12,002	\$41,800	\$53,802
Terminal/Off./Frame Han-	1	\$454,080	\$25,489	\$479,569
Animal Control	1	\$2,138,393	\$15,856	\$2,154,249
Animal Control	1	\$2,138,393	\$15,856	\$2,154,249
Communications	3	\$3	\$53,583	\$53,586
Radio Tower Repeater	1	\$1	\$17,861	\$17,862
Repeater Site - Cahto Mountain	1	\$1	\$17,861	\$17,862
Repeater Site - Spanish Mountain (Cleveland)	1	\$1	\$17,861	\$17,862
Community Building	8	\$4,756,473	\$346,600	\$5,103,073
Community Building	1	\$1,279,469	\$74,263	\$1,353,732



Building/ Site Name	# Bldg.	Site Value		
		Structure	Content	Total
Justice Court/City Hall	1	\$703,567	\$57,810	\$761,377
Radio Tower Repeater	1	\$1	\$11,906	\$11,907
Veteran'S Memorial Building	5	\$2,773,436	\$202,621	\$2,976,057
County Building	28	\$6,302,236	\$1,973,177	\$8,275,413
Administration Building	1	\$1,331,670	\$309,423	\$1,641,093
Dot Storage	1	\$1	\$3,746	\$3,747
Equipment Building	2	\$99,778	\$74,534	\$174,312
Equipment Building 2	1	\$46,331	\$1	\$46,332
Equipment Storage	1	\$53,399	\$9,534	\$62,933
Flammable Liquids Building	1	\$4,272	\$10,137	\$14,409
General Services Building	1	\$1,785,363	\$525,860	\$2,311,223
Main Building	1	\$377,116	\$148,499	\$525,615
Modular Break Room	1	\$165,510	\$1	\$165,511
Modular Office	1	\$37,000	\$13,367	\$50,367
Oil Shed	1	\$5,131	\$4,906	\$10,037
Parts Storage	1	\$103,958	\$8,309	\$112,267
Shop Building	5	\$640,493	\$263,440	\$903,933
Storage Building	2	\$291,225	\$22,793	\$314,018
Storage Facility	1	\$1	\$5,458	\$5,459
Storage Shed	3	\$88,584	\$124,018	\$212,602
Storage Unit	1	\$1	\$1,785	\$1,786
Tire Shed	1	\$4,666	\$399	\$5,065
Vehicle Service Building	1	\$1,054,828	\$385,273	\$1,440,101
Veterans Service Office	1	\$212,909	\$61,694	\$274,603
Courthouse	2	\$15,892,732	\$2,018,005	\$17,910,737
Courthouse	1	\$14,396,012	\$1,540,043	\$15,936,055
Courthouse Annex	1	\$1,496,720	\$477,962	\$1,974,682
Detention Facility	10	\$24,932,751	\$2,181,951	\$27,114,702



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Building/ Site Name	# Bldg.	Site Value		
		Structure	Content	Total
Administration Building	1	\$2,433,079	\$338,258	\$2,771,337
Adult Detention Facility	1	\$8,110,655	\$347,942	\$8,458,597
Adult Detention(Maximum Security)	1	\$6,074,661	\$925,893	\$7,000,554
Classroom/Training Building	1	\$1,545,431	\$97,508	\$1,642,939
Juvenile Hall Admin	1	\$537,980	\$38,873	\$576,853
Juvenile Hall Classroom	1	\$429,856	\$49,112	\$478,968
Juvenile Hall Dorm	1	\$1,958,563	\$125,134	\$2,083,697
Juvenile Hall Kitchen,	1	\$616,890	\$55,533	\$672,423
Juvenile Hall/Violent Hall	1	\$2,147,001	\$53,717	\$2,200,718
Kitchen/Laundry Building	1	\$1,078,635	\$149,981	\$1,228,616
Emergency Operations	5	\$1,612,688	\$2,126,084	\$3,738,772
Dispatch Center	1	\$1	\$1,165,446	\$1,165,447
I.D. & Evidence	1	\$1	\$148,499	\$148,500
Sheriff	1	\$1	\$4,459	\$4,460
Sheriff Admin/Probation	1	\$1,612,684	\$647,091	\$2,259,775
Sheriff Commet	1	\$1	\$160,589	\$160,590
Fair Grounds	29	\$6,664,751	\$29	\$6,664,780
Administration Building	1	\$287,175	\$1	\$287,176
Agric.Bldg./Exhibit Hall .Bldg	1	\$1,522,765	\$1	\$1,522,766
Arts & Crafts Bldg.	1	\$606,837	\$1	\$606,838
Auditorium	1	\$603,767	\$1	\$603,768
Commercial Bldg./Exhibit Hall	1	\$724,276	\$1	\$724,277
Dinning Hall	1	\$218,838	\$1	\$218,839
Dormitory	1	\$96,274	\$1	\$96,275



Building/ Site Name	# Bldg.	Site Value		
		Structure	Content	Total
Field Bleachers 1	1	\$26,408	\$1	\$26,409
Field Bleachers 2	1	\$11,825	\$1	\$11,826
Grandstand	1	\$402,829	\$1	\$402,830
Hog Barn	1	\$241,535	\$1	\$241,536
Jr. Barn 1	1	\$98,120	\$1	\$98,121
Jr. Barn 2	1	\$98,120	\$1	\$98,121
Judging Booth	1	\$4,667	\$1	\$4,668
Lamb Palace	1	\$241,032	\$1	\$241,033
Marvin Barn	1	\$88,318	\$1	\$88,319
Open Barn	1	\$496,968	\$1	\$496,969
Pumphouse	2	\$24,863	\$2	\$24,865
Restroom	3	\$500,585	\$3	\$500,588
Restrooms	1	\$123,766	\$1	\$123,767
Shop Building	1	\$76,778	\$1	\$76,779
Shop Storage Shed	1	\$1,345	\$1	\$1,346
Show Barn	1	\$144,048	\$1	\$144,049
Show Barn Bleachers	1	\$7,918	\$1	\$7,919
Ticket Office	1	\$5,825	\$1	\$5,826
Wood Bleachers	1	\$9,869	\$1	\$9,870
Health Services	11	\$11,047,323	\$3,976,707	\$15,024,030
County Health Building	1	\$661,359	\$259,209	\$920,568
Hhsa	1	\$1	\$300,722	\$300,723
Mental Health	1	\$1	\$29,766	\$29,767
Mental Health Annex	1	\$534,584	\$118,823	\$653,407
Mental Health Office	1	\$509,591	\$1	\$509,592
Modular Building	1	\$1	\$44,184	\$44,185
Office	1	\$223,369	\$1	\$223,370
Public Health Center	1	\$8,411,295	\$3,143,292	\$11,554,587
Public Health Storage	1	\$106,394	\$54,993	\$161,387
Social Services	1	\$567,393	\$1	\$567,394
Storage Building	1	\$33,335	\$25,715	\$59,050
Library	5	\$7,488,326	\$10,613,038	\$18,101,364
Covelo Library	1	\$1,116,120	\$1,062,466	\$2,178,586
Fort Bragg Library	1	\$1,211,737	\$2,655,032	\$3,866,769



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Building/ Site Name	# Bldg.	Site Value		
		Structure	Content	Total
Point Arena Library	1	\$757,965	\$805,729	\$1,563,694
Ukiah Library	1	\$2,895,989	\$3,404,642	\$6,300,631
Willits Library	1	\$1,506,515	\$2,685,169	\$4,191,684
Miscellaneous	13	\$1,077,145	\$402,688	\$1,479,833
Buildings & Grounds Building	1	\$476,209	\$61,315	\$537,524
Office	3	\$10,878	\$2,229	\$13,107
Offices	1	\$1	\$37,125	\$37,126
Old Justice Court	1	\$126,835	\$11,964	\$138,799
Recycling Facility	1	\$186,474	\$9,521	\$195,995
Shop Building	1	\$95,649	\$9,935	\$105,584
Site Office	1	\$4,691	\$743	\$5,434
Values Formerly Reported - Replacement Cost	2	\$2	\$2	\$4
Vehicle Value Scheduled At Location 100	1	\$1	\$221,200	\$221,201
Willits Action Group	1	\$176,405	\$48,654	\$225,059
Museum	5	\$5,621,348	\$1,468,329	\$7,089,677
Artifact Storage	1	\$1	\$498,860	\$498,861
Exhibit Building	1	\$1	\$29,047	\$29,048
Museum	2	\$5,621,345	\$337,918	\$5,959,263
Restoration Building	1	\$1	\$602,504	\$602,505
Park	10	\$609,229	\$120,014	\$729,243
Community Building	1	\$79,443	\$22,278	\$101,721
Picnic Shelter	2	\$251,704	\$14,585	\$266,289
Restroom	6	\$278,081	\$8,904	\$286,985
Shed	1	\$1	\$74,247	\$74,248
Social Services	33	\$21,074,994	\$5,049,159	\$26,124,153
Child Support Office	1	\$997,071	\$590,909	\$1,587,980
Childrens Office	1	\$1	\$101,304	\$101,305
Family Center	1	\$1	\$37,125	\$37,126
Family Recources	1	\$1	\$8,191	\$8,192



Building/ Site Name	# Bldg.	Site Value		
		Structure	Content	Total
Fort Bragg Justice Center	1	\$2,606,077	\$376,334	\$2,982,411
Hopsital Office	1	\$1	\$9,223	\$9,224
Human Resources	1	\$510,036	\$118,823	\$628,859
Justice Center	1	\$3,470,062	\$191,464	\$3,661,526
Maintenance Garage	1	\$306,960	\$77,530	\$384,490
Office	1	\$425,391	\$236,211	\$661,602
Public Health	1	\$1,459,003	\$361,143	\$1,820,146
Social Services Building	1	\$2,643,876	\$447,975	\$3,091,851
Social Services Gain Unit	1	\$1	\$301,167	\$301,168
Social Services Modular Office	1	\$316,760	\$120,357	\$437,117
Social Services Office	1	\$6,198,465	\$1,486,033	\$7,684,498
Social Services Storage	7	\$7	\$19,064	\$19,071
Storage	5	\$5	\$52,707	\$52,712
Storage Shed	1	\$1,913	\$1	\$1,914
Storage Unit	2	\$2	\$6,688	\$6,690
Storage-Ergo	1	\$1	\$1,126	\$1,127
Wellness & Eap	1	\$102,111	\$24,255	\$126,366
Wisc Social Services	1	\$2,037,249	\$481,529	\$2,518,778
Grand Total	172	\$126,466,404	\$40,333,912	\$166,800,316



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Appendix B. Process Documentation

MENDOCINO COUNTY

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



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Appendix B

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Website Documentation	B.5



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Planning Committee Meeting Documentation

Appendix B.1



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Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Tuesday, April 14, 2020 12:05 PM
To: Torie Jarvis
Subject: Mendocino Co. Hazard Mitigation Plan Mtg. #1

MENDOCINO MULTI-JURISDICTION HAZARD MITIGATION PLAN UPDATE

You are cordially invited to attend the first Planning Committee meeting in the process to update the Mendocino Multi-Jurisdiction Hazard Mitigation Plan!

You have been identified as a Lead for your participating jurisdiction. Thank you and we look forward to working with you!

We have a meeting with the Participating Jurisdiction Leads- that's you- from 11:30-12 PM and will start our regular meeting at 12 PM.

Planning Committee Meeting #1

Wed. April 29, 2020

11:30 PM to 2 PM

** Participating jurisdictions leads meet at 11:30.

Regular meeting starts at 12 PM.

Via Zoom conference call:

<https://zoom.us/j/461962147>

Call-in option: 669 900 6833

Meeting ID: 461 962 147



Project updates and meeting materials will be available on the Mendocino County MJHMP page:

- www.mitigatehazards.com/mendocino-county/meetings/
- Project Password: Mendocino2020



While we greatly prefer to meet face-to-face, due to coronavirus, this meeting will be held via Zoom. We will hope subsequent meetings can be in-person.

We are pleased to begin the process to update the Mendocino Multi-Jurisdiction Hazard Mitigation Plan (MJHMP). The purpose of the Mendocino MJHMP is to reduce property losses

April 2020

29



and avoid injury and/or casualties resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce loss of life, personal injury, and property damage that can result from a disaster.



The Plan is multi-jurisdictional in that 6 different Mendocino County jurisdictions are participating (the County, City of Fort Bragg, City of Point Arena, City of Ukiah, City of Willits, and the Mendocino County Office of Education). Your jurisdiction's active participation in the update process, as demonstrated by your attendance at this meeting, helps us fulfill one of FEMA's prerequisites for Plan approval.

This is the first in a series of three meetings over the course of four months to review and develop information for the updated MJHMP. During the series of meetings, you will learn about FEMA's hazard mitigation program, prevalent hazards throughout the County, and mitigation techniques to reduce damage and injury in the event of a wildfire, flood, earthquake, and other natural hazards.

At this first meeting, you will meet our Plan update consultants, Atlas Planning and Dynamic Planning + Science (DP+S). We will review project scope and schedule, an internal project management protocol, and Cal OES/FEMA plan



review requirements. Meeting participants will discuss required multi-jurisdictional planning processes and documentation of such and begin planning a public outreach strategy. Consultants will review the existing MJHMP and demonstrate new Plan development resources and tools available to participating jurisdictions.

Please let me know if you need additional information and how I can be of assistance. I appreciate your time and consideration as always. I look forward to seeing you at the end of the month.

 [VISIT THE PROJECT PAGE TO LEARN MORE](#)

MITIGATE HAZARDS




This email was sent to torie@dynamicplanning.co

[why did I get this?](#) [unsubscribe from this list](#) [update subscription preferences](#)

Dynamic Planning + Science · 19235 HWY 550 · Montrose, CO 81403 · USA





Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Wednesday, April 22, 2020 12:39 PM
To: dhutchison@cityofukiah.com; gowen@cityofukiah.com; jwyatt@cityofukiah.com; ssangiacomo@cityofukiah.com; tbartolemei@cityofukiah.com; teriksen@cityofukiah.com; Cathy Moorhead; Dusty Duley; Jim Robbins; Stephanie Garrabrant-Sierra; jnaulty@fortbragg.com; tmiller@fortbragg.com; tvarga@fortbragg.com; avpinotgrower@gmail.com; pa-admin@mcn.org; sturner@mcoe.us; Gregory Allen; Darcie Antle; Shannon Barney; Brentt Blaser; Tammy Moss Chandler; Heather Correll Rose; Howard Dashiell; Department of Transportation; Steve Dunncliff; Bekkie Emery; Leif Farr; Greg Glavich; Nash Gonzalez; Matthew Kendall; Barbara Moed; Anne Molgaard; Richard Molinari; Michael Oliphant; William Schurtz; Cody Snider; Xuyen Ung; cm@pointarena.ca.gov
Cc: aaron@atlasplanning.org; Torie Jarvis
Subject: First Planning Committee Meeting for the Update of the Multi-Jurisdictional Hazard Mitigation Plan

Hello all,

We are excited to kick off the process to update the Mendocino Multi-Jurisdiction Hazard Mitigation Plan (MJHMP). You have been identified as part of the planning team for your jurisdiction. We hope you can join us for our first meeting next week. A calendar reminder is attached to this email.

Planning Committee Meeting #1

Wed. April 29, 2020
12 PM to 2 PM
(Leads for each jurisdiction, join in at 11:30 AM)

Via Zoom conference call:
<https://zoom.us/j/461962147>
Call-in option: [669 900 6833](tel:6699006833)
Meeting ID: 461 962 147

We sent out a MailChimp announcement last week, and will send another today. If you did not receive this, please check your junk mailbox or email the lead consultant on the project (Aaron@atlasplanning.org) to confirm your contact information.

The purpose of the Mendocino MJHMP is to reduce property losses and avoid injury and/or casualties resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce loss of life, personal injury, and property damage that can result from a disaster.

The Plan is multi-jurisdictional in that 6 different Mendocino County jurisdictions are participating (the County, City of Fort Bragg, City of Point Arena, City of Ukiah, City of Willits, and the Mendocino County Office of Education). **Your jurisdiction's active participation in the update process, as demonstrated by your attendance at this meeting, is one of FEMA's prerequisites for Plan approval.**

This is the first in a series of three meetings over the course of four months to review and develop information for the updated MJHMP. During the series of meetings, you will learn about FEMA's hazard mitigation program, prevalent hazards



throughout the County, and mitigation techniques to reduce damage and injury in the event of a wildfire, flood, earthquake, and other natural hazards.

Agenda

(Available on project website and linked [here](#))

- **Welcome and Introductions**
- **Background**
- **Mitigation Planning Defined**
- **Expectations from Participating Jurisdictions**
- **Planning Process Review**
 - Project Schedule
 - Website Review
- **FEMA Hazard Mitigation Program**
- **2014 Mitigation Plan Review**
- **What has Changed**
- **Outreach**
- **Next Steps**

Please let me know if you need additional information and how I can be of assistance. I appreciate your time and consideration as always. I look forward to seeing you at the end of the month.

Note, While we greatly prefer to meet face-to-face, due to coronavirus, this meeting will be held via Zoom. We will hope subsequent meetings can be in-person.

Thank you,

Nash Gonzalez
Recovery Director
Mendocino County
Executive Office
501 Low Gap Road, Room 1010
Ukiah, CA 95482
Telephone (707) 463-4441
Direct Line (707) 234-6693
e-mail: gonzalezn@mendocinocounty.org





11:56 AM
4/29/2020

Speaker View

Participants (17)

Find a participant

BG Brian Greer (DP+S) (Me)

TJ Torie Jarvis (Host)

EM Ethan Mobley (DP+S)

G gonzalezn

17079612804

PD Paul Duncan

17079614713

Tom Varga

AP Aaron Pfannenstiel

A Alex

AM Anthony Massucco

B bgunn

CN Chief Noyer

PA Paul Andersen

ST Stephen Turner

T Ty

X Xuyen

Torie Jarvis

Brian Greer (...)

Ethan Mobley (...)

Aaron Pfannens...

17079612804

bgunn

Paul Duncan

gonzalezn

HMPC Meeting 1 Jurisdiction Lead Participants Pre-Meeting



MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

Recording

Paul Andersen

Ty

Anthony Massu...

McCollins

Dave MVFD

Scott Cratty, Me...

Heather Correll...

Molly Nilsson

Todd Crabtree

ajames

Craig Schlatter

Elizabeth Salom...

blaserb

Mike Oliphant

daniel

Joe Zicherman

MENDOCINO COUNTY - Multi-Hazard Mitigation Plan 2020 Update

Planning Partner Role, that's you!

- Assist in Data Collection
- Attending Meetings (2 more)
- Complete jurisdictional assignments.
- Assist with Public Outreach
- Review Draft Documents
- Educate yourself on Mitigation!

MITIGATE HAZARDS

mitigatehazards.com

Participants (39)

Find a participant

BG

Brian Greer (DP+S) (Me)

TJ

Torie Jarvis (Host)

EM

Ethan Mobley (DP+S)

17072723672

G

gonzalez

PD

Paul Duncan - CALFIRE Operations...

17073212650

17074594601

17079514713

Tom Varga

AP

Aaron Pfannenstiel

A

ajames

A

Alex

Anne Molgaard

AM

Anthony Massucco

B

bjun

B

blaserb

CN

Chief Noyer

CS

Craig Schlatter

D

daniel

DM

Dave MVFD

ES

Elizabeth Salomone, RRFC

F

faul

HC

Heather Correll Rose - Mendocino...

I

iPhone

JZ

Joe Zicherman

M

McCollins

MN

Molly Nilsson

PA

Paul Andersen

S

Sarah Dukett

SC

Scott Cratty, Mendocino County F...

ST

Stephan Turner

TB

Tami Bartolomei, City of Ukiah

TC

Todd Crabtree

T

Ty

X

Xuyen

17072346650

17079846052

MO

Mike Oliphant

Invite

Unmute Me

HMPC Meeting 1 Main Meeting Screenshot



Name	E-mail	Title	Dept	HMP Jurisdiction
Anthony Massucco	anthony.massucco@fire.ca.gov	Fire Captain	Cal Fire -Howard Forest Emergency Command Center	Mendocino County
Anne Molgaard	molgaardac@mendocinocounty.org	Director	Child Support Services	Mendocino County
William Schurtz	schurtzw@mendocinocounty.org	Director	Human Resources	Mendocino County
Leif Far	farrl@mendocinocounty.org	Mendocino County	Information Systems (GIS)	Mendocino County
Barbara Moed	moedb@mendocinocounty.org	Executive Officer	Mendocino County Air Quality Management District (MCAQMD)	Mendocino County
Nash Gonzalez	gonzaleznm@mendocinocounty.org	Mendocino County Disaster Recovery Director	Mendocino County Executive Office	Mendocino County
Brentt Blaser	blaserb@mendocinocounty.org	Emergency Services Coordinator	Mendocino County Sheriff's Office	Mendocino County
Sarah Duckett	duketts@mendocinocounty.org	Water Agency	Mendocino County Water Agency	Mendocino County
Xuyen Ung	ungx@mendocinocounty.org	Administrative Analyst	Recovery/CEO	Mendocino County
Heather Correll Rose	correllh@mendocinocounty.org	Executive Office	Risk Management	Mendocino County
Richard Molinari	molinarir@co.mendocino.ca.us	Shelter Manager	Ukiah Animal Shelter	Mendocino County
Steve Turner	sturner@mcocoe.us	Director	Maintenance & Operations, MCOE	Mendocino County Office of Education
Paul Anderson	pa-admin@mcn.org	Administrative Assistant	City of Point Arena	City of Point Arena
Tami Bartolomei	tbartolomei@cityofukiah.com	Office of Emergency Management Coordinator	City of Ukiah	City of Ukiah
Dusty Duley	dduley@cityofwillits.org	Community Development Director	Community Development	City of Willits
Craig Schlatter	cschlatter@cityofukiah.com	City of Ukiah Community Development Director	Community Development	City of Ukiah
Tom Varga	tvarga@fortbragg.com	Director of Public Works	Former City of Fort Bragg	City of Fort Bragg
Molly Nilsson	mnilsson@blm.gov	Environmental Protection Specialist	BLM Point Arena-Stornetta Unit	Point Arena
Todd Crabtree	CrabtreeT@cdchousing.org	Executive Director	Community Development Commission - Housing Authority	Regional Agency
Scott Cratty	firesafe@pacific.net	Executive Director	Fire Safe Council	Wildfire Stakeholder
Sue Carberry	scarberry2@gmail.com	Chief	Long Valley Fire Protection District/Laytonville Fire Department	Wildfire Stakeholder
Elizabeth Salomone	DistrictManager@RRFC.net	General Manager	The Mendocino County Russian River Flood Control and Water Conservation Improvement District	Regional Agency
Michael Oliphant	oliphant@mendocinocounty.org	Department of Planning and Building, Building Official	Mendocino County Building Official	Mendocino County
Joe Zicherman	avpinotgrower@gmail.com	Chairman	Mendocino County Fire Safe Council	Mendocino County
Jon K. Noyer	jnoyer@btcsd.org	Chief	Brooktrails CSD Fire Department	Wildfire Stakeholder
Amanda James	BLM_CA_Web_UK@blm.gov	Field Manager	Bureau of Land Management, Ukiah Field Office	Wildfire Stakeholder
David Latoof	chief8400@mcn.org	Chief	Mendocino VFD	Wildfire Stakeholder

HMPC Meeting 1 Attendees



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

1 12:46:18—> From Mac Lojowsky to Torie Jarvis(Privately) : I'm with Mendocino College- I don't think we are part of this plan. I do not think I need to be in this meeting.

2 13:01:25—> From MCollins : Melanie Collins with Sonoma County DEM

3 13:01:26—> From Paul Andersen : Paul Andersen - City of Point Arena

4 13:01:28—> From Torie Jarvis : If you have any technical issues, chat here or text Torie with Dynamic Planning + Science (970-596-5039)

5 13:01:40—> From Xuyen Ung (Mendocino) : Xuyen Ung, County of Mendocino

6 13:01:57—> From Dave MVFD : Dave Latoof, Mendocino Fire

7 13:01:58—> From ajames : Amanda James, Field Manager, BLM Ukiah Field Office

8 13:02:01—> From Paul Duncan - CALFIRE Operations Chief : Paul Duncan - CALFIRE Mendocino Unit - Operations Chief

9 13:02:05—> From Scott Cratty, Mendocino County Fire Safe Council : Scott Cratty, Mendocino County Fire Safe Council

10 13:02:29—> From Elizabeth Salomone, RRFC : Elizabeth Salomone, Russian River Flood Control District

11 13:02:36—> From Molly Nilsson : Molly Nilsson, Environmental Protection Specialist, BLM Ukiah

12 13:02:39—> From Chief Noyer : Jon Noyer, Fire Chief Brooktrails Township CSD

13 13:03:34—> From Todd Crabtree : Hello. Not sure if I have a working mic but I can hear everyone

14 13:03:36—> From farrl : Leif Farr

15 13:03:36—> From Stephen Turner : Stephen Turner, Mendocino County Office of Education

16 13:03:38—> From Craig Schlatter : Craig Schlatter, City of Ukiah

17 13:04:20—> From Heather Correll Rose - Mendocino County Risk Management : Heather Correll Rose Mendocino County Risk Management

18 13:04:27—> From Anthony Massucco - CAL FIRE Pre-Fire Engineer : Anthony Massucco - CALFIRE MEU - PRE-FIRE ENGINEER

19 13:04:34—> From Sarah Dukett : Sarah Dukett - Mendocino County Water Agency and Executive Office

20 13:04:45—> From blaserb : Brentt Blaser - Mendocino County OES

21 13:04:45—> From William Schurtz County Human Resources : William Schurtz Mendocino County Human Resources

22 13:05:22—> From Tami Bartolomei, City of Ukiah : Tami Bartolomei, City of Ukiah

23 13:08:33—> From Torie Jarvis to Todd Crabtree(Privately) : Hi Todd, you shouldn't need your mic but if you have a question you can also chat it here and I can ask it for you.

24 13:10:38—> From Todd Crabtree to Torie Jarvis(Privately) : Thank you Torie

25 13:17:04—> From Elizabeth Salomone, RRFC : Yes, I'm from a special district - Russian river flood control

26 13:17:25—> From Todd Crabtree to Torie Jarvis(Privately) : I put us down as Other. I am with the Housing Authority for Mendocino County

27 13:19:37—> From Tami Bartolomei, City of Ukiah : Tami Bartolomei-was not able to log into Pollev- I was involved in the last planning process

28 13:20:16—> From Torie Jarvis to Tami Bartolomei, City of Ukiah(Privately) : Thanks Tami! Does this link help? You should just enter your name and be ready to roll: <https://pollev.com/dynamicplanning>

29 13:21:32—> From Torie Jarvis to Todd Crabtree(Privately) : Thanks Todd. that works. We are more practicing Pollev than keeping up too much. Great to have the housing authority here.

30 13:21:48—> From Joe Zicherman : Checking in for MC Fire Safe Council - Bd of Directors

31 13:41:32—> From Torie Jarvis to Paul Duncan - CALFIRE Operations Chief(Privately) : Hi Paul, it doesn't look like we currently have your email address for our mailings. Would you like us to add you? Can you share your email?

32 13:42:21—> From Torie Jarvis to MCollins(Privately) : Hi Melanie, it doesn't look like we have your email address for our outreach. Would you like us to add you? If so, please chat me your email.

33 13:43:04—> From blaserb : since schools report to the state, do they need to

HMPC Mtg 1 Meeting Zoom Chat 1



adopted the plan too? I was under the impression that they had different requirements

34 13:43:12—> From: Torie Jarvis to: Elizabeth Salomone, RRFC(Privately) : Hi Elizabeth, thanks for joining today. It doesn't look like we have your email address for our outreach. Would you like us to add you? If so, please chat me your email.

35 13:43:39—> From: MCollins to: Torie Jarvis(Privately) : Yes, please add me. Melanie.collins@sonoma-county.org. I'll be your DEM Liaison for the County of Sonoma. Thank you

36 13:43:42—> From: Craig Schlatter to: Torie Jarvis(Privately) : Can you please also discuss the relationship between this hazard mitigation plan and cities' general plan safety elements. Do you recommend cities adopt the Plan into their general plans or is that not necessary?

37 13:44:51—> From: blaserb : also how does this align with the safety plan. This question can wait.

38 13:44:58—> From: blaserb : Thank you!

39 13:45:03—> From: Craig Schlatter to: Torie Jarvis(Privately) : Thanks.

40 13:45:15—> From: Torie Jarvis to: Craig Schlatter(Privately) : Sure. It's a great question.

41 13:45:29—> From: Torie Jarvis to: MCollins(Privately) : Great, thanks Melanie!

42 13:46:24—> From: MCollins to: Torie Jarvis(Privately) : Is it possible to get a copy of the presentation?

43 13:47:22—> From: Torie Jarvis to: Craig Schlatter(Privately) : Hi Craig, glad you could join the meeting. It doesn't look like we currently have your email address for our mailings. Would you like us to add you? Can you share your email/ title with City?

44 13:48:04—> From: Craig Schlatter to: Torie Jarvis(Privately) : Yes please. I am the Community Development Director for the City of Ukiah. Email is cschlatter@cityofukiah.com. Thanks much.

45 13:48:34—> From: Torie Jarvis to: Elizabeth Salomone, RRFC(Privately) : False alarm-- I see your info now!

46 13:51:19—> From: Torie Jarvis to: Anthony Massucco(Privately) : Hi Anthony, glad you could join the meeting. It doesn't look like we currently have you on our contact list. Would you like us to add you?

47 13:52:33—> From: Torie Jarvis to: bgunn(Privately) : Hi! Just trying to track meeting attendees-- mind letting me know who this is? Not seeing a "Gunn" last name on our contact list. Let me know also if you'd like to share your email to be added. Thanks!

48 13:52:56—> From: Anthony Massucco to: Torie Jarvis(Privately) : Torie, I believe that would be good. I was invited by my chief and will likely be part of the process for the time being.

49 13:53:46—> From: Torie Jarvis to: Molly Nilsson(Privately) : Hi Molly, glad you could join the meeting. Do you want me to add you to our email list for this HMP? Looks like for the BLM we currently have Amanda James. Let me know your email address if so.

50 13:54:06—> From: Torie Jarvis to: Anthony Massucco(Privately) : Great! Would you mind sharing your email and title? We'll get you added.

51 13:54:25—> From: Torie Jarvis to: Craig Schlatter(Privately) : Great! Not sure how we missed you before.

52 13:54:35—> From: Anthony Massucco to: Torie Jarvis(Privately) : anthony.massucco@fire.ca.gov

53 13:54:47—> From: Anthony Massucco to: Torie Jarvis(Privately) : Fire Captain -- Pre-Fire Engineer

54 13:55:18—> From: Torie Jarvis to: Anthony Massucco(Privately) : Great thanks. I see your title above now. Got you added.

55 13:55:22—> From: Craig Schlatter to: Torie Jarvis(Privately) : No problem.

56 13:55:39—> From: Molly Nilsson to: Torie Jarvis(Privately) : Yes, you can add me to the list! My email is mnilsson@blm.gov. I am currently the poc of the Pt. Arena-Stornetta unit of the CA Coastal National Monument.

57 13:56:00—> From: Anthony Massucco to: Torie Jarvis(Privately) : great...thank you! :)

58 13:56:05—> From: Torie Jarvis to: Molly Nilsson(Privately) : Great thanks Molly.

59 14:06:40—> From: Elizabeth Salomone, RRFC to: Torie Jarvis(Privately) : Hi Torie,

HMPC Mtg 1 Meeting Zoom Chat 2



just to make sure, my NEW email address is DistrictManager@rrfc.net. (The old one was rrfc@pacific.net) thanks!

60 14:10:56—> From: Torie Jarvis to: Elizabeth Salomone, RRFC(Privately) : Perfect, I will check right now.

61 14:11:07—> From: Paul Duncan - CALFIRE Operations Chief to: Torie Jarvis(Privately) : Sure. Paul.Duncan@fire.ca.gov

62 14:11:27—> From: Torie Jarvis to: Paul Duncan - CALFIRE Operations Chief(Privately) : Great, thanks.

63 14:35:36—> From: Stephen Turner : Tanzywart

64 14:39:28—> From: Stephen Turner : Build for internet infrastructure in rural areas

65 14:47:06—> From: blaserb : evacuation planning?

66 14:47:33—> From: Craig Schlatter to: Torie Jarvis(Privately) : Is there a period of time by which a municipality must adopt the changes to their safety element, after the local hazard mitigation plan is adopted by the County?

67 14:48:02—> From: blaserb : perfect

68 14:48:05—> From: blaserb : thanks

69 14:48:41—> From: Craig Schlatter to: Torie Jarvis(Privately) : In other long term planning documents, it is a period like 180 days.

70 14:49:05—> From: blaserb : yes

71 14:50:28—> From: Craig Schlatter to: Torie Jarvis(Privately) : All Mendocino County jurisdictions have (or should have) adopted their housing elements for 2019-27.

72 14:50:56—> From: Craig Schlatter to: Torie Jarvis(Privately) : So that means we have until 2027?

73 14:52:03—> From: Torie Jarvis to: Craig Schlatter(Privately) : We should look into this more then. If everyone "escaped" having the clock start ticking this round of housing elements, then yet, seems like there wouldn't be a required update until the next Housing Element based on what Aaron said. Need to do some more digging!

74 14:52:36—> From: Craig Schlatter to: Torie Jarvis(Privately) : Okay sounds good. I think the County of Mendocino is the only jurisdiction in Mendocino County without an adopted in compliance housing element.

75 14:53:39—> From: Torie Jarvis to: Craig Schlatter(Privately) : And they'll have an updated safety element at the end of this whole process along with the HMP

76 14:53:40—> From: Craig Schlatter to: Torie Jarvis(Privately) : The housing element clock makes sense though, as the SB 244 analysis for example related to disadvantaged unincorporated communities and other state legislative requirements are triggered off the HE.

77 14:54:12—> From: Torie Jarvis to: Craig Schlatter(Privately) : Yeah so do the vulnerability assessments for safety element with that same information at the least before it's stale.

78 15:01:22—> From: Sarah Dukett : When will community outreach start? When are you looking at sending out the survey to the community?

79 15:03:34—> From: farrl : There is a problem with your incorporated city charts

80 15:04:02—> From: blaserb : will we be integrating the state's AFN statistics? Will there be graphics (maps) created to show the density of these different populations within the county

81 15:04:16—> From: farrl : You list the city of Ukiah twice and are missing Willits

82 15:04:27—> From: Paul Andersen : Looks like Point Arena and Ukiah are nterchnaged

83 15:04:45—> From: Paul Andersen : Missing Willits

84 15:05:55—> From: Torie Jarvis to: farrl(Privately) : Could you be more specific or email me at torie@dynamicplanning.co if there are some changes we should make aside from the typos :) Thank you!

85 15:06:04—> From: Stephen Turner : Who do we have our media person contact to set up the link to our web site

86 15:06:32—> From: blaserb : You guys are great. Thank you.

87 15:06:38—> From: Torie Jarvis : For assistance getting materials on websites contact torie@dynamicplanning.co

88 15:07:40—> From: Torie Jarvis : 970-323-4330

89 15:08:09—> From: farrl to: Torie Jarvis(Privately) : The ACS has a very high margin of error in Mendocino County due to the small population numbers

HMPC Mtg 1 Meeting Zoom Chat 3



90 15:09:20—> From: Torie Jarvis to: farrl(Privately) : Yeah we are really locked into
ACS here because of the GIS linkages that you heard about. And the purpose of these
documents is really to give more an overview. Definitely imperfect.

91 15:09:21—> From: Tami Bartolomei, City of Ukiah to: Torie Jarvis(Privately) : Thank
you for your work and explaining in detail

92 15:09:36—> From: Elizabeth Salomone, RRFC : Wow, that was a lot of information --
thank you!

93 15:11:03—> From: Torie Jarvis to: Tami Bartolomei, City of Ukiah(Privately) :
You're welcome! Looking forward to working together.

94 15:11:08—> From: Aaron Pfannenstiel to: Torie Jarvis(Privately) : Our next meeting
will be May 26th?

95 15:11:23—> From: Aaron Pfannenstiel to: Torie Jarvis(Privately) : Sorry. 27th?

96 15:12:15—> From: blaserb : could we get the slides too.

97 15:12:57—> From: Torie Jarvis to: Aaron Pfannenstiel(Privately) : I think I lost
track of emailing to confirm dates for the next two meetings with you and Nash before
this... so will circle back to confirm and send a save the date, ideally for both of
the next two meetings, ASAP. Good follow up from this meeting plus meeting materials.

98 15:13:28—> From: Torie Jarvis to: blaserb(Privately) : We'll post slides ASAP

99 15:13:32—> From: Stephen Turner : thank you

100 15:13:59—> From: blaserb to: Torie Jarvis(Privately) : thank you

101 15:14:06—> From: Elizabeth Salomone, RRFC : If you need more Special District
engagement, connect with LAFCo for assistance in contacting.

102 15:14:21—> From: Don : thanks

103 15:14:23—> From: blaserb to: Torie Jarvis(Privately) : Have a great day!

104 15:14:28—> From: ajames : thank you

105 15:14:28—> From: Aaron Pfannenstiel to: Torie Jarvis(Privately) : Yes. We are set
for May 27th and June 24th. We confirmed via email



Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Thursday, April 30, 2020 5:46 PM
To: Torie Jarvis
Subject: Mendocino Hazard Mit. Plan Mtg #1 follow up and SAVE THE DATES

MENDOCINO MULTI-JURISDICTION HAZARD MITIGATION PLAN UPDATE

Thank you all for a great first meeting for the Mendocino MJHMP yesterday! If you weren't able to join us, we have the [meeting recording](#) and [powerpoint slides](#) posted on the project website, linked below, along with the meeting materials including the [Engagement Strategy](#) and [Memo on Updating the 2014 Plan](#).

SAVE THE DATES

for the next 2 Planning Partners

Meetings:

Wed. May 27 ([calendar link](#))

12 PM to 2 PM

Wed. June 24 ([calendar link](#))

12 PM to 2 PM

Both will likely be held via Zoom



A note on the SURVEY discussed at our meeting: We are working on developing resources for public release of the survey that will provide for consistent messaging across our jurisdictions. Please stand by for public release of the survey until you receive those materials!

Upcoming Meetings:

May 27, 12 - 2 PM
June 24, 12 - 2 PM

Meeting resources available here:

Project webpage:

<http://mitigatehazards.com/mendocino-county/>

Meeting webpage:

<http://mitigatehazards.com/mendocino-county/meetings/>





Password: Mendocino2020

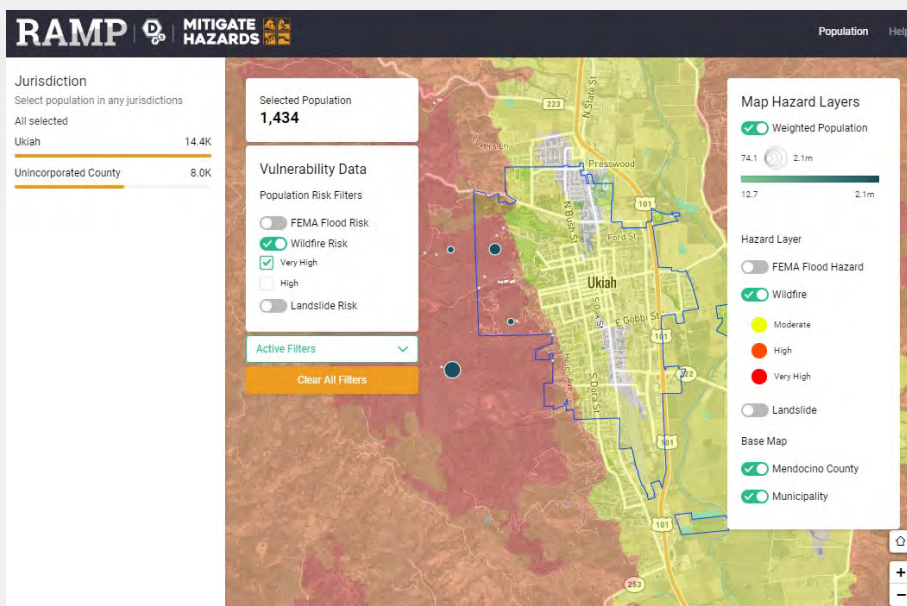


Image above is an example of the Risk Assessment Mapping Tool (RAMP) that will be demonstrated at Meeting #2.

Background information on the MJHMP:

The purpose of the Mendocino MJHMP is to reduce property losses and avoid injury and/or casualties resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce loss of life, personal injury, and property damage that can result from a disaster.

The Plan is multi-jurisdictional in that 6 different Mendocino County jurisdictions are participating (the County, City of Fort Bragg, City of Point Arena, City of Ukiah, City of Willits, and the Mendocino County Office of Education). **Your jurisdiction's active participation in the update process, as demonstrated by your attendance at this meeting, is one of FEMA's prerequisites for**



Plan approval. Please let me know if you need additional information and how I can be of assistance. I appreciate your time and consideration as always. I look forward to seeing you at the end of the month.

Note, while we greatly prefer to meet face-to-face, due to coronavirus, the upcoming meetings will be held via Zoom. We will hope subsequent meetings can be in-person.

 [VISIT THE PROJECT PAGE TO LEARN MORE](#)

MITIGATE HAZARDS




This email was sent to torie@dynamicplanning.co

[why did I get this?](#) [unsubscribe from this list](#) [update subscription preferences](#)

Dynamic Planning + Science · 19235 HWY 550 · Montrose, CO 81403 · USA





Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Thursday, May 14, 2020 1:14 PM
To: Torie Jarvis
Subject: Reminder: Mendocino Hazard Mitigation Plan Mtg #2 May 27th

**MENDOCINO COUNTY
MULTI-JURISDICTIONAL HAZARD
MITIGATION PLAN
2020 UPDATE**

This is a reminder that the second Planning Committee meeting in the process to update the Mendocino Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) is coming up in 2 weeks!

Planning Committee Meeting #2

Wed. May 27, 2020

12 PM to 2 PM

Calendar reminder [available here](#).

Via Zoom conference call:

<https://us02web.zoom.us/j/82180516814>

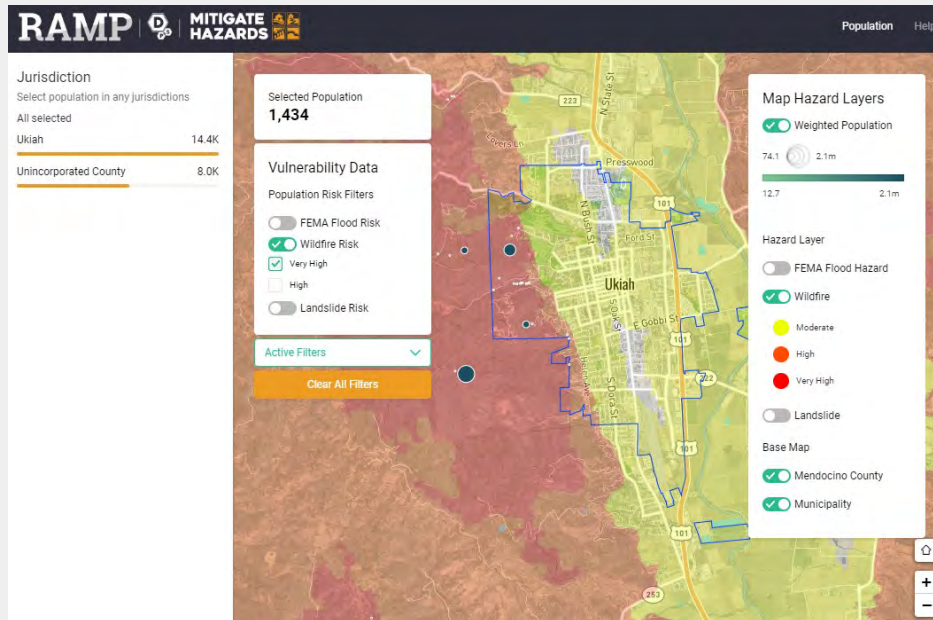
Call-in option: 669 900 6833

Meeting ID: 821 8051 6814



Project updates and meeting materials are available on the Mendocino County MJHMP page:

- www.mitigatehazards.com/mendocino-county/meetings/
- Project Password: Mendocino2020



In our second meeting to craft the County's Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), we are diving into assessing the County's vulnerability to hazards. The above image is a sample of the Risk Assessment Mapping Platform (RAMP) that we'll be exploring together. We'll also be getting geared up for each planning partner to perform vulnerability assessments.

May 2020

27



AGENDA for the meeting:

- **Welcome and Introductions**
- **Meeting #1 Brief Recap**
- **Risk Assessment/ Community Vulnerability Review**
 - Review Risk Assessment Mapping Platform (RAMP)
- **Risk Matrix Group Exercise**
- **Hazard Problem Statement Exercise Review**
- **Review Outreach Materials**
 - Survey
 - Web content
- **Next Steps**
 - Jurisdictional Exercises (capabilities assessment, success stories, risk matrix, and problem statements)



Save the date for Meeting #3!

Wednesday, June 24, 2020 from 12-2 PM.

Calendar reminder [available here](#).

Background information on the MJHMP:

The purpose of the Mendocino MJHMP is to reduce property losses and avoid injury and/or casualties resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce loss of life, personal injury, and



property damage that can result from a disaster.

For planning partners: The Plan is multi-jurisdictional in that 6 different Mendocino County jurisdictions are participating (the County, City of Fort Bragg, City of Point Arena, City of Ukiah, City of Willits, and the Mendocino County Office of Education). Your jurisdiction's active participation in the update process, as demonstrated by your attendance at this meeting, is one of FEMA's prerequisites for Plan approval.

For stakeholders: Many of you are also included in this email list as important stakeholders. While your participation is not required, we are happy to have you at any of these large meetings (of which there are 3 total). We will also arrange for hazard-specific meetings to garner more specific input on major hazards like wildfire, flood, and earthquake. You're welcome to just participate in those hazard-specific meetings as well.

Please let me know if you need additional information and how I can be of assistance. I appreciate your time and consideration as always. I look forward to seeing you at the end of the month.

Note, while we greatly prefer to meet face-to-face, due to coronavirus, the upcoming meetings will be held via Zoom. We will hope subsequent meetings can be in-person.

 [VISIT THE PROJECT PAGE TO LEARN MORE](#)

MITIGATE HAZARDS






The screenshot shows a Zoom meeting interface. The main window displays a slide titled "MENDOCINO COUNTY - Multi-Hazard Mitigation Plan 2020 Update" with the Mendocino County seal. The slide content is as follows:

Agenda

- Welcome and Introductions
- Meeting #1 Brief Recap
- Risk Assessment/ Community Vulnerability Review
- Jurisdictional Exercise Review
 - Risk Matrix Group Exercise Review
 - Hazard Problem Statement Exercise Review
- Review Outreach Materials
- Next Steps

At the bottom of the slide is the "MITIGATE HAZARDS" logo and the website "mitigatehazards.com". The right sidebar shows a list of participants: Jrobblins, Scott Cratty, Mc..., William Schurtz, Craig Schlatter, daniel, Tami Bartolome..., Todd Crabtree, dashlieli, Ty, farri, SUE CARBERRY, Anne Mangau, Stephen Turner, Alex, Sue carberry, 17074534363, 17023212650, and 17074591155. The bottom status bar indicates 25 participants, a chat window, a "Share Screen" button, and a "Leave" button.

HMPC Meeting 2 Screenshot 1

This screenshot is similar to the first one, showing the same "Agenda" slide. The participant list on the right sidebar is different and includes: Urban Mobley D..., Brian Greer, Dusty Duley, 17072346040, t-atga, Torie Jarvis DP+S..., blaserb, correllh@mend..., Aaron Flannens..., Paul Andersen, Molly Nilsson ..., Chief Noyer -Br..., Beth, RR Flood..., ungs, gonzalezn, Sarah Duket, Rich, and Jrobblins. The interface elements at the bottom are consistent with the first screenshot.

HMPC Meeting 2 Screenshot 2



Name	E-mail	Title	Dept	HMP Jurisdiction
Anthony Massucco	anthony.massucco@fire.ca.gov	Fire Captain	Cal Fire -Howard Forest Emergency Command Center	Mendocino County
Anne Molgaard	molgaardac@mendocinocounty.org	Director	Child Support Services	Mendocino County
William Schurtz	schurtzw@mendocinocounty.org	Director	Human Resources	Mendocino County
Leif Far	farrl@mendocinocounty.org	Mendocino County	Information Systems (GIS)	Mendocino County
Barbara Moed	moedb@mendocinocounty.org	Executive Officer	Mendocino County Air Quality Management District (MCAQMD)	Mendocino County
Nash Gonzalez	gonzalezn@mendocinocounty.org	Mendocino County Disaster Recovery Director	Mendocino County Executive Office	Mendocino County
Brentt Blaser	blaserb@mendocinocounty.org	Emergency Services Coordinator	Mendocino County Sheriff's Office	Mendocino County
Sarah Duckett	duketts@mendocinocounty.org	Water Agency	Mendocino County Water Agency	Mendocino County
Xuyen Ung	ungx@mendocinocounty.org	Administrative Analyst	Recovery/CEO	Mendocino County
Heather Correll Rose	correllh@mendocinocounty.org	Executive Office	Risk Management	Mendocino County
Richard Molinari	molinarir@co.mendocino.ca.us	Shelter Manager	Ukiah Animal Shelter	Mendocino County
Howard Dashiel	dashielh@mendocinocounty.org	Director	Department of Transportation	Mendocino County
Steve Turner	sturner@mcoe.us	Director	Maintenance & Operations, MCOE	Mendocino County Office of Education
Paul Anderson	pa-admin@mcn.org	Administrative Assistant	City of Point Arena	City of Point Arena
Tami Bartolomei	tbartolemei@cityofukiah.com	Office of Emergency Management	City of Ukiah	City of Ukiah
Dusty Duley	dduley@cityofwillits.org	Community Development Director	Community Development	City of Willits
Craig Schlatter	cschlatter@cityofukiah.com	City of Ukiah Community	Community Development	City of Ukiah
Tom Varga	tvarga@fortbragg.com	Director of Public Works	Former City of Fort Bragg	City of Fort Bragg
Molly Nilsson	mnilsson@blm.gov	Environmental Protection Specialist	BLM Point Arena-Stornetta Unit	Point Arena
Todd Crabtree	CrabtreeT@cdchousing.org	Executive Director	Community Development Commission - Housing Authority	Regional Agency
Scott Cratty	firesafe@pacific.net	Executive Director	Fire Safe Council	Wildfire Stakeholder
Sue Carberry	scarberry2@gmail.com	Chief	Long Valley Fire Protection	Wildfire Stakeholder
Elizabeth Salomone	DistrictManager@RRFC.net	General Manager	The Mendocino County Russian River Flood Control and Water Conservation	Regional Agency

HMPC Meeting 2 Attendees



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

1 12:57:24—> From: Torie Jarvis to: Ethan Mobley DP+S(Privately) : hey can you make
me host?

2 13:00:05—> From: Torie Jarvis : Hell everyone. If you have technical issues during
the call you can chat me directly or email torie@dynamicplanning.co

3 13:01:18—> From: Torie Jarvis : <http://mitigatehazards.com/mendocino-county/ramp/>
username and password Mendocino2020

4 13:02:54—> From: Rich to: Torie Jarvis DP+S(Privately) : Rich from Animal Care
Services is on via phone and watching online -- no working microphone on computer.
Thanks.

5 13:04:37—> From: Torie Jarvis DP+S to: Rich(Privately) : Got you-- thanks Rich.
Glad you can see the screen, you should be able to still do the PolLEV questions too
that way (which will be fun)

6 13:04:51—> From: Rich to: Torie Jarvis DP+S(Privately) : Gotcha. :)

7 13:05:56—> From: Paul Andersen : MUTE

8 13:07:54—> From: Stephen Turner : Stephen Turner here from Mendocino County Office
of Education representing the schools in the county.

9 13:08:04—> From: Beth, RR Flood Control : Elizabeth Salomone, General Manager of the
Mendocino County Russian River Flood Control & Water Conservation Improvement
District. Thanks!

10 13:08:15—> From: jrobbins : James Robbins, City of Willits

11 13:08:45—> From: Chief Noyer - Brooktrails Township CSD : Jon Noyer, Brooktrails
Township CSD

12 13:08:49—> From: William Schurtz : William Schurtz, HR Director, Mendocino County

13 13:08:56—> From: Todd Crabtree : Todd Crabtree, Community Development Commission of
Mendocino County

14 13:09:00—> From: ungx : Xuyen Ung, County of Mendocino

15 13:09:03—> From: gonzalezn : Nash Gonzalez, signed in

16 13:09:06—> From: Scott Cratty, Mendocino County Fire Safe Council : Scott Cratty,
Mendocino County Fire Safe Council

17 13:09:11—> From: SUE CARBERRY : SUE CARBERRY - LAYTONVILLE FIRE

18 13:09:11—> From: Dusty Duley : Dusty Duley, Community Development Director, City of
Willits

19 13:09:36—> From: tvarga : Tom Varga, City of Fort Bragg

20 13:09:38—> From: blaserb : Hello, I'm on Zoom and called in since the computer does
not have a camera/microphone. I'm using *6

21 13:09:47—> From: blaserb : Mendocino County OES

22 13:09:48—> From: Molly Nilsson - BLM Ukiah FO : Molly Nilsson, point of contact for
the Point Arena-Stornetta Public Lands, BLM

23 13:09:51—> From: farrl to: Torie Jarvis DP+S(Privately) : Leif Farr, GIS
Coordinator, Mendocino County

24 13:10:34—> From: mendocino county : Sarah Dukett - Mendocino County Water Agency and
Mendocino County Executive Office

25 13:11:09—> From: Aaron Pfannenstiel to: Torie Jarvis DP+S(Privately) : Dusty Duley
is the POC for Willits.

26 13:13:32—> From: Tami Bartolomei, City of Ukiah : Tami Bartolomei, City of Ukiah

27 13:14:11—> From: Torie Jarvis DP+S to: Aaron Pfannenstiel(Privately) : Got it. That
should have been updated after last meeting. Miscommunication between me and Ethan

28 13:26:56—> From: blaserb : Did PSPS/de-energization get added to the list?

29 13:27:05—> From: tvarga : We should consider expanding wildfire to include Public
Safety Power Shutoff (PSPS) events. This was a major emergency/disaster issue last year.

30 13:28:01—> From: tvarga : Fort Bragg has an urban conflagration issue outside of
wildfires. We have an at risk downtown that is old.

31 13:28:42—> From: blaserb : Probably best to list the threat as de-energization/power
loss.

32 13:29:16—> From: Torie Jarvis DP+S to: blaserb(Privately) : Great feedback. Noted!

33 13:31:23—> From: farrl to: Torie Jarvis DP+S(Privately) : Hazardous Materials are
part of other natural disasters, Toxic materials are released in floods, fires etc

34 13:31:27—> From: jrobbins : Would it be possible/useful to leave issues in the Plan,
but only mention them briefly?

HMPC Meeting 2 Zoom Chat 1



- 35 13:31:41—> From :gonzalezn : The 2009 County General Plan has policies related to Naturally Occurring Asbestos, as this has been an issue for years, Will this present a problem by removing? Nash Gonzalez
- 36 13:31:48—> From :tvarga : Geologic hazards: landslides, soils, natural asbestos, etc.
- 37 13:32:15—> From :Craig Schlatter to :Torie Jarvis DP+S(Privately) : How is environmental justice addressed within the HMP, and do you recommend approaching this separately from climate change?
- 38 13:33:09—> From :tvarga : Support suggestion to briefly mention minor issues...
- 39 13:37:25—> From :gonzalezn : As long as there are no issues, I am OK with the consolidation, Nash
- 40 13:37:44—> From :Craig Schlatter to :Torie Jarvis DP+S(Privately) : Oops you can say my name- I just realized I put that on private.
- 41 13:38:10—> From :Torie Jarvis DP+S to :Craig Schlatter(Privately) : Ha it's all good. Then I would say your last name wrong :)
- 42 13:38:45—> From :Craig Schlatter to :Torie Jarvis DP+S(Privately) : Understandable- we are not in Switzerland, where it apparently is like the name smith :0
- 43 13:39:00—> From :gonzalezn : Under Climate Change, will Sea Level Rise be addressed and how it will impact our coastal communities, including Noyo Harbor, Little River, Point Arena, etc. ? Nash Gonzalez
- 44 13:40:25—> From :Craig Schlatter to :Torie Jarvis DP+S(Privately) : Craig Schlatter (shlahhh-ter), Community Development Director for City of Ukiah :)
- 45 13:40:45—> From :Torie Jarvis DP+S to :Craig Schlatter(Privately) : Oh man I would have gotten it right!
- 46 13:40:56—> From :Craig Schlatter to :Torie Jarvis DP+S(Privately) : Nice!
- 47 13:41:05—> From :tvarga : Comment: Sea level rise will be essential for coastal communities. It is important to the Coastal Commission and other State agencies.
- 48 13:41:39—> From :Torie Jarvis DP+S to :tvarga(Privately) : thanks Tom, just FYI we save these chats and I'm capturing your comments separately, so this is great info.
- 49 13:44:54—> From :tvarga to :Torie Jarvis DP+S(Privately) : Thanks
- 50 13:46:20—> From :tvarga to :Torie Jarvis DP+S(Privately) : Some additional thoughts:
- 51 13:48:22—> From :tvarga to :Torie Jarvis DP+S(Privately) : oops, some additional thoughts: (1) there are a lot of larger areas that considered disadvantaged and severely disadvantaged communities in the current ACS, (2) census blocks in our low population density county are pretty large and not very granular.
- 52 13:50:56—> From :blaserb to :Torie Jarvis DP+S(Privately) : will there be any other ADA/AFN populations identified? I'm assuming the community profile might cover this
- 53 13:51:12—> From :Torie Jarvis DP+S to :tvarga(Privately) : Ah thanks. We added some language to that demographics report to acknowledge the inaccuracies in the ACS and definitely focus on keeping them high level as a result and guiding jurisdictions to identify vulnerable populations as you all are the expert on that, not us (and certainly not ACS)
- 54 13:54:13—> From :blaserb : will there be any other ADA/AFN populations identified? I'm assuming the community profile might cover this
- 55
- 56 13:55:03—> From :Craig Schlatter : All Mendocino County jurisdictions recently completed their Housing Elements, completing updates to demographic data. For consistency, it may be good to align the HMP demographic information with cities' demographic information. Seeking alignment will also be important if cities adopt the HMP into our safety elements for GP consistency.
- 57 13:55:20—> From :Torie Jarvis DP+S to :blaserb(Privately) : We don't have a great source for ADA populations or AFN populations, so we point out to jurisdictions to consider how to ID particular vulnerable populations. We generally do have stats more broadly on persons with disability status but it's also ACS so for such small numbers and the margin of error in census block, it's very high level. Always open to news ways to show that kind of information!
- 58 13:56:41—> From :Torie Jarvis DP+S to :Craig Schlatter(Privately) : We haven't mined Housing Elements for demographics data before but very interested in this idea-- recorded on our notes.
- 59 13:56:55—> From :Craig Schlatter : Okay great!

HMPC Meeting 2 Zoom Chat 2



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

60 13:57:04—> From: blaserb : Perhaps mirror the states AFN/ADA effort?
<https://caloes.ca.gov/cal-oes-divisions/access-functional-needs/oafn-web-map>

61 13:57:17—> From: Craig Schlatter to: Torie Jarvis DP+S(Privately) : Ooops- I'm not
good at this private/public chat thing it appears. :)

62 13:57:41—> From: blaserb to: Torie Jarvis DP+S(Privately) : sorry,

63 13:57:44—> From: blaserb to: Torie Jarvis DP+S(Privately) : Perhaps mirror the
states AFN/ADA effort?
<https://caloes.ca.gov/cal-oes-divisions/access-functional-needs/oafn-web-map>

64

65 13:57:46—> From: Torie Jarvis DP+S to: Craig Schlatter(Privately) : Yeah you are. I
just wrote you back privately for the brainstorm/ not to overwhelm folks. You send to
everyone.

66 13:57:57—> From: blaserb to: Torie Jarvis DP+S(Privately) : without the maps, but
align the data sets

67 13:58:50—> From: Torie Jarvis DP+S to: blaserb(Privately) : Yes! Will definitely
check this out, thank you.

68 13:59:12—> From: Stephen Turner : Do you want any local geotechnical survey
information? We have some for Talamage (Mayacama) and Ukiah

69 13:59:48—> From: Stephen Turner : ok

70 14:02:24—> From: gonzalezn : What about earthquake shaking impacts from neighboring
counties, such as Humboldt County has had earthquakes in years past that have ben felt
in Mendocino County, Nash

71 14:06:35—> From: Scott Cratty, Mendocino County Fire Safe Council to: Torie Jarvis
DP+S(Privately) : I understand a significant wave of sudden oak death is expected in
the county over the next few years. Would that feed in as a subset of wildfire risk?

72 14:08:51—> From: blaserb : Don't we use the most dangerous and then run HAZUS

73 14:10:22—> From: tvarga : Earthquakes in Humboldt: Mendocino Triple Junction is the
contact from San Andreas and Cascadia subduction zone. This is farther away but
potentially much more powerful. This is actually our biggest tsunami source concern.
Please double check with CGS.

74 14:11:01—> From: blaserb : Yes, most dangerous/most probable EQ scenario.

75 14:19:48—> From: Stephen Turner : M7.4 EQ Mayacama "Garberville" should be Geyserville

76 14:21:48—> From: Torie Jarvis DP+S to: Scott Cratty, Mendocino County Fire Safe
Council(Privately) : Thanks Scott-- I pulled out your comment to make sure we are
making that link in text. If you have any resource we should make sure we're citing on
that, would be great (torie@dynamicplanning.co)

77 14:25:49—> From: Torie Jarvis DP+S : Hi Stephen, USGS lists as Garberville:
https://earthquake.usgs.gov/scenarios/eventpage/nclegacymaacamagarbervillem7p4_se/execute

78 14:26:16—> From: Craig Schlatter to: Torie Jarvis DP+S(Privately) : This is a
purely planning question, so I'll go private- prompted since Brian mentioned WUI.
Ethan stated earlier the recommendation to not pursue urban conflagration as a focus
area. Is WUI still discussed as information/background, even without the focus on
urban conflagration?

79 14:27:23—> From: Torie Jarvis DP+S to: Craig Schlatter(Privately) : YES definitely.
Our concern with urban conflagration is that the issues are either wildfire with
conflagration as a secondary hazard or it's not a natural disaster. We describe
conflagration in wildfire and stress the concerns around WUI generally as well.

80 14:27:41—> From: Stephen Turner : Thanks

81 14:28:22—> From: Craig Schlatter to: Torie Jarvis DP+S(Privately) : Okay perfect-
thanks.

82 14:31:32—> From: Scott Cratty, Mendocino County Fire Safe Council : Is there a list
of critical infrastructure you are still gathering or is it considered complete?

83 14:32:57—> From: farrl : If your are calculating population by block then how are
you allocating that population when only a portion of the block is in a hazard area.

84 14:36:37—> From: Stephen Turner : I would like to ask that schools and Mendocino
College be listed as critical facilities. What is the process?

85 14:37:22—> From: farrl : Blocks in Mendocino County can be very large, and the true
population is all located in one side or one area of that block?

HMPC Meeting 2 Zoom Chat 3



86 14:40:30—> From :farrl : What is the source or criteria for the Landslide hazard
layer?
87 14:41:05—> From :Torie Jarvis DP+S : to : Stephen Turner(Privately) : Hi Stephen-- let
me follow up with Brian on this question and look back at how we define critical
facilities. We may have to consider a different way to capture those facilities and are
happy to work for you on that.
88 14:41:54—> From :Stephen Turner : to : Torie Jarvis DP+S(Privately) : thanks
89 14:45:12—> From :jrobbins : It seems to be working well and seems to be useful. Some
of the data points seem a bit off, but that is always the case with models of this
nature.
90 14:49:25—> From :Torie Jarvis DP+S : to : Stephen Turner(Privately) : Hi Stephen looks
like once we have your data it will be categorized as critical infrastructure data--
it's just not in there yet!
91 14:50:01—> From :Paul Andersen : System is bogging down
92 14:51:52—> From :Stephen Turner : to : Torie Jarvis DP+S(Privately) : thank you
93 14:52:59—> From :mendocino county : 1117
94 14:52:59—> From :Torie Jarvis DP+S : to : Paul Andersen(Privately) : Hey Paul is it
working better for you now?
95 14:53:13—> From :Paul Andersen : to : Torie Jarvis DP+S(Privately) : Yes, I reloaded.
Thanks.
96 14:53:20—> From :Torie Jarvis DP+S : to : Paul Andersen(Privately) : Great!
97 15:08:17—> From :Craig Schlatter : to : Torie Jarvis DP+S(Privately) : sudden oak
disease
98 15:12:40—> From :Stephen Turner : thanks!
99 15:13:03—> From :jrobbins : The session went well. Thank you.
100



Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Thursday, June 4, 2020 2:25 PM
To: Torie Jarvis
Subject: Mendocino Hazard Mitigation Plan Survey Ready and Mtg #3 Agenda

**MENDOCINO COUNTY
MULTI-JURISDICTIONAL HAZARD
MITIGATION PLAN
2020 UPDATE**

The public survey for the MJHMP is ready! Please share with your community. Resources for sharing are available below, including graphics and sample text.

We are initiating outreach to jurisdictional leads to begin working on assessing vulnerability to hazards in the next couple of weeks. If you missed the last meeting, the meeting recording and materials are available on the [meeting page](#). We reviewed the [Risk Assessment Mapping Platform \(RAMP\)](#) and several tasks we'll work on with jurisdictions.

We are looking forward to the final meeting, #3, of the full stakeholder group. More information below!

[Planning Committee Meeting #3](#)



Wed. June 24, 2020

12 PM to 2 PM

Calendar reminder [available here](#).

Via Zoom conference call:

<https://us02web.zoom.us/j/89018217172>

Call-in option: 669 900 6833

Meeting ID: 890 1821 7172

Meeting materials are available on the Mendocino County MJHMP page:

- www.mitigatehazards.com/mendocino-county/meetings/
- Project Password: Mendocino2020 (works for all log ins)



PUBLIC SURVEY NOW AVAILABLE.

Please share through your outreach avenues!



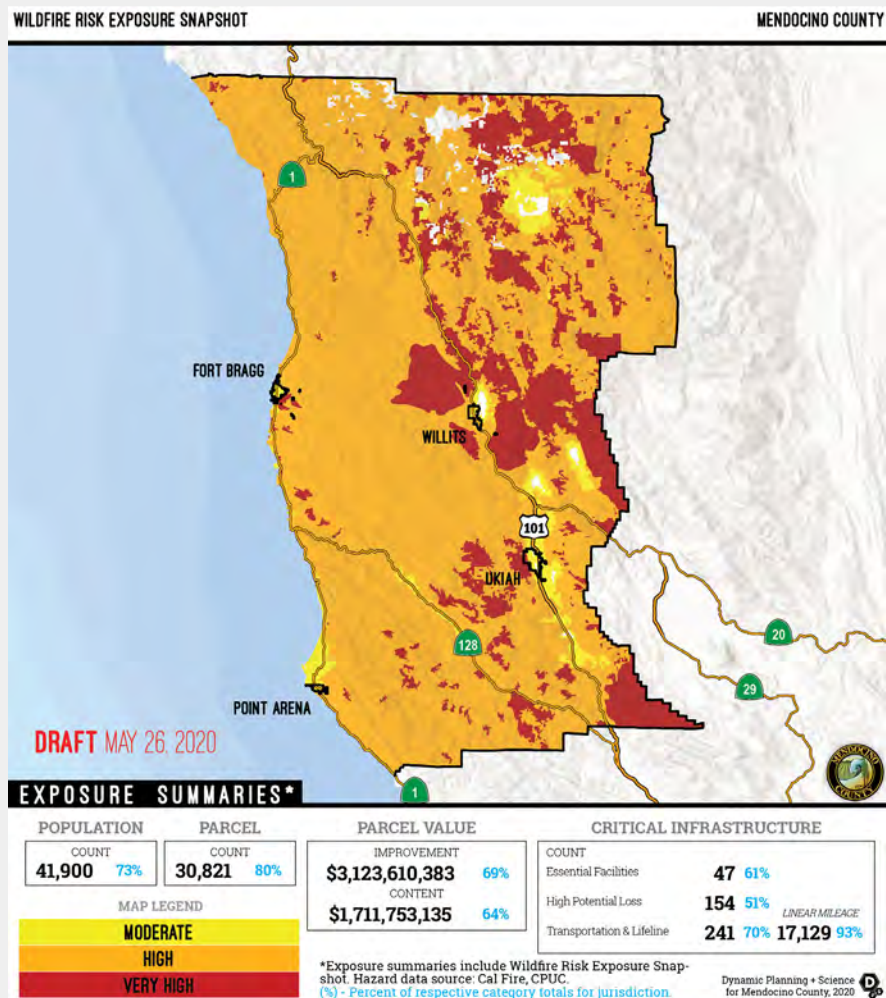
We have many resources available to help you share the MJHMP Survey with the public!

- 2 graphics that you can download.
 - The above graphic is a [Twitter-sized graphic available at this link](#).
 - We also have a Facebook and other social media [graphic available at this link](#).
- A sample story for newspapers or press releases, [available here](#).
- Sample text for various formats:
 - **Shortest (280 character Twitter-friendly):** Help us identify risks from hazards like wildfires, floods, & earthquakes in Mendocino County! **Participate in a short survey, be entered to win a \$150 voucher for Stihl tools of your choice:** <https://bit.ly/2TYgCes>.
 - **Short/ social media:** We need your help to identify hazard risks in Mendocino County! **Participate in a short survey and be entered to win a \$150 voucher for Stihl tools of your choice.** The information you provide will help us identify and coordinate projects focused on reducing the risk of injury or damage to property from future hazard events (e.g. wildfires, floods, earthquakes). The survey should take approximately 5 minutes to complete and is anonymous: <http://mitigatehazards.com/mendocino-county/get-involved/>.
 - **Longer sample text:** Mendocino County is updating its multijurisdictional hazard mitigation plan—and we need your help! **Participate in a short survey and be entered to win a \$150 voucher for Stihl tools of your choice.**
The County's hazard mitigation plan, which includes municipalities and school districts via the County Office of Education, explains prevalent hazards within the county and how hazards may affect communities differently. Most importantly, the mitigation strategy presented in the plan responds to the known vulnerabilities within each community and provides prescriptions or actions to achieve the greatest reduction of natural hazard risk. This planning effort could result in saved lives, reduced injuries, reduced property damage, and protection for the environment in the event of a natural hazard within the County.
Over the coming months, the county stakeholders will finalize newly-developed mitigation action strategies based upon stakeholder and public consensus. To establish public perceptions on local hazards and mitigation strategies, the county developed a short community survey. Anyone who completes the survey by July 31st, 2020 will be entered



into a drawing for a chance to win a variety of donated prizes. This short survey will help the County and participating jurisdictions prioritize mitigation actions and establish incentives for mitigating hazards near your home.

Survey respondents will be entered to win a grand prize of a \$150 Stihl power tool voucher. Power tools are a great way to reduce vegetation around homes for wildfire mitigation and reduce the unwieldy branches that cause damage to property or utility outages during severe storms. For more information on the planning effort or the survey please visit <http://mitigatehazards.com/mendocino-county/get-involved/>.





The above draft map shows wildfire risk exposure for Mendocino County from Mtg #2.

Planning Partners Meeting #3 coming up!

In our third and final meeting to craft the County's Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), we are taking a deeper dive into the development of mitigation actions that will be ID'ed in the Plan, as well as funding those identified actions through FEMA's Hazard Mitigation Assistance (HMA) programs.

June 2020

24



Draft AGENDA for the meeting:

- Welcome and Introductions
- Meeting #2 and Jurisdictional Exercises, Brief Recap
- Mitigation Alternatives
- Setting Plan Goals
- Mitigation Action Review (Draft)
- Developing a Nexus to HMA Funding
- Public Outreach Updates
- Next Steps

Background information on the MJHMP:



The purpose of the Mendocino MJHMP is to reduce property losses and avoid injury and/or casualties resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce loss of life, personal injury, and property damage that can result from a disaster.

For planning partners: The Plan is multi-jurisdictional in that 6 different Mendocino County jurisdictions are participating (the County, City of Fort Bragg, City of Point Arena, City of Ukiah, City of Willits, and the Mendocino County Office of Education). Your jurisdiction's active participation in the update process, as demonstrated by your attendance at this meeting, is one of FEMA's prerequisites for Plan approval.

For stakeholders: Many of you are also included in this email list as important stakeholders. While your participation is not required, we are happy to have you at any of these large meetings (of which there are 3 total). We will also arrange for hazard-specific meetings to garner more specific input on major hazards like wildfire, flood, and earthquake. You're welcome to just participate in those hazard-specific meetings as well.

Please let us know if you need additional information and how I can be of assistance. I appreciate your time and consideration as always. I look forward to seeing you at the end of the month.

Note, while we greatly prefer to meet face-to-face, due to coronavirus, the upcoming meetings will be held via Zoom. We will hope subsequent meetings can be in-person.

 [VISIT THE PROJECT PAGE TO LEARN MORE](#)



Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Tuesday, June 23, 2020 8:52 AM
To: Torie Jarvis
Subject: Mendocino Hazard Mitigation Mtg #3 tomorrow!

**MENDOCINO COUNTY
MULTI-JURISDICTIONAL HAZARD
MITIGATION PLAN
2020 UPDATE**

We are looking forward to the final meeting, #3, of the full stakeholder group TOMORROW! More information below!

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Photo shows a 2017 landslide on Hwy 101 near Leggett, <https://sanfrancisco.cbslocal.com/2017/04/20/massive-landslide-shuts-down-highway-101-in-mendocino-county/>

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June 2020

24



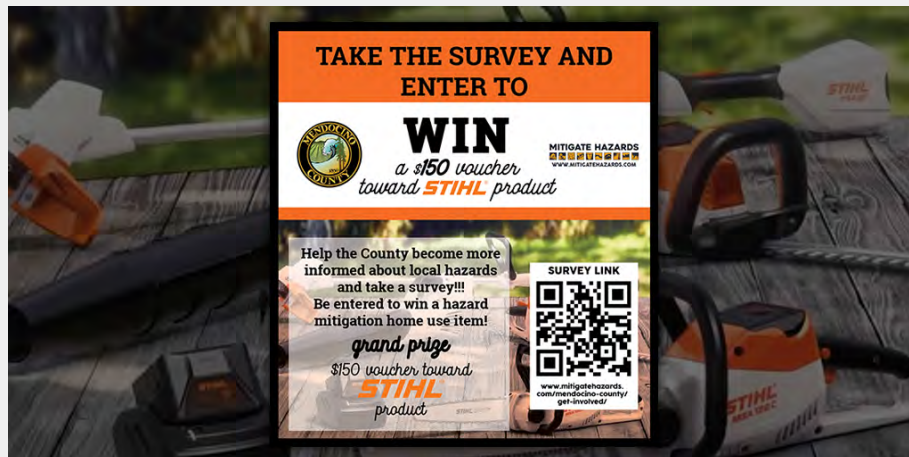


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324 responses to date!

Please share through your outreach avenues.



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 [VISIT THE PROJECT PAGE TO LEARN MORE](#)

MITIGATE HAZARDS






Participants (25)

Find a participant

TJ	Torie Jarvis (DP+S) (Host, me)		
EM	Ethan Mobley		
	17072346040		
HC	Heather Correll Rose		
	17074634363		
AP	Aaron Pfannenstiel		
BR	Beth, Russian River FC		
BG	Brian Greer		
CS	Craig Schlatter		
D	daniel		
	Gabriel Sherman		
PA	Paul Andersen, Point Arena		
R	Rich		
SD	Sarah Dukett		
SC	Scott Cratty		
ST	Stephen Turner		
TC	Todd Crabtree		
T	tvarga		
T	Ty		
U	ungx		
WS	William Schurtz		
	17074594601		
	deckiehk		

HMPC Meeting 3 Participant List



SD	Sarah Dukett		
SC	Scott Cratty		
ST	Stephen Turner	Ask to Unmute	More >
TC	Todd Crabtree		
T	tvarga		
T	Ty		
U	ungx		
WS	William Schurtz		
	17074594601		
D	dashielh		
DD	Dusty Duley		
G	gonzalezn		

[Invite](#)[Mute All](#)[...](#)

HMPC Meeting 3 Participant List 2



Name	E-mail	Title	Dept	HMP Jurisdiction
William Schurtz	schurtzw@mendocinocounty.org	Director	Human Resources	Mendocino County
Nash Gonzalez	gonzalezn@mendocinocounty.org	Mendocino County Disaster Recovery Director	Mendocino County Executive Office	Mendocino County
Sarah Duckett	duketts@mendocinocounty.org	Water Agency	Mendocino County Water	Mendocino County
Xuyen Ung	ungx@mendocinocounty.org	Administrative Analyst	Recovery/CEO	Mendocino County
Heather Correll Rose	correllh@mendocinocounty.org	Executive Office	Risk Management	Mendocino County
Richard Molinari	molinarir@co.mendocino.ca.us	Shelter Manager	Ukiah Animal Shelter	Mendocino County
Howard Dashiel	dashielh@mendocinocounty.org	Director	Department of Transportation	Mendocino County
Paul Anderson	pa-admin@mcn.org	Administrative Assistant	City of Point Arena	City of Point Arena
Dusty Duley	dduley@cityofwillits.org	Community Development Director	Community Development	City of Willits
Craig Schlatter	cschlatter@cityofukiah.com	City of Ukiah Community Development Director	Community Development	City of Ukiah
Tom Varga	tvarga@fortbragg.com	Director of Public Works	Former City of Fort Bragg	City of Fort Bragg
Richard Shoemaker	cm@pointarena.ca.gov	City Manager	City of Point Arena	City of Point Arena
Todd Crabtree	CrabtreeT@cdchousing.org	Executive Director	Community Development	Regional Agency
Scott Cratty	firesafe@pacific.net	Executive Director	Fire Safe Council	Wildfire Stakeholder
Elizabeth Salomone	DistrictManager@RRFC.net	General Manager	The Mendocino County	Regional Agency
Steve Turner	sturner@mcocoe.us	Director	Maintenance & Operations, MCOE	Mendocino County Office of Education

HMPC Meeting 3 Attendees



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

1 12:58:16—> From Rich : Rich from Animal Care Services on via phone.
2 13:00:19—> From Torie Jarvis (DP+S) : Thanks Rich! Welcome everyone else. We'll ask
you to sign in via chat again as a record of who is attending the meeting. Please list
your name and affiliation here. And if you have any issues, feel free to chat me, text
970-596-5039 or email torie@dynamicplanning.co
3 13:02:28—> From Torie Jarvis (DP+S) : <https://mitigatehazards.com/mendocino-county/>
4 Password: Mendocino2020
5 Polling Website for Smartphone: pollev.com/dynamicplanning
6 13:03:05—> From dashielh : Howard can't log into the Meeting materials page... so
if you want me to have something email it to me dashielh@mendocinocounty.org
7 13:03:54—> From Craig Schlatter : Craig Schlatter, City of Ukiah
8 13:04:18—> From Beth, Russian River FC : I'm not able to access the website
materials, either.
9 13:04:54—> From William Schurtz : William Schurtz, Mendocino County
10 13:05:03—> From Aaron Pfannenstiel : Remember to use this password to access
meeting materials
11 13:05:05—> From Aaron Pfannenstiel : Password: Mendocino2020
12 13:05:22—> From Torie Jarvis (DP+S) : Even with password Mendocino2020? I had to
clear my cookies for some reason today to be able to log in. Beth- I can email you too
if you need. Just emailed Howard.
13 13:06:25—> From Torie Jarvis (DP+S) to Beth, Russian River FC(Privately) : Hi
Beth-- can you send send me your email here if you need a copy of the mitigation
action handout? Will be faster than me looking up your email.
14 13:06:33—> From Sarah Dukett : Sarah Dukett - Mendocino County Water Agency and
Executive Office.
15 13:06:40—> From Beth, Russian River FC to Torie Jarvis (DP+S)(Privately) : I used
the link in this thread instead of the email and it worked. Thanks!
16 13:06:57—> From Torie Jarvis (DP+S) to Beth, Russian River FC(Privately) : Oh
oops. Thanks for letting me know.
17 13:07:30—> From Beth, Russian River FC : Elizabeth (Beth) Salomone from Russian
River Flood Control & Water Conservation Improvement District.
18 13:07:59—> From Stephen Turner : Stephen Turner MCOE representing all schools in
the county
19 13:09:48—> From Scott Cratty : Scott Cratty, Mendocino County Fire Safe Council.
20 13:10:42—> From Stephen Turner to Torie Jarvis (DP+S)(Privately) : I have
terrible cell service here
21 13:11:22—> From Torie Jarvis (DP+S) to Stephen Turner(Privately) : No worries
from my end. Ethan likes to call you out :)
22 13:11:38—> From Todd Crabtree : Todd Crabtree County Housing Authority. CDC of
Mendocino County
23 13:12:24—> From Torie Jarvis (DP+S) to Stephen Turner(Privately) : You can also
use a computer browser if that's easier: <https://pollev.com/dynamicplanning>
24 13:14:04—> From Stephen Turner to Torie Jarvis (DP+S)(Privately) : thanks
25 13:43:21—> From tvarga to Torie Jarvis (DP+S)(Privately) : Torie, are slope
stabilization projects far game as a structural project? Tom Varga, Fort Bragg
26 13:53:03—> From Torie Jarvis (DP+S) to tvarga(Privately) : Hi Tom-- will ask the
group as I'm sure you aren't the only one with the question!
27 13:55:56—> From Beth, Russian River FC to Torie Jarvis (DP+S)(Privately) : Can
Ethan send me that flood control communication information he is going to send Nash?
Even though my District is "Flood Control", because of those issues with CA F&W, etc,
we don't do any streambank work or engineering type work. All of our "flood control"
effort is in the Coyote Dam, perhaps raising it in the long run. thanks!
28 13:57:26—> From Torie Jarvis (DP+S) to Beth, Russian River FC(Privately) : Sure,
Beth. I'll send him a reminder right now (before I forget!)
29 14:12:54—> From Ty : I believe this is the resource that Ethan was just
referencing:
<https://www.epa.gov/iaq-schools/heating-ventilation-and-air-conditioning-systems-part-in-door-air-quality-design-tools#:~:text=Classrooms%20and%20other%20school%20spaces,remove%20odors%20and%20other%20pollutants.&text=If%20outside%20air%20is%20provided,be%20provide>

HMPC Mtg 3 Meeting Zoom Chat 1



d%20for%20each%20occupant.

30 14:13:33—> From: Torie Jarvis (DP+S) to: Gabriel Sherman(Privately) : Hi Gabriel-- thanks for joining us! It doesn't look like we have you in our contact list. Would you like to be included? What entity are you representing, if any? Thanks!

31 14:14:25—> From: Torie Jarvis (DP+S) to: Gabriel Sherman(Privately) : I see you Gabe-- looks like you're with Ukiah Unified. I'm sure Steve is keeping you in the loop but let me know if you would like to receive emails as well!

32 14:23:01—> From: Gabriel Sherman to: Torie Jarvis (DP+S)(Privately) : That would be great Tori, thank you. gsherman@uusd.net

33 14:25:15—> From: Gabriel Sherman : Seems like mitigating the potential effects of PSPS impact would is discussion worthy

34 14:26:39—> From: Paul Andersen : easier to read

35 14:27:42—> From: Torie Jarvis (DP+S) to: Paul Andersen(Privately) : Which one, Paul?

36 14:27:50—> From: Paul Andersen to: Torie Jarvis (DP+S)(Privately) : New set

37 14:27:57—> From: Paul Andersen to: Torie Jarvis (DP+S)(Privately) : Not 2014

38 14:28:16—> From: Torie Jarvis (DP+S) to: Paul Andersen(Privately) : Set #1 we can see now? (There is a second one not on the screen from the state's HMP)

39 14:28:36—> From: Dusty Duley : Goals can be general but Policies can get into specific mitigation measures

40 14:28:42—> From: Paul Andersen to: Torie Jarvis (DP+S)(Privately) : Yes

41 14:28:49—> From: Torie Jarvis (DP+S) to: Paul Andersen(Privately) : OK perfect

42 14:30:21—> From: Dusty Duley : PSPS should be addressed even if it has to be done in an indirect way

43 14:36:41—> From: Paul Andersen to: Torie Jarvis (DP+S)(Privately) : Where can I find the survey publicity materials? Specifically for social media?

44 14:37:57—> From: Torie Jarvis (DP+S) : PSPS is discussed in detail wildfire and we can include mitigation measures specifically to reduce impacts from PSPS events following wildfire (back up generators, for example, can be eligible for FEMA funds: https://www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/ENAL_Generators_JobAid_13FEB15_508complete.pdf)

45 14:39:21—> From: Torie Jarvis (DP+S) to: Paul Andersen(Privately) : Hi Paul, I put them into MailChimp emails to everyone but your question makes me realize I never posted it to our website. I can do that as well and will forward you survey info right now via email.

46 14:40:34—> From: Paul Andersen to: Torie Jarvis (DP+S)(Privately) : Thank you!

47 14:45:55—> From: dashielh : Ethan, so are you saying that if I built ten bridges since 2008 and I give you the Hydraulics Report that shows the new bridge is 100yr or better that helps you... do you want something like that... in addition all ten of those bridges meet current seismic standards... do you want that kind of detail? Howard

48 14:48:59—> From: Heather Correll Rose : still here

49 14:53:47—> From: Stephen Turner : Could a school with a 30 year old comp roof apply for the cost difference between replacing in-kind and upgrading to fireproof metal?

50 15:00:08—> From: Stephen Turner : Thank you

51 15:11:40—> From: Stephen Turner : thank you for all the work

52 15:11:59—> From: Paul Andersen to: Torie Jarvis (DP+S)(Privately) : Thank you!!

53 15:12:07—> From: Beth, Russian River FC : Thank you all for all this! Wow!

54 15:12:13—> From: Paul Andersen : Thank you!

55



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Public Notice & Comment

Appendix B.2

[BACK TO APPENDIX TABLE OF CONTENTS](#)



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County of Mendocino

June 11 · 🌐

Mendocino County is updating its multi-jurisdictional hazard mitigation plan—and we need your help! Participate in a short survey and be entered to win a \$150 voucher for Stihl tools of your choice. The information you provide will help us identify and coordinate projects focused on reducing the risk of injury or damage to property from future hazard events (e.g. wildfires, floods, earthquakes). The survey should take approximately 5 minutes to complete and is anonymous: <http://mitigatehazards.com/mendocino-county/get-involved/>. #MendoPrepares #KeepMendoSafe

TAKE THE SURVEY AND ENTER TO

WIN
a \$150 voucher
toward **STIHL** product

Help the County become more informed about local hazards and take a survey!!!
Be entered to win a hazard mitigation home use item!

grand prize
\$150 voucher toward
STIHL product

SURVEY LINK

www.mitigatehazards.com/mendocino-county/get-involved/

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OTHER POSTS

Mendocino HMP Facebook Survey Notice



The screenshot shows the City of Willits website with a news flash titled "Hazard Mitigation Plan Survey". The page includes a search bar, navigation links for Business, Community, Departments, Services, Visitors, and How Do I, and a sidebar with search, tools, and categories. The main content area features a large image of a tree trunk and text detailing the survey's purpose and participation details.

Home » News Flash

Home

Posted on: April 30, 2020

Hazard Mitigation Plan Survey

Mendocino County Hazard Mitigation Plan Survey:

<https://docs.google.com/forms/d/e/1FAIpQLSf42IHb5oSkS59Q5IPCFeCADmsKKYPL23LhBzuWLK2nFC1IRw/viewform>

The City of Willits, together with the County of Mendocino and 4 other participating jurisdictions, is helping to develop an update to the Mendocino County Multi-Hazard Mitigation Plan to reduce losses resulting from natural disasters. Hazard mitigation is the use of long-term actions to reduce the loss of life, personal injury, and property damage that can result from a disaster. Benefits of mitigation planning include:

- Identifying actions for risk reduction that are agreed upon by stakeholders and the public,
- Focusing resources on the greatest risks and vulnerabilities,
- Building partnerships by involving citizens, organizations, and businesses,
- Increasing education and awareness of threats and hazards, as well as their risks,
- Communicating priorities to State and Federal officials, and
- Aligning risk reduction with other community objectives.

Planning efforts could include capital projects and other pragmatic activities that can mitigate the impacts of hazards. The 2020 HMP Update will cover each of the major natural hazards that pose risks to County infrastructure and residents, such as wildfires, floods, and earthquakes. Recognizing that successful mitigation planning efforts must be communicated and understood by the public, the County approach will include stakeholder participation and input with the use of cutting-edge GIS technology to map and update the hazard information for each hazard profiled in the 2020 HMP.

This questionnaire is designed to obtain your opinion about hazards in the area and what types of mitigation measures should be carried out by the county, cities and towns. The information you provide will help us identify and coordinate projects focused on reducing the risk of injury or damage to property from future hazard events (such as wildfires, floods, and earthquakes).

The survey should take approximately 5 minutes to complete. Your information will be kept confidential, however, we are using e-mails for administration of survey prizes. The final results of the survey will be included within the Hazard Mitigation Plan and posted at: <http://mitigatehazards.com/mendocino-county/>

[Hazard Mitigation Plan Survey](#)

Previous Next

HMP Survey notice on Willits Website



Mendocino County 2020 Multi-Jurisdictional Hazard Mitigation Plan Public Comments on MJHMP (October 2020)						
No.	Comment Format	Name	Email if applicable	Comment	Cite of Comment if applicable	Response
1	Via online comment form	Carlon LaMont	lamontc@hotm ail.com	With the recent logging on and around the Albion Ridge. I have personally seen large areas (acres) of downed tan oak and other slash that has not been broken down to reduce volume. With this large amount of fuel and the resulting low density. It is an extreme fire hazard for everyone located on and around the Albion and coastal communities, that may only have one exit route. Please consider ordinances that either require some form of fuel Removal or density remediation. It would be nice to open these opportunities for locals to make some money and create more jobs, opportunity, and services. While reducing overall risk and potential loss of life and property. Thank you for your time.		Thank you for this comment, especially in all of our minds after (during) such a rough fire season. We do feel that your comment is already covered in discussions within the document and specifically with a "mitigation action," or identified project, numbered MA-WF-239, which would increase vegetation management in the County: "Coordinate with fire protection agencies to develop vegetation management program to remove under story brush and excessive fuels around County roads and evacuation routes." We also added all areas you pointed out to the online system for tracking these actions as background information.
2	Emailed comments	Helene Chalfin	hughandle-ed@mcn.org	Please make sure that throughout Mendocino County—including Caspar, Mendocino, Little River, Albion, Elk, and more you address and plan to mitigate the thousands of dead and dying trees on both public and private properties. The dead and dying trees in large stands are a tremendous fire threat to all homes in proximity. There are several areas in the County where this hazard must be addressed.		Thank you for this comment, especially in all of our minds after (during) such a rough fire season. We do feel that your comment is already covered in discussions within the document and specifically with a "mitigation action," or identified project, numbered MA-WF-239; "Coordinate with fire protection agencies to develop vegetation management program to remove under story brush and excessive fuels around County roads and evacuation routes." Other areas you pointed out have been added to the online system for tracking these actions as background information.
3	Emailed comment letter to Nash	Robert Pinoli	rip@mcn.org	During each of the past three years we have applied for a grant from the U.S. Department of Transportation's Better Utilizing Investments to Leverage Development (BUILD) program. We hoped that BUILD funds would pay for half of the \$18.8 million project, with our company paying the remainder to reestablish a connection between Fort Bragg & Willits, improve corridor access in the event of emergencies, and acquire significant rail mounted fire suppression equipment and storage capacities to be staged at 8-10 spots along the route. Sadly, we were not awarded these funds. As you know Mendocino Railway (California Western Railroad / Skunk Train) is a Class III Common Carrier / Public Utility. As such, we remain ready to serve our communities. I believe that using the railroad corridors as fire breaks and emergency access corridors is something with immense befits in disaster mitigation and making our communities more resilient. I think we should find a way to incorporate this into the revised plan.		We have updated the Plan to include railways explicitly in considering critical facilities that require retrofitting and defensible space work, and in the background for the mitigation action (that does not appear within the document) we also added direct reference to both your letter and the potential benefits for rehabilitating railway lines for fire protection.
						Updated ma-WF-MC-227 to include railways: Retrofit critical facilities (adult care, child care, schools, railways) with fire-resistant materials and or create defensible space around structures." To the background on MAST, added "Re Railways, the Mendocino Railway (California Western Railroad / Skunk Train) is a Class III Common Carrier / Public Utility. Railroad corridors may be useful as fire breaks and emergency access corridors. (see public comment from Robert Pinoli in 2020 Plan App B)"
4	Collab PDF	Jennifer Kreger		Just started reading but a question comes to mind right away: do "natural disasters and hazard events" include things like: famine? supply chain disruption from far-away events? Military or other hostile takeovers of local supplies? Big influxes of people to our area because of floods, fires, droughts, wars, and famines elsewhere?		Thanks for the question, Jennifer. Natural hazards could include famine, but California has not ever looked at famine as a possible hazard to mitigate to date. This did not rise to a priority for this HMP. You ask about influxes of people because of hazard events elsewhere-- this is a secondary impact of hazard events, and this issue did arise for communities in Mendocino County. Some mitigation actions look at whether shelters are adequate for an influx of people or are properly outfitted in the event of sheltering during a pandemic (which we've already experienced while writing this HMP). The hostile take-over type scenario would not be a natural hazard and would be difficult to mitigate for ahead of time-- an emergency operations plan would likely cover this scenario.

Public Comment 1



MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

Mendocino County 2020 Multi-Jurisdictional Hazard Mitigation Plan Public Comments on MJHMP (October 2020)						
No.	Comment Format	Name	Email if applicable	Comment	Cite of Comment if applicable	Response
5	Collab PDF	Jennifer Kreger		Can we add the word "toward" after the word "determine" and before the word "what" in sentence 3?	ES XX	Edit made- thank you! Small sentence structure adjustment made.
6	Collab PDF	C W		verify the naturally occurring asbestos map with the California Geologic Survey.	Figure ES 5	The Air Quality Management District, working with other agencies, has produced a series of maps of areas likely to contain NOA in Mendocino County. These areas were mapped using information from the CGS (Rock Outcrops) and the NRCS. The maps are not parcel specific and only show areas where NOA is more likely, the actual presence of NOA can only be determine by an expert.
7	Collab PDF	Jennifer Kreger		On Tsunami Run-Up where it says Transportation and Lifeline 6, does that mean that impassability is expected of 6 major roads, one of which is Highway One? Or 6 of the bridges along Highway One? or something else? A high %age of Coast people rely on being able to travel N and S along Highway One but that is only one road.	Figure ES 7	Not necessarily, the Transportation and Lifeline locations summarized as being exposed to any hazard, Tsunami Run-up included, are just summarized locations that fall within the potential inundation area of a tsunami event. The risk is there, but the level of damage and temporal persistence cannot be described due to specificities of actual events. Isolation due to loss of roadways and infrastructure would be developed based on the vulnerability in the problem statement and mitigation action planning process if deemed necessary. For more information on Tsunami see Section 4.8.4.7.
8	Collab PDF	C W		suggest you add the dates of the hazard sources on the figures	Figure ES 7	Dates and additional information about data sources is available here: https://www.dropbox.com/s/r7dv8duxw768300/RAMP%20Hazard%20Legends.pdf?dl=0 .
9	Collab PDF	Jennifer Kreger		Can we add clarification here too? I am not sure whether the Linear Mileage Section is predicting that up to 23 linear miles of Highway One may be destroyed by sea level rise, or if that number refers to something else.	Figure ES-8	These are summarized linear lifeline assets which include highways and include local roads and other infrastructure such as pipelines. Appendix A to the HMP outlines the data sources for linear lifeline assets. For more detail on critical assets vulnerable to a hazard, see the specific vulnerability section (Section 4.5.)
10	Collab PDF	Jennifer Kreger		for hazard type Climate Change, suggest increasing incentives (or requirements) for multiple practices that have been shown to improve at least the local climate (and potentially the global climate to some degree) while being good for human health and local economic resilience, such as: no-till agriculture, composting, keeping organic material out of landfills, allowing sea-grass meadows to sequester CO2 and buffer waves even as they migrate inland, silo-pasture, managed grazing, poison-free agriculture, home gardens, indigenous land-management practices, multi-story reforestation, distributed solar, distributed with with some of its energy stored in water pumped upward, electric vehicles, safe bike ways, producing and shopping locally and reducing imports and exports and thereby reducing fossil fuel use, and rooftop rainwater collection	p. xxvii of ES	The following mitigation action has been created to address the above comment: MA-CC-MC-298: Develop public outreach to educate the public on household practices that can lessen the impacts of climate change. In addition, the above practices have been incorporated into the "background" section of this mitigation action in MAST as recommended practices that can be incorporated into a public outreach/education campaign
11	Collab PDF	Jennifer Kreger		suggest expanding to include coordination of County OES / Incident Call Center with volunteer efforts to prepare for several months of mutual first aid and water/food/supplies/disposal independence on each of the land masses that could easily become isolated (and thus closed to both imports and exports as well as ambulances and travel) by bridge failures, floods, landslides or fires	p. xxvii of ES	While a very valid concern, this is an issue for an Emergency Operations Plan. In the four parts of emergency management (response, recovery, preparedness, mitigation), this subject is part of response and preparedness.

Public Comment 2



Mendocino County 2020 Multi-Jurisdictional Hazard Mitigation Plan Public Comments on MJHMP (October 2020)						
No.	Comment Format	Name	Email if applicable	Comment	Cite of Comment if applicable	Response
12	Collab PDF	Jennifer Kreger		suggest expanding to include incentives (or requirements) for private landowners to grant evacuation easements so that all neighborhoods have multiple ways in and out	p. xxvii of ES	Thank you. We have added the following mitigation action: "Construct evacuation routes as feasible to ensure multiple egress routes from neighborhoods." ma-AH-MC-299.
13	Collab PDF	Jennifer Kreger		For MC-197, Does/will/can this include encouraging reuse of gray water? Does/will/can it include legalizing methods of disposing of human waste other than using drinking-quality water to move the waste along a pipe?	p. xxvii of ES	Yes, this could include encouraging reuse of gray water. The County will follow all public hearing/noticing requirements associated with any code updates, which would be the venue for providing feedback and engaging the County on any proposed code changes.
14	Collab PDF	C W		suggest expanding to include water/sewer infrastructure susceptible to wildfire and seismic hazards	p. xxvii of ES	MC-EQ-MC201 has been edited to read: Retrofit / Harden County-owned critical facilities (including water & sewer infrastructure) and buildings and their ability to withstand earthquakes.
15	Collab PDF	Jennifer Kreger		Some of the alternative sheltering locations on the coast (sin MC-224) are visible on Islands and Public Hubs map at hubsandroutenet	p. xxviii of ES	Thank-you for this information. This has been included in the MAST database "notes" section for MC-224
16	Collab PDF	Lauren Robertson		Page xxix: Retrofit critical facilities with fire-resistant materials AND create defensible space. (remove and/or--these are distinctly different goals in terms of cost, maintenance, and staffing.	p. xxviii of ES	Updated and thank you for the feedback ma-WF-MC-227 updated to remove "and or," replace with "and"
17	Collab PDF	Jennifer Kreger		This page is important and makes its point about limitations. What do you think of the possibility of adding a column to the tables above where you could give details about potential limitations and challenges for each of the rows?	p. xxx	Great point. We have more information on implementation in Section 6 of this HMP. The Mitigation Action Plan in Section 5.5.2 also includes additional information about implementation. The online Mitigation Action Support Tool, accessible by participating jurisdictions, includes implementation steps, background, and notes that can be continually updated with ongoing information regarding implementation.
18	Collab PDF	Walt		Highway 1 will be inundated and made impassible about 3 miles north of Point Arena in the low scenario of sea level rise	Section 4.5 intro, p. 4-29	Great point. Our mapping does show this inundation, but it's difficult to see because the County has such a long coast line! We have also added text to Section 4.5.3.8.3, which looks at vulnerability of critical facilities to sea level rise. It now reads: Updated text of Section 4.5.8.3 to use Hwy 1 inundation as another critical facility vulnerability: "Some critical infrastructure (i.e., roads, hospitals, schools, emergency facilities, and properties) are at increased risk of coastal flooding in the County. For example, the Fort Bragg Intake Pump Station could become vulnerable to a 100-year flood event with 1.4 meters (m) of sea-level rise. Small sections of Highway 1 could also be completely obstructed (e.g. north of Point Arena from the delta of the Garcia River).
19	Collab PDF	Walt		Cell Service reliability is not listed as a concern, but almost County-wide it is either unavailable, unreliable or spotty. This limits notifications for any emergency and for communication during an emergency.	Section 4.5 intro, p. 4-29	Thank you for this comment-- it's very much an issue that's come up with fires this year. We did have some discussion of cell service concerns that we've edited and increased information on. We've made changes to three different locations within the HMP. In Section 4.3.3.5, we discuss the addition of preemptively improving cellular service prior to emergency situations, as well as increased dissemination of information relating to where people can go for better service in the event of an emergency. In Sections 4.5.4.8.1 and 4.5.10.10.3 we discuss the risk of specific hazards in impacting critical communication infrastructure such as cell towers.

Public Comment 3



MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

Mendocino County 2020 Multi-Jurisdictional Hazard Mitigation Plan Public Comments on MJHMP (October 2020)						
No.	Comment Format	Name	Email if applicable	Comment	Cite of Comment if applicable	Response Changes Made if applicable
20	Collab PDF	Walt		Why aren't automatic seismic shutoff valves required for all buildings using NG or propane in any are subject to Very Strong or higher earthquake intensity? Fire or explosion after an earthquake is more dangerous than the shake itself.	Table 4-40 re: Earthquake, p.4-119	We wish automatic shutoff valves were required too! They are certainly a best practice on new construction. The County will also look at pursuing funding to install automatic shut off valves on all county buildings. See the mitigation action number ma-EQ-MC-203 in Section 5.5.2: "Install seismic gas shut-off valves on County buildings to prevent the flow of gas into buildings during a seismic event"
21	Collab PDF	Walt		The Garcia River floods almost 1 - 2 times annually closing Highway 1, the only State Route from Point Arena northward. The detour can be almost 253 miles. This put life in peril as emergency vehicles would need to be dispatched from Santa Rosa. I don't see this listed as a problem; CalTrans has a proposal to build a new bridge on Windy Hollow Road as a new route.	p. 4-162	Thanks, Walt. This issue is capture within Point Arena's Annex in Volume 2 of this document. They are planning to continue working with CalTrans to address this challenging issue.
22	Collab PDF	Alix Sabin		Policy DE-217 seems to be very important, critical. It needs to be communicated broadly to residents.	p. 4-225 (wildfire regulatory environment)	Thank you for this comment. The policy cited exists in the County General Plan and can be a reference in considering new development anytime. Many of the mitigation actions identified for wildfire address increased work towards defensible space, chipping to reduce fuels, and vegetation management, including in connection with the County's community wildfire protection plan. See Section 5.5.2.
23	Collab PDF	Alix Sabin		Mendocino County needs to create an evacuation & rescue route permit process that allows rescue routes to be developed and maintained through private property. Many of our rural roads are "Not Thru-Road". Like Paradise, we could be caught unable to evacuate. Firefighters and medical personal might not have access. The County and landowner (private, non-profit, State, County, or lumber company) should work together to create rescue routes available in emergencies to mitigate hazards including fire, earthquakes, flooding, etc..	p. 4-229 (Fig. 4-52, wildfire profile)	Thank you. We have added the following mitigation action: "Construct evacuation routes as needed to ensure multiple egress routes from neighborhoods." ma-AH-MC-299.
24	Google Form	Joe Zicherman - Board President, Mendocino County Fire Safe Council	Zicherman46@gmail.com; avpinotgrower@gmail.com	See comments and responses as separate document	See comments and responses as separate document	Updates to: ma-WF-MC-238, ma-AH-MC-134, ma-WF-MC-239, ma-WF-MC-123, ma-WF-MC-228, ma-WF-MC-287 New MAs created: ma-WF-MC-300, ma-WF-MC-301, ma-WF-MC-302
25	Email to DP+S	Rick Hemmings	hemstich@gmail.com	Submitted letter to and graphic of evacuation routes and safe havens for Albion Ridge, Middle Ridge, and Navarro Ridge		Thank you for this! We have added the following mitigation action: "Construct evacuation routes as needed to ensure multiple egress routes from neighborhoods." ma-AH-MC-299. We added the materials you sent to Appendix B of the HMP and have referenced them in the background section of MAST for this new mitigation actions. We have added the following mitigation action: "Construct evacuation routes as needed to ensure multiple egress routes from neighborhoods." ma-AH-MC-299. Added materials sent to Appendix B as well.

Public Comment 4



About

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Public Service

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County of Mendocino
October 13 at 5:15 PM · 🌐

We need your feed back on the Mendocino Multi-Jurisdiction Hazard Mitigation Plan! This is the community's chance to review and provide feedback on information regarding natural hazards in the area. Our strategy focuses on mitigating the effects of natural hazards through proposed actions that protect lives and property across the county. Public input will ensure the priorities of the Hazard Mitigation Plan match those of Mendocino County residents. To view and comment on the draft plan by Oct. 26th, please visit <http://mitigatehazards.com/mendocino-county/public-review/> #MendocinoCounty #HazardMitigation #PublicComment #mendocino

Image: Wildfire Risk Exposure Map from the Draft Hazard Mitigation Plan

City of Willits City of Ukiah City of Fort Bragg California Mendocino County Office of Education

**WILDFIRE RISK EXPOSURE
MENDOCINO COUNTY**
*Data sources: Cal Fire, USFS

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PUBLIC COMMENT FROM MENDOCINO COUNTY FIRE SAFE COUNCIL

RESPONSES INCLUDED

SUBMITTED VIA GOOGLE FORM

OCTOBER 26, 2020

Responses from County in orange text below respective comment.

To Whom it may concern:

The Mendocino County Fire Safe Council has reviewed the proposed (draft)County Hazard Mitigation Plan and is providing the comments included here.

Our comments are essentially of two types: The first are recommendations based on our daily work at ground level with County residents to help address their concerns consistent with our support and guidance from the Board of Supervisors. The second our comments on the programs tabulated in the table "County Wide Priority Mitigation Actions."

It is our opinion that the list of issues in Tabulation 1 below need to be addressed and - where possible - should be added to programs summarized in the tabulation of "County Wide Priority Mitigation Actions." Many of these are nuts and bolts items which need to be added to the mitigation plan so as to acknowledge their importance in the County. An example of this can be seen in the citation below related to sudden death syndrome attacking native Oaks which if not addressed and whose absence will add to the hazard levels when wildfires occur in Mendocino County.

We are also providing specific comments on each of the wildfire related items among the tabulated entries in the county wide document as currently written in draft form.

1.0 Wildfire mitigation objectives not directly addressed:

1.1 Develop an effective and enforceable hazard mitigation ordinance for the county. This important issue is not addressed in the current draft.

Response: We updated ma-WF-MC-238 to be more open ended to the type of code updates the County might consider (italics represent additional info): *Update County Code/ Land Use Regulations/Subdivision Design Guidelines to include design and siting standards to incorporate, for example, emergency response access and turn around space or fire suppression water needs.*

1.2 Identify and develop a plan and schedule for maintaining key fuel breaks currently existing around population centers and other key resources. This important issue is not addressed in the current draft.

FireSafe Council comments and responses 1



Response: Created new mitigation action that reads: “Identify and develop a plan and maintenance schedule for key fuel breaks currently existing around population centers and other key resources; develop new fuel breaks as identified.” ma-WF-MC-300

1.3 Develop county policies supporting with wider use of prescribed burning on private land throughout the county and provide resources supporting the county prescribed burn association. This important issue is not addressed in the current draft.

Response: Created new mitigation action that reads: Continue to support programs to reduce fuel loads in the County, including but not limited to continuing the chipper program, mastication and removal of fuels, and encouraging prescribed burns when practicable. ma-WF-MC-301

1.4 Develop county policies to support deployment of additional fire suppression water resources on private land. This important issue is not addressed in the current draft.

Response: updated ma-WF-MC-238 to read (*italics represent additional info*): Update *County Code/ Land Use Regulations/Subdivision Design Guidelines* to include design standards *in the WUI that take into account structural and public health protection, emergency response access, emergency vehicle turn around space, and necessary additional fire suppression water resources needed to serve development.*

1.5 Implement an ongoing education campaign to address necessary ignition resistance and home hardening features - including defensible space - for county residents.

Response: Updated ma-AH-MC-134 to emphasize wildfire public outreach from MCFSC : Develop a public outreach program that distributes consistent hazard mitigation content and mitigation tips for property owners. *For example, wildfire outreach should focus on necessary ignition resistance and home hardening features - including defensible space - for county residents.”*

1.6 Develop a program for hazard tree removal along ingress and egress routes.

Response: Updated ma-WF-MC-239 to read: “Coordinate with fire protection agencies to develop vegetation management program to remove understory brush, *hazardous trees*, and excessive fuels around County roads and evacuation routes.”

1.7 Develop a program to map and manage emerging high risk fuel sources such as invasive broom and gorse and areas with substantial sudden oak death.

Response: Added as new ma-WF-MC-302: “Develop a program to map and manage emerging high risk fuel sources.” The examples are provided in the “notes” section of MAST for the County.

2.0 Comments on Wildfire mitigation objectives addressed in the current draft :

ps-WF-MC-44 – This statement deals with speculative observations re. Class K buildings. It is essentially irrelevant in this document as written – A statement to the effect that “Older class K buildings may be less resistant to ignition. An educational Program including outreach to the owners of such structures.” would be more appropriate (also see comment re. ma-WF-MC-238)

FireSafe Council comments and responses 2



Response: Updated problem statement to read: Buildings permitted as “class k” structures under the building code *may be* at higher risk of wildfire.

This problem statement is addressed with an all hazard mitigation action. We also updated MA-AH-MC-134 to read: Develop an education program to *inform both existing Class K structure owners* and applicants of building permits for Class K structures of the inherent risks of such structures to all natural hazards.

ma-WF-MC-123 – Property Protection – Good proposal, should also refer to current ongoing program by MCFSC noting limited funds for the MCFSC program at present.

"Create an ongoing vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes." We also note that the although it is correct that the cost of the program could be spread out over multiple years it would also be an ongoing cost. As vegetation grows back the program would need to revisit sites on an ongoing basis.

Response: Update mitigation action with changes in italics: “Create *and/or help strengthen existing* vegetation management programs that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation.”

Also added additional information to background available on MAST for County: “Some of this work is already ongoing with the Mendocino Fire Safe Council, although funds are limited.”

ma-WF-MC-142 should be moved from the "completed" table and added as a new mitigation target with the following modification. "Develop an ongoing countywide chipper program in which local residents and business owners do their own vegetation management and the community offers free or reduced cost roadside chipping. A targeted component of the program should be developed to address the needs of the elderly or those needing assistance for reasons of disability or costs."

Response: Addressed in new mitigation action ma-WF-MC-301 instead, which reads: “Continue to support programs to reduce fuel loads in the County, including but not limited to continuing the chipper program, mastication and removal of fuels, and encouraging prescribed burns when practicable.”

ma-WF-MC-227 – Property Protection – support as proposed

ma-WF-MC-228 – Emergency Services – MCFSC appreciates the attention to improving emergency access. However, the plan item to "Make high visibility address markers available to all residents within the WUI" is unclear. Appropriate address markers are currently available to all residents through local hardware stores or can be purchased through the Mendocino County Fire Safe Council or other sources. If the intent of the item is to make them more available by creating a free or subsidized sign program, the description should be modified to state that. However, an equally problematic issue for wildfire safety is the extensive, duplicate, mis-ordered or otherwise confusing street and address markings in the WUI. A new or enhanced mitigation goal should be added to work with the County Fire Chief's Association to methodically address eliminating those situations and potentially to work on more

FireSafe Council comments and responses 3



sophisticated GPS based locating options for more remote or hard to find locations to provide more efficient delivery of emergency response or evacuation monitoring.

Response: Rewrote ma-WF-MC-228 to read: Ensure addresses and locations are easily accessed during emergency, especially in the WUI. Methods include installation of high visibility address markers, partnering with County Fire Chief to reduce overlapping, duplicate, or mis ordered street and address markings, and developing GPS-based locating options for more remote or hard to find locations.

ma-WF-MC-238 – Prevention - Note relationship to ps-WF-MC-44 if building codes issues are involved. Include campaign to educate old Class K homeowners, and all homeowners having built in remote areas before enhanced state rules came into effect. Home hardening and development of ignition resistant features should be stressed. This holds true for the vast majority of houses in the county that were built under the old building codes.

Response: Noted and thank you. We do not have any additional changes based on these comments.

ma-WF-MC-239 – Natural Resource Protection - Potentially an important program which would provide high long-term benefits needed in the County. In addition to maintaining primary ingress and egress routes, County roads - of which there are many with no two way access - need to be targeted and even some state highways such as Hwy 128 North of Philo contain overarching vegetation which would prove hazardous in a fire emergency including evacuation. Ongoing implementation has "high" life safety benefit not "low." Developing a mitigation plan, with ongoing implementation, stressing hazardous tree removal, clearing of brush adjoining critical arteries, and aid to assure emergency ingress and egress should be a high priority to the County.

Response: Updated benefit to "high." Also, related to the point about egress, we added an all-hazard mitigation action in response to other public comment: "Construct evacuation routes as feasible to ensure multiple egress routes from neighborhoods." MA-AH-MC-299. Added background information on Hwy 128 north of Philo to this MA-WF-MC-239 as well.

ma-WF-MC-287 – Property Protection – In addition to generally working to implement the CWPP the MCFSC suggests work on developing a process for regularly updating the priority projects in the plan and also for encouraging the develop of more specific neighborhood and community plans for existing subdivisions, which could be crucial to enhance life safety and allow for additional enhanced property protection.

Response: Updated to read: Implement and continue to re-prioritize Mendocino County CWPP Mitigation Projects and support smaller-scale neighborhood and community plans as appropriate.

Respectfully,

Joseph B. Zicherman, President,
Mendocino County Fire Safe Council
Residence:
PO Box 1042, 10540 Anderson Valley Way
Boonville 95415

FireSafe Council comments and responses 4



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

October 29, 2020

Ted Williams
Mendocino County Supervisor, 5th District
501 Low Gap Road, Room 1010
Ukiah, CA 95482

Dear Ted:

Last November, Michael Rees, Chief of ALRFPD, made a presentation to the Albion/Little River and Navarro Ridge communities stressing the importance of individual responsibility in preventing fires on their properties and reducing the spread of fires along private and county roads in their area. He emphasized that, in the event of a catastrophic fire, residents cannot count on a volunteer department to control the fire, notify residents, or evacuate them. He encouraged all residents to have a clear evacuation plan should a major fire occur in their area.

This meeting brought together several folks who were already interested in identifying and publicizing escape routes off the Albion and Navarro Ridge Roads in the event of a fire or other catastrophe. We were concerned that a fire part way up the ridge could limit the usefulness of the Albion Ridge Road for those living on Middle Ridge or east of it; and a fire 4 or 5 miles up the Navarro Ridge Road could leave households further up with no regularly maintained, auto-accessible way out. The uniqueness of coastal geography combined with the encircling of residential areas by privately-owned, commercial forests offers a challenge to the identification and development of alternate escape routes, especially where the more flammable Pygmy Forest bisects these roads.

Using Google Earth and "boots on the ground" exploration, we have identified three escape and rescue routes offering emergency egress off different parts of Albion Ridge, Middle Ridge and Navarro Ridge Roads. The condition of some of these routes has already been determined by inspection while others are scheduled for review by Chief Rees. Approved routes will be geo-referenced, via satellite, for downloading to cell phones.

1. One route drains Middle Ridge and the upper half of Albion Ridge via the "Donut Shop" and Elliott Road to Salmon Creek and up to Navarro Ridge (**ROADS 3, 6 and 10** on the accompanying map). Most of these roads are on Conservation Fund land. According to Chief Rees, these roads are currently drivable by ordinary vehicles. This route connects with a 2.0-mile Mendocino Redwood Company (MRC) rocked road offering an outlet for Navarro Ridge residents as well – at Mile 4.5 – to Highway 128 (**ROAD 5**). It also connects with the inconsistently maintained continuation of Navarro Ridge inland to 128 near Flynn Creek's intersection with 128 (**Road 8**). In its current condition, the Navarro Ridge Road does not offer an eastern escape route for most vehicles. This is a county road, the eastern portion of which is not maintained year-round. The most obvious solution for emergency egress from the eastern portion of Navarro Ridge is to have the County restore this road to a minimum standard for emergency use by ordinary vehicles.
2. The shortest option for Middle Ridge and Albion Ridge residents would utilize the "Donut Shop" and Elliott Road connectors to the Salmon Creek Road, exiting halfway between the two via a 2-mile connector (**Road 9**) to Navarro Ridge.

Hemmings submittal Hazard Mitigation Letter 1



3. For residents east of Elliott Road on Albion Ridge, the only potential way to escape a fire in the eastern portion of the Pygmy or in the Conservation Fund's holdings along Salmon Creek would be a 5.9-mile lifeline via a private road connecting with a now abandoned MRC logging road over Keane Summit and out to Flynn Creek Road (**ROAD 7**). Portions of MRC's connector roads have been found to be drivable; but the section closest to Albion Ridge is reportedly overgrown.
4. One alternative for residents of Middle Ridge and the central portions of Albion Ridge going west is a possible connection through the Shandel property at the end of K Road (**ROAD 2**). Accessed by either I or K Road, this wide, well-rocked road dead ends at the junction of Taylor and Little Salmon Creek, opposite the gentlest rise in the Little Salmon Creek drainage. Nothing is known yet about the connection to Middle Ridge Road on the south side.

In addition to identifying evacuation routes that would be made available to the public by CalFire, ALRFPD or the Sheriff's Department, we have identified three Safe Havens – fields large enough to offer protection from fire and falling trees and shown by lime green circles on the map -- where residents could gather and receive services. We have received permission to use two of the three Safe Havens.

We would like to voice our support for a continuation of the effort to identify and prepare multiple Safe Havens and escape routes from the Albion Ridge, Middle Ridge and Navarro Ridge Roads and to volunteer our time and energy to build widespread backing for it in the broader community. A complementary and concurrent effort to complete a census of residents to help plan evacuation routes and other services is being organized by NEAR (Neighborhood Emergency Action and readiness), a volunteer organization serving the Albion Ridge, Middle Ridge, Navarro Ridge and Little River communities.

The identification and construction of evacuation routes raises at least three legal issues. The first is whether public funds can be used to build or improve a road on private or commercial property that the public can only use in an emergency. The second is whether these roads need to meet the same construction standards of a public right-of-way. Both issues would directly affect the cost of the project and time to completion. And finally, both permitting and denying use of these routes poses liability issues for private and commercial landowners.

The persons signing this letter are committed to working with you and the County to build support for creating emergency escape routes from the Ridge Roads.

We sincerely appreciate your leadership on this issue.

Warm regards,

Carole Barnes, Scribe, Hubs and Routes and Albion resident
Michael Rees, Chief of ALRFPD
Jennifer Kreger, MD, Public Health Advisor, Mendocino Coast Healthcare District
Rick Hemmings, Mapmaker, Hubs and Routes, Mendocino Coast Healthcare District
Alix Sabin, Fund Raising Consultant, Hubs and Routes, Mendocino Coast Healthcare District; Member of NEAR, ALRFPD Fire Council; Albion Resident
Tom Wodetzki, Communicator-in-Chief and Albion resident

Hemmings submittal Hazard Mitigation Letter 2



Attachment: Map of Alternate Evacuation Routes and Safe Havens for Albion Ridge, Middle Ridge and Navarro Ridge
c.c. Supervisors John Haschak and Dan Gjerde

Co-Signers

Albion Ridge Road Residents

Carole Barnes
Bev Karkruff
T White
Chris Larsen
Shai Larsen
Rita Crane
Jena Breton
Larry Miller
Alison Gardner
Peter Temple
Linda Perkins
Bill Heil
Mario Abreu
JoAnne Abreu
Annemarie Weibel
Sandi Berrigan
Jonathon Peakall
Megan Collison
Robert Collison

Middle Ridge Road Residents

Tom Wodetzki
Sharon Hansen
Alix Sabin
Nancy Drooker
Joan Stevenson
Michael Stevenson
Karen McGrath
Bob McGrath
Michael McGrath
Nancy Chao
Joel Ginsberg
Virginia Reed
Lee Smith
Ron Smith
Arlene Reiss
Warren deSmidt
Larry Sawyer
Harriet Bye
Leona Walden

Hemmings submittal Hazard Mitigation Letter 3



Toby Wade
Marylyn Motherbear Scott
Sidra Stone
Stan Thornton
Alison Trick-Thornton

Navarro Ridge Road Residents

Will Lewis
Karen Lewis
Will Tomlinson
Renee Clark
David Stein
Karen Bowers
Leonardo Bowers
Steve Heckerroth
Christiane Heckerroth
Jim Heid
Janferie Stone
Toby Molina
Kirk Kleinschmidt
Will Federico
Gary Grimm
Ann Holsberry
Victor Simon
Brooke Wilder
Kit Williams
Russ Williams
Justine Olivia Battersby

Little River Residents

Danny Hervilla

Mendocino Residents

Steve Antler



----- Original message -----

From: Rick Hemmings <hemstitch@gmail.com>

Date: 10/29/20 3:36 PM (GMT-06:00)

To: "Ethan E. Mobley" <ethan@dynamicplanning.co>

Subject: Albion area evacuation routes

Hi Ethan,

We spoke about 10 days ago and you were kind enough to discuss available grants that could help us fund our evacuation routes project. You also allowed us to submit our public review documents a little late so they would reflect the changes that have been made since our meeting on Tuesday with our local Fire Chief, our County Supervisor and with local residents.

Residents on Albion Ridge and adjacent Middle Ridge have only one access route in and one route out. Our aim is to identify, then repair the chosen escape routes to help ensure a safe and effective emergency evacuation.

I've attached a letter which is being sent today to our local Mendocino County Supervisor Ted Williams, as well as an attached map which shows our current evacuation routes along with pertinent details. Please submit these two documents on our behalf to the Mendocino Multi-Jurisdictional Hazard Mitigation Plan.

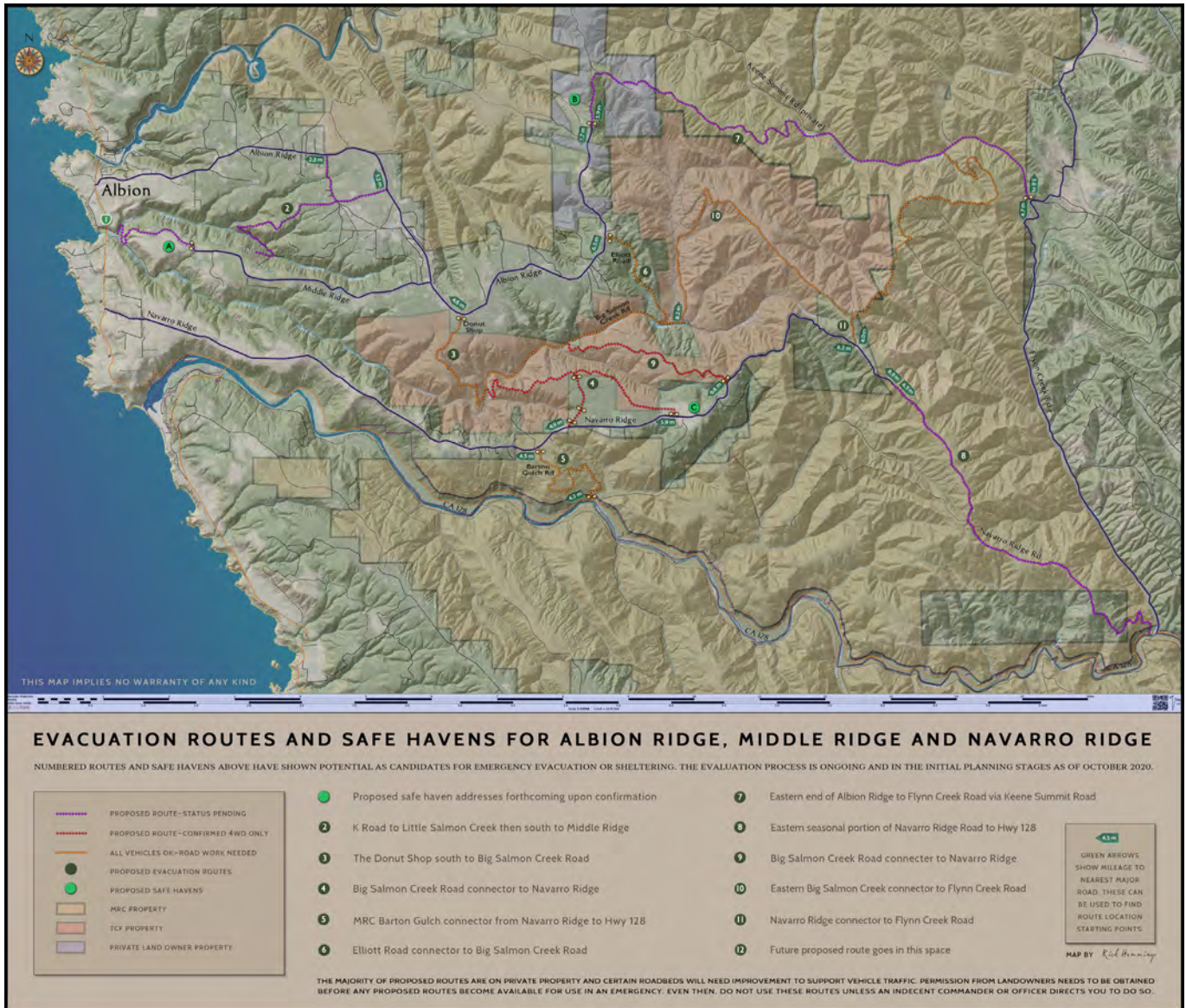
You spoke with Alix Sabin, a member of our team about a week ago. I was wondering if we could set up a time for a 10 minute phone call that all three of us could participate in? The purpose being to explore the possibility of disaster grants other than FEMA, that you had mentioned to me during our initial conversation.

Thanks very much for all that you do Ethan!

1

Best regards,
Rick Hemmings

Hemmings Evac Albion Ridge



Hemmings submittal Evac Routes



MENDOCINO RAILWAY

Foot of Laurel Street
Fort Bragg, California 95437

707 964 6371 TEL
707 964 6428 FAX

October 19, 2020

Carmel Angelo, Chief Executive Officer
County of Mendocino
501 Low Gap Road
Ukiah, California 95482

RE: Mendocino County Multi-Hazard Mitigation Plan

VIA EMAIL: angeloc@mendocinocounty.org

Dear Ms. Angelo:

I hope this finds you doing well.

On Friday, October 17, 2020 during the KZYX's local news I heard an interview with Mr. Gonzalez regarding the Mendocino County Multi-Hazard Mitigation Plan. Mr. Gonzalez indicated that the county was seeking feedback on the plan. During that interview no direction was given as to where that feedback should be sent. I would appreciate you directing this to the appropriate department.

In reviewing the May 2014 Mendocino County Multi-Hazard Mitigation Plan I see that the railroads of Mendocino County are called out on the various maps, but nowhere else are the railroad's right of ways or the important roles they can play called out in the document. This is troubling and I think Mendocino County should be using of the railroad corridors which would have immense benefits to the health and safety of our communities.

During each of the past three years we have applied for a grant from the U.S. Department of Transportation's *Better Utilizing Investments to Leverage Development* (BUILD) program. We hoped that BUILD funds would pay for half of the \$18.8 million project, with our company paying the remainder to reestablish a connection between Fort Bragg & Willits, improve corridor access in the event of emergencies, and acquire significant rail mounted fire suppression equipment and storage capacities to be staged at 8-10 spots along the route. Sadly, we were not awarded these funds.

As you know Mendocino Railway (California Western Railroad / Skunk Train) is a Class III Common Carrier / Public Utility. As such, we remain ready to serve our communities. I believe that using the railroad corridors as fire breaks and emergency access corridors is something with immense benefits in disaster mitigation and making our communities more resilient. I think we should find a way to incorporate this into the revised plan.

Thank you as always for your time, and for considering the utilization of the railroad corridors. Please feel free to reach out if you have any questions, my email is rip@mcn.org and my phone is 707-964-6371.

Sincerely,

MENDOCINO RAILWAY / SKUNK TRAIN

A handwritten signature in black ink, appearing to read "Robert J. Pinoli".

Robert J. Pinoli

Railway Mendocino County Multi Hazard Letter to Provide Feedback (Angelo) 2020



Survey & Results Documentation

Appendix B.3



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Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Thursday, June 4, 2020 2:25 PM
To: Torie Jarvis
Subject: Mendocino Hazard Mitigation Plan Survey Ready and Mtg #3 Agenda

MENDOCINO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN 2020 UPDATE

The public survey for the MJHMP is ready! Please share with your community. Resources for sharing are available below, including graphics and sample text.

We are initiating outreach to jurisdictional leads to begin working on assessing vulnerability to hazards in the next couple of weeks. If you missed the last meeting, the meeting recording and materials are available on the [meeting page](#). We reviewed the [Risk Assessment Mapping Platform \(RAMP\)](#) and several tasks we'll work on with jurisdictions.

We are looking forward to the final meeting, #3, of the full stakeholder group. More information below!

[Planning Committee Meeting #3](#)



Wed. June 24, 2020

12 PM to 2 PM

Calendar reminder [available here](#).

Via Zoom conference call:

<https://us02web.zoom.us/j/89018217172>

Call-in option: 669 900 6833

Meeting ID: 890 1821 7172

Meeting materials are available on the Mendocino County MJHMP page:

- www.mitigatehazards.com/mendocino-county/meetings/
- Project Password: Mendocino2020 (works for all log ins)



PUBLIC SURVEY NOW AVAILABLE.

Please share through your outreach avenues!



We have many resources available to help you share the MJHMP Survey with the public!

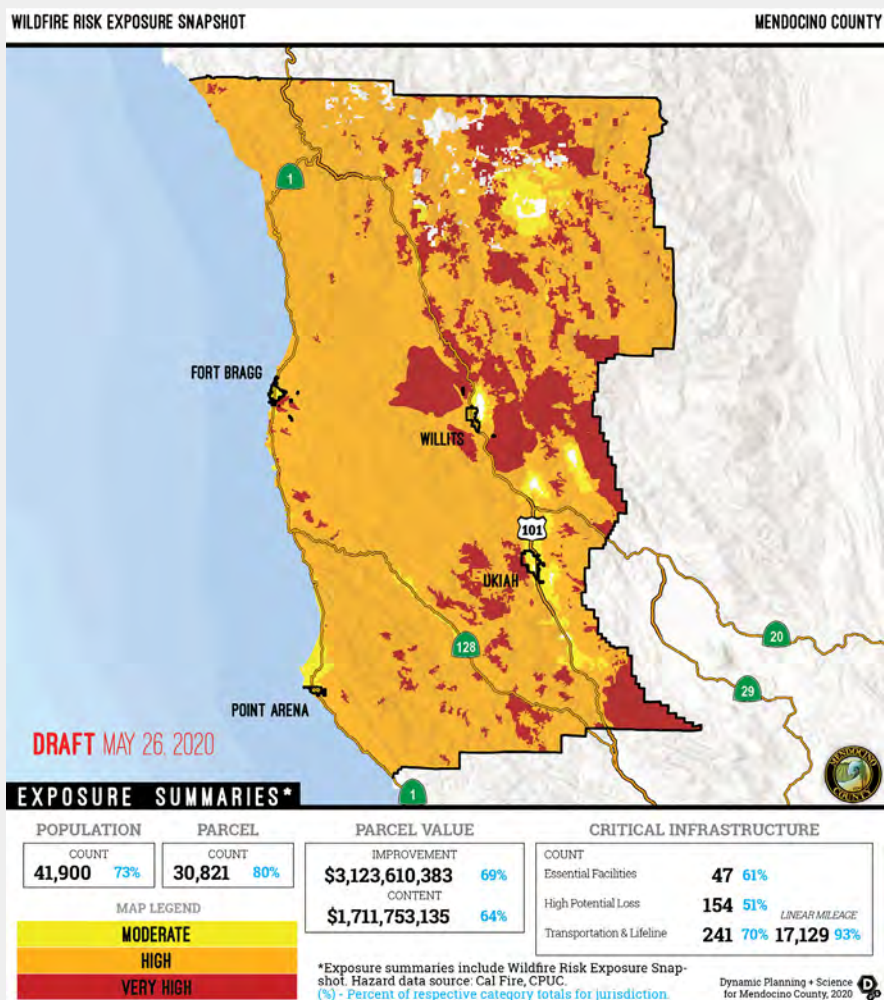
- 2 graphics that you can download.
 - The above graphic is a [Twitter-sized graphic available at this link](#).
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 - **Longer sample text:** Mendocino County is updating its multijurisdictional hazard mitigation plan—and we need your help! **Participate in a short survey and be entered to win a \$150 voucher for Stihl tools of your choice.**
 The County's hazard mitigation plan, which includes municipalities and school districts via the County Office of Education, explains prevalent hazards within the county and how hazards may affect communities differently. Most importantly, the mitigation strategy presented in the plan responds to the known vulnerabilities within each community and provides prescriptions or actions to achieve the greatest reduction of natural hazard risk. This planning effort could result in saved lives, reduced injuries, reduced property damage, and protection for the environment in the event of a natural hazard within the County.
 Over the coming months, the county stakeholders will finalize newly-developed mitigation action strategies based upon stakeholder and public consensus. To establish public perceptions on local hazards and mitigation strategies, the county developed a short community survey. Anyone who completes the survey by July 31st, 2020 will be entered



MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

into a drawing for a chance to win a variety of donated prizes. This short survey will help the County and participating jurisdictions prioritize mitigation actions and establish incentives for mitigating hazards near your home.

Survey respondents will be entered to win a grand prize of a \$150 Stihl power tool voucher. Power tools are a great way to reduce vegetation around homes for wildfire mitigation and reduce the unwieldy branches that cause damage to property or utility outages during severe storms. For more information on the planning effort or the survey please visit <http://mitigatehazards.com/mendocino-county/get-involved/>.





The above draft map shows wildfire risk exposure for Mendocino County from Mtg #2.

Planning Partners Meeting #3 coming up!

In our third and final meeting to craft the County's Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), we are taking a deeper dive into the development of mitigation actions that will be ID'ed in the Plan, as well as funding those identified actions through FEMA's Hazard Mitigation Assistance (HMA) programs.

June 2020

24



Draft AGENDA for the meeting:

- Welcome and Introductions
- Meeting #2 and Jurisdictional Exercises, Brief Recap
- Mitigation Alternatives
- Setting Plan Goals
- Mitigation Action Review (Draft)
- Developing a Nexus to HMA Funding
- Public Outreach Updates
- Next Steps

Background information on the MJHMP:



The purpose of the Mendocino MJHMP is to reduce property losses and avoid injury and/or casualties resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce loss of life, personal injury, and property damage that can result from a disaster.

For planning partners: The Plan is multi-jurisdictional in that 6 different Mendocino County jurisdictions are participating (the County, City of Fort Bragg, City of Point Arena, City of Ukiah, City of Willits, and the Mendocino County Office of Education). Your jurisdiction's active participation in the update process, as demonstrated by your attendance at this meeting, is one of FEMA's prerequisites for Plan approval.

For stakeholders: Many of you are also included in this email list as important stakeholders. While your participation is not required, we are happy to have you at any of these large meetings (of which there are 3 total). We will also arrange for hazard-specific meetings to garner more specific input on major hazards like wildfire, flood, and earthquake. You're welcome to just participate in those hazard-specific meetings as well.

Please let us know if you need additional information and how I can be of assistance. I appreciate your time and consideration as always. I look forward to seeing you at the end of the month.

Note, while we greatly prefer to meet face-to-face, due to coronavirus, the upcoming meetings will be held via Zoom. We will hope subsequent meetings can be in-person.

 [VISIT THE PROJECT PAGE TO LEARN MORE](#)



Torie Jarvis

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Sent: Thursday, June 4, 2020 2:25 PM
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We are looking forward to the final meeting, #3, of the full stakeholder group. More information below!

[Planning Committee Meeting #3](#)



Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Tuesday, June 23, 2020 8:52 AM
To: Torie Jarvis
Subject: Mendocino Hazard Mitigation Mtg #3 tomorrow!

**MENDOCINO COUNTY
MULTI-JURISDICTIONAL HAZARD
MITIGATION PLAN
2020 UPDATE**

We are looking forward to the final meeting, #3, of the full stakeholder group TOMORROW! More information below!

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12 PM to 2 PM

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Photo shows a 2017 landslide on Hwy 101 near Leggett, <https://sanfrancisco.cbslocal.com/2017/04/20/massive-landslide-shuts-down-highway-101-in-mendocino-county/>

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June 2020

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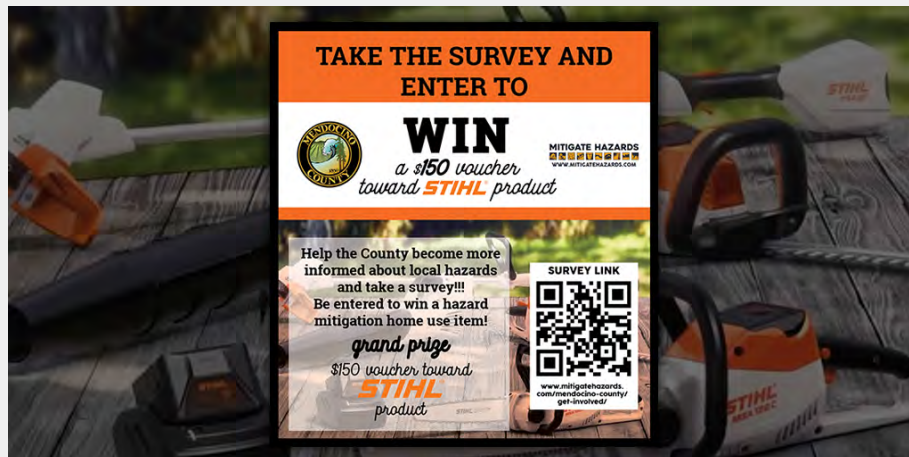


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**REMINDER: PUBLIC SURVEY NOW
AVAILABLE.**

324 responses to date!

Please share through your outreach avenues.



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MITIGATE HAZARDS






Torie Jarvis

From: Nash Gonzalez <gonzalezn@mendocinocounty.org>
Sent: Tuesday, June 23, 2020 8:52 AM
To: Torie Jarvis
Subject: Mendocino Hazard Mitigation Mtg #3 tomorrow!

MENDOCINO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN 2020 UPDATE

We are looking forward to the final meeting, #3, of the full stakeholder group TOMORROW! More information below!

Planning Committee Meeting #3

Wed. June 24, 2020

12 PM to 2 PM

Calendar reminder [available here](#).

Via Zoom conference call:

<https://us02web.zoom.us/j/89018217172>

Call-in option: 669 900 6833

Meeting ID: 890 1821 7172

Meeting materials are available on the Mendocino County MJHMP page:

- www.mitigatehazards.com/mendocino-county/meetings/
- Project Password: Mendocino2020 (works for all log ins)



Welcome to the Mendocino Hazard Mitigation Plan Survey!!!

376 responses

[Publish analytics](#)

Thank you again for completing the survey! Please provide any additional comments that you may have regarding hazard mitigation and community protection against natural disasters.

64 responses

Stopping logging and controlled burns around here was one of the largest mistakes of this county/state! Unfortunately people that didn't deserve to had to lose everything they had and some even lost their lives. What a shame!

test

Protection = better planning by govt agencies, \$ for emergency services, incentives that consider people of all means

Mitigation = local emergency drills, Spanish language outreach, \$ to all parts of the county to improve roads & communications

There is a need for clear accessible information in English and Spanish on how to prepare, and a way to distribute it. Perhaps the front of the free ad papers that come to every household. Most people don't seem to have a clue. Teaching the kids too!

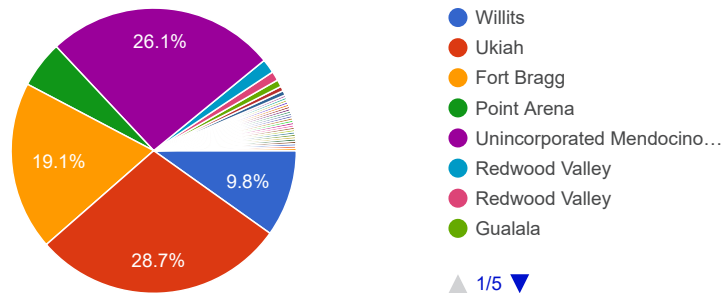
Please stop Pigs, Greed, and Extortion (PG&E) from shutting off power to the coast for inland "possible wind events" because they are scared sh!tless about lawsuit probabilities. Or fund Coasties to get on solar power for our autonomy and security.



Please fill out all the survey questions completely. Thanks for your participation.

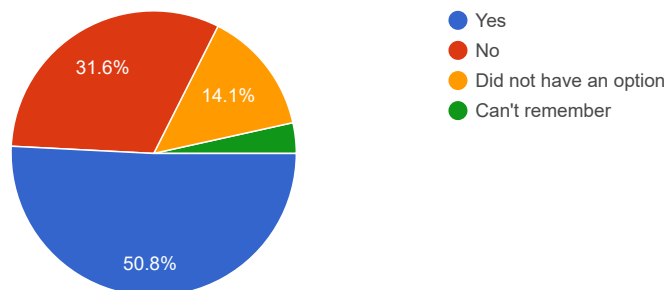
I live in...

376 responses



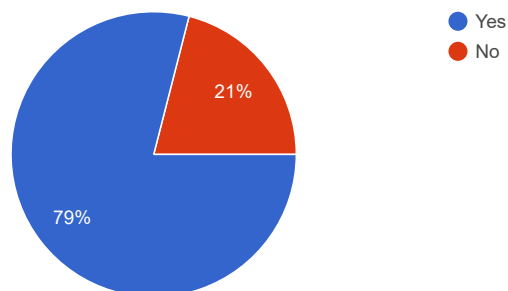
Did you consider the risks of naturally occurring hazards when you chose your home?

376 responses



Do you believe your property is at risk from a natural hazard disaster?

376 responses



Mendocino Public Survey - English Results 2



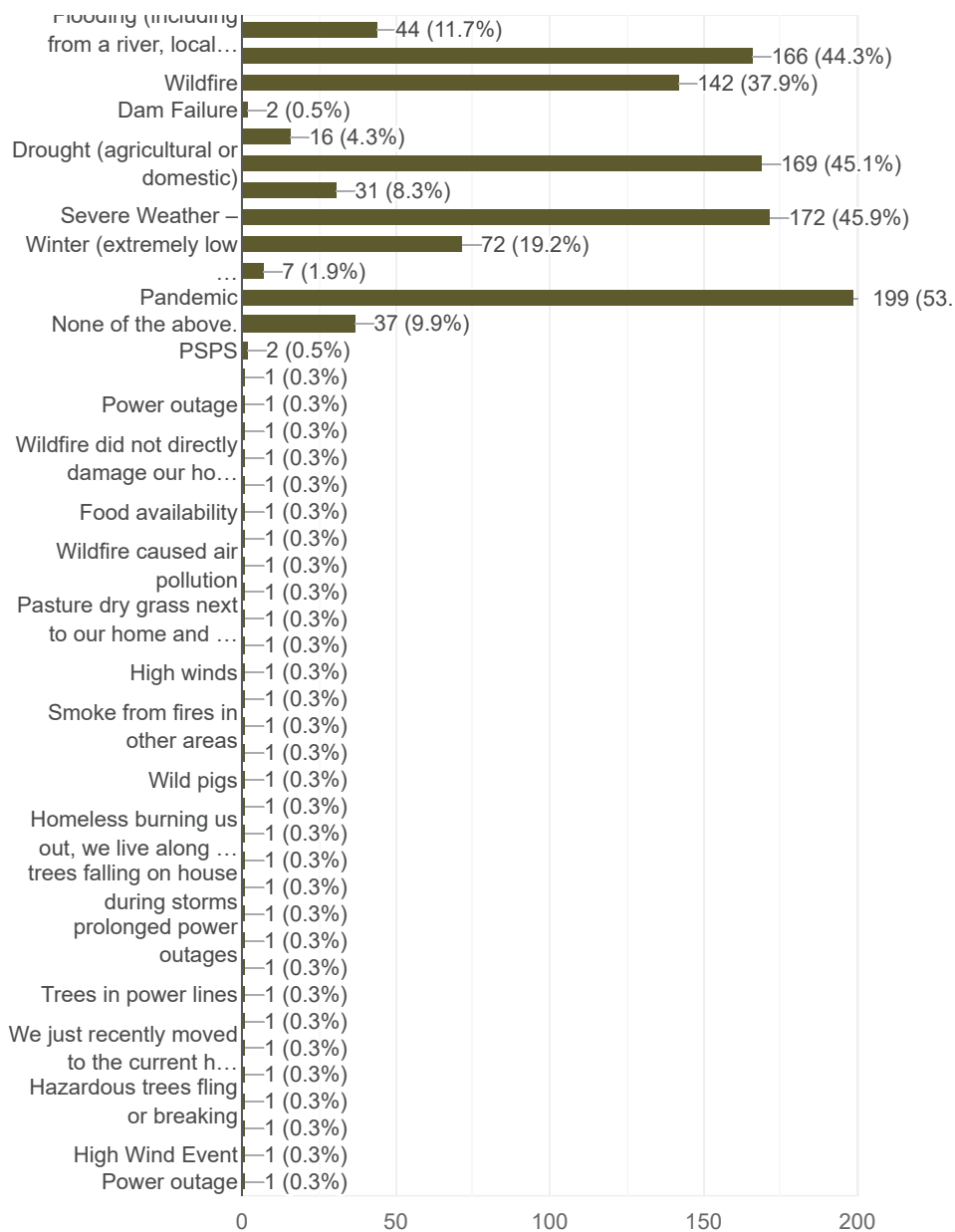
MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

Welcome to the Mendocino Hazard Mitigation Plan Survey!!!

https://docs.google.com/forms/d/18cSMcXXoBO4LUd_vZ3xgg...

Which of the following types of hazard events have you or someone in your household experienced at your current home?

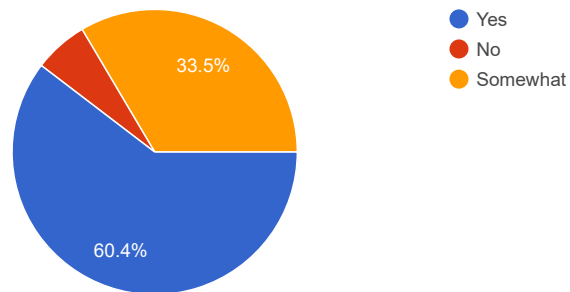
375 responses





Do you think you are well informed about the dangers of natural hazards in this area?

376 responses





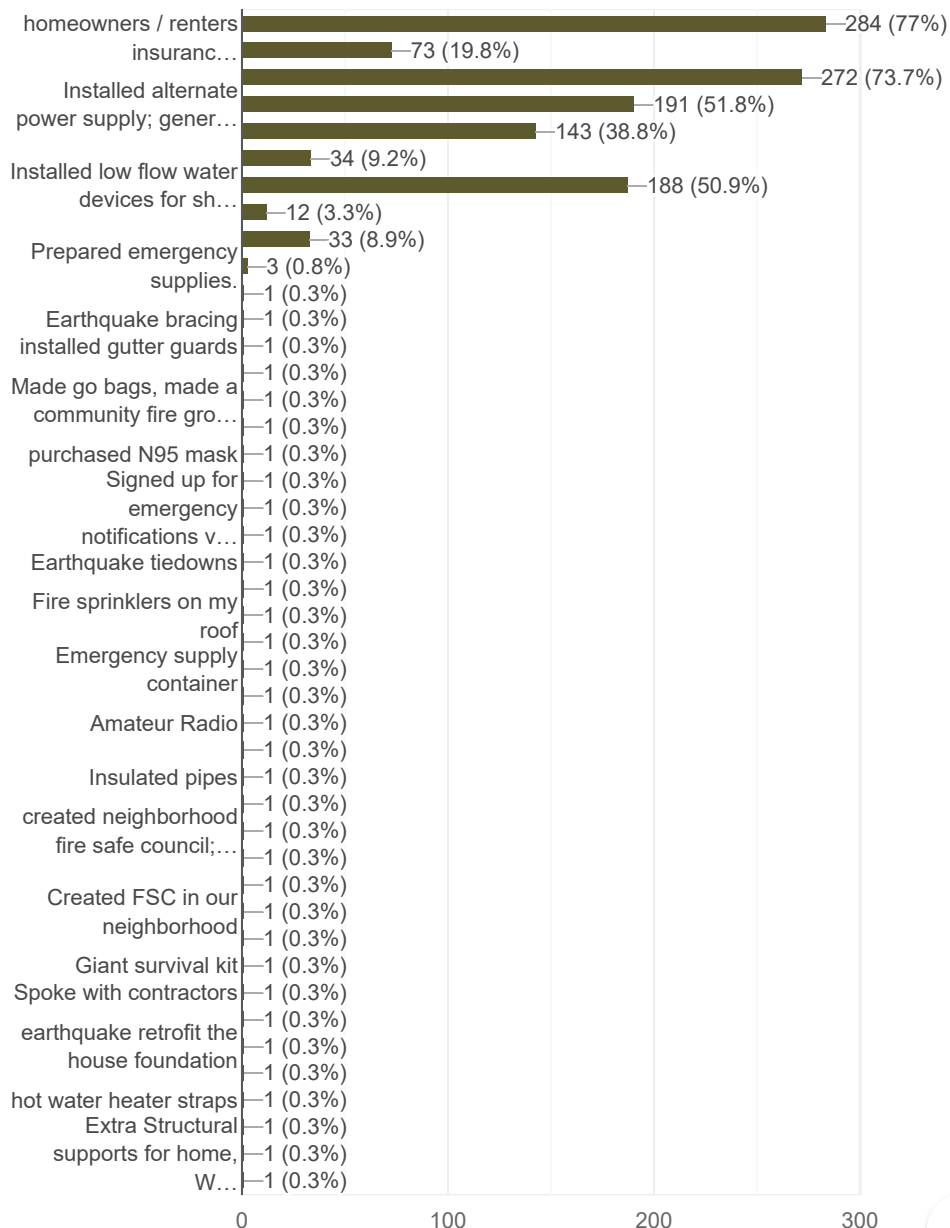
MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

Welcome to the Mendocino Hazard Mitigation Plan Survey!!!

https://docs.google.com/forms/d/18cSMcXXoBO4LUd_vZ3xgg...

What actions have you taken for your home or property that increase personal safety or reduce risk and injury from potential disasters? (please check all that apply)

369 responses



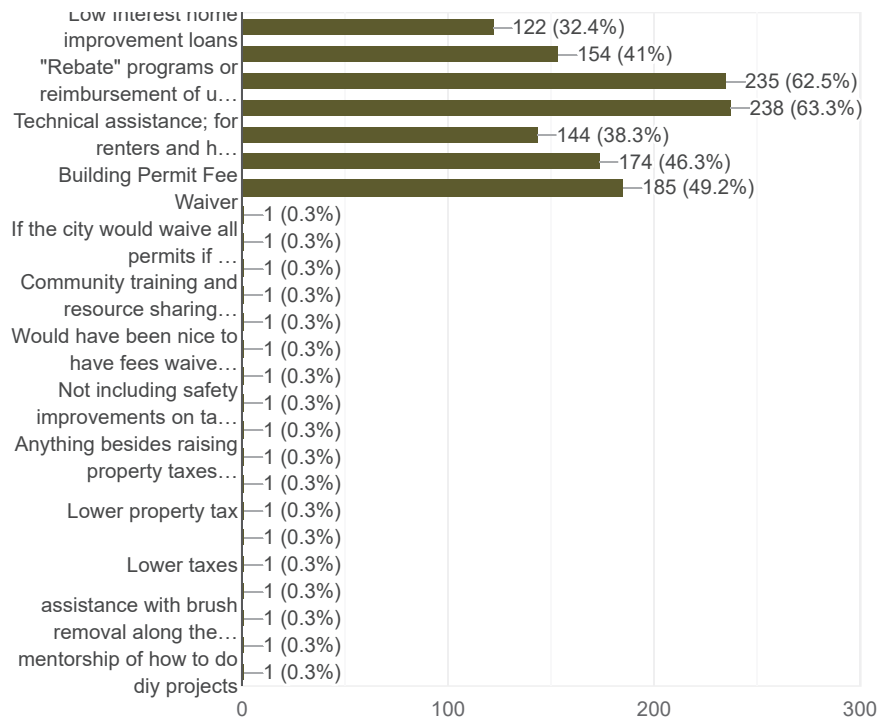


Welcome to the Mendocino Hazard Mitigation Plan Survey!!!

https://docs.google.com/forms/d/18cSMcXXoBO4LUd_vZ3xgg...

Which of the following incentives would encourage you to protect your home to withstand the impacts of possible natural hazards?

376 responses





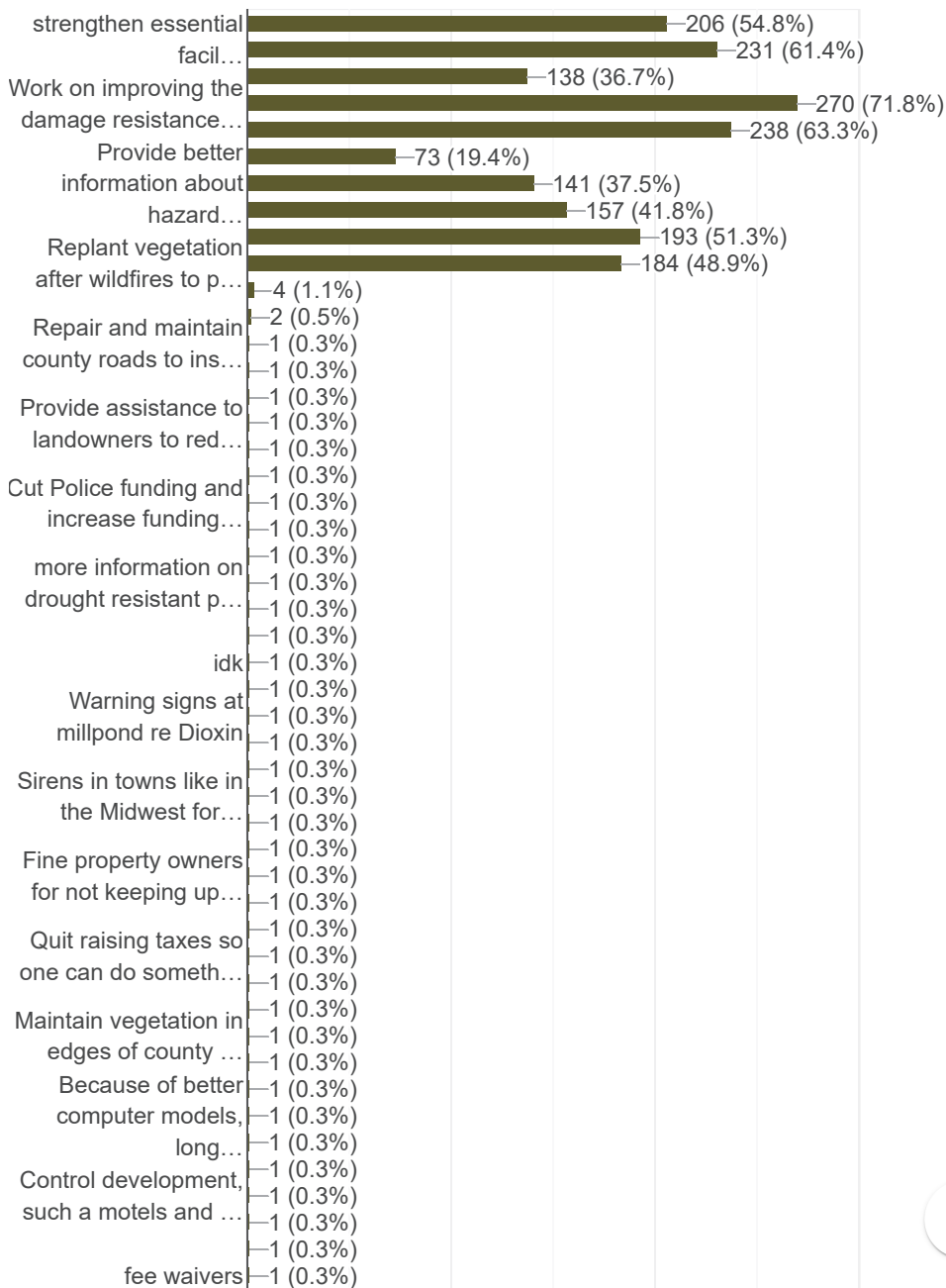
MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Welcome to the Mendocino Hazard Mitigation Plan Survey!!!

https://docs.google.com/forms/d/18cSMcXXoBO4LUd_vZ3xgg...

Which of the following mitigation projects do you believe local government agencies should focus on to reduce disruptions of services and to strengthen the community (please check all that apply)

376 responses





Bienvenido/a a la Encuesta del Plan de Mitigación de Peligros de Mendocino!!!

2 responses

[Publish analytics](#)

Por Favor Proporcione su correo electrónico. *

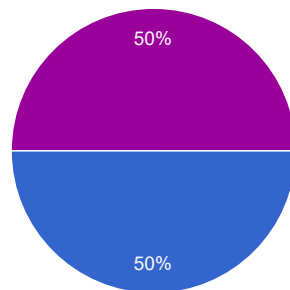
1 response

test

Por favor complete todas las preguntas de la encuesta completamente. Gracias por su participación.

Vivo en...

2 responses



- Cuidad de Fort Bragg
- Cuidad de Point Arena
- Cuidad de Ukiah
- Cuidad de Willits
- No vive en una ciudad/pueblo pero vive en el condado
- No incorporado en el Condado de Kern



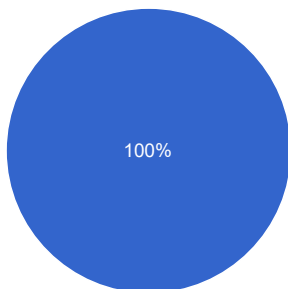


Bienvenido/a a la Encuesta del Plan de Mitigación de Peligro...

https://docs.google.com/forms/d/1-s_gdZLCD5uptO9O3Zaiw...

¿Consideró los riesgos de peligros naturales cuando eligió su hogar?

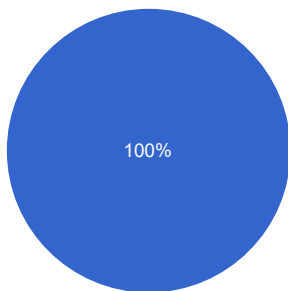
2 responses



- Sí
- No
- No tenía opción
- No puedo recordar

¿Cree que su propiedad está en riesgo por un desastre de peligro natural?

2 responses



- Sí
- No



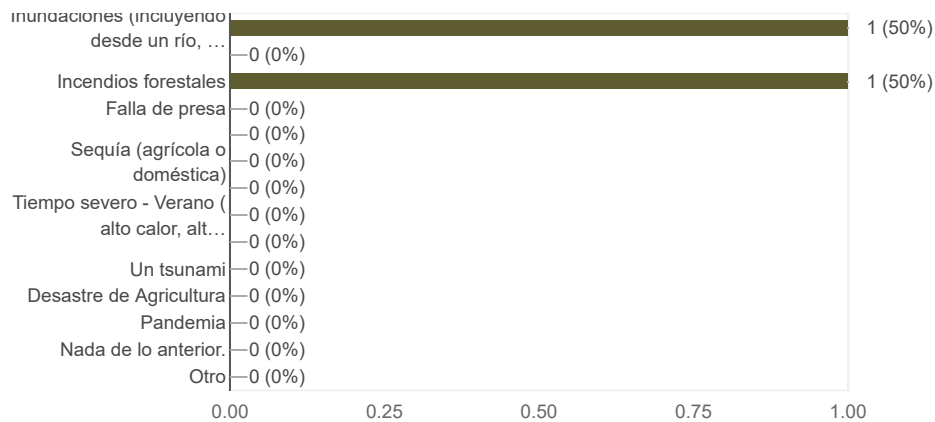


Bienvenido/a a la Encuesta del Plan de Mitigación de Peligro...

https://docs.google.com/forms/d/1-s_gdZLCD5uptO9O3Zaiw...

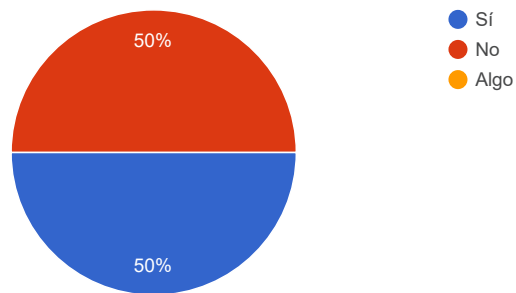
¿En su hogar actual, cuáles de los siguientes tipos de eventos de peligro ha experimentado usted o alguien de su casa?

2 responses



¿Cree que está bien informado sobre los peligros naturales en esta área?

2 responses



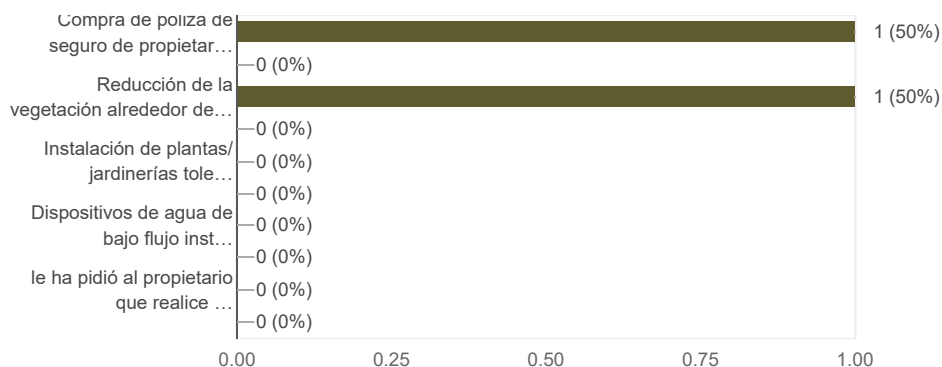


Bienvenido/a a la Encuesta del Plan de Mitigación de Peligro...

https://docs.google.com/forms/d/1-s_gdZLCD5uptO9O3Zaiw...

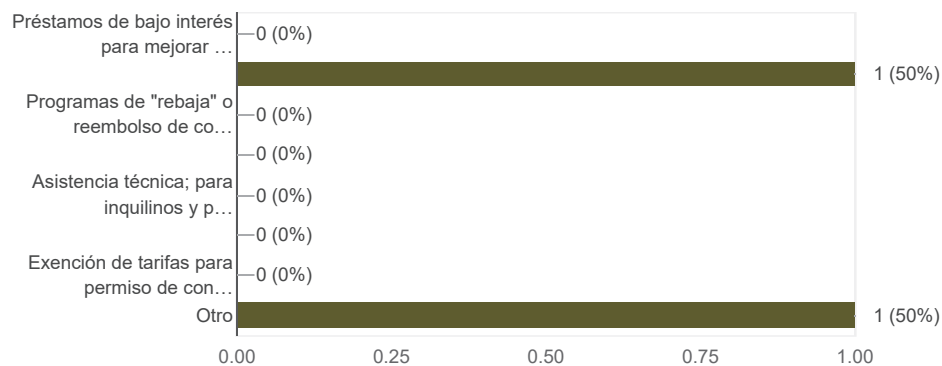
¿Qué medidas ha tomado para su hogar o propiedad que aumentan la seguridad personal o reducen el riesgo y las lesiones por posibles desastres?

2 responses



¿Cuál de los siguientes incentivos lo alentaría a proteger su hogar para resistir los impactos de posibles peligros naturales?

2 responses



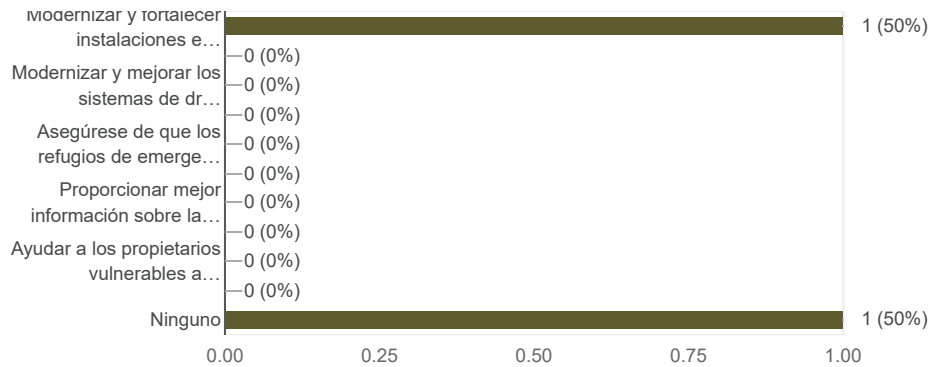


Bienvenido/a a la Encuesta del Plan de Mitigación de Peligro...

https://docs.google.com/forms/d/1-s_gdZLCD5uptO9O3Zaiw...

¿Cuál de los siguientes proyectos de mitigación cree que las agencias gubernamentales locales deben de concentrarse en reducir las interrupciones de servicios y fortalecer la comunidad?

2 responses



¡Gracias de nuevo por completar la encuesta! Por favor proporcione cualquier comentario adicional que pueda tener con respecto a la mitigación de riesgos y la protección de la comunidad contra desastres naturales.

1 response

test

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Google Forms





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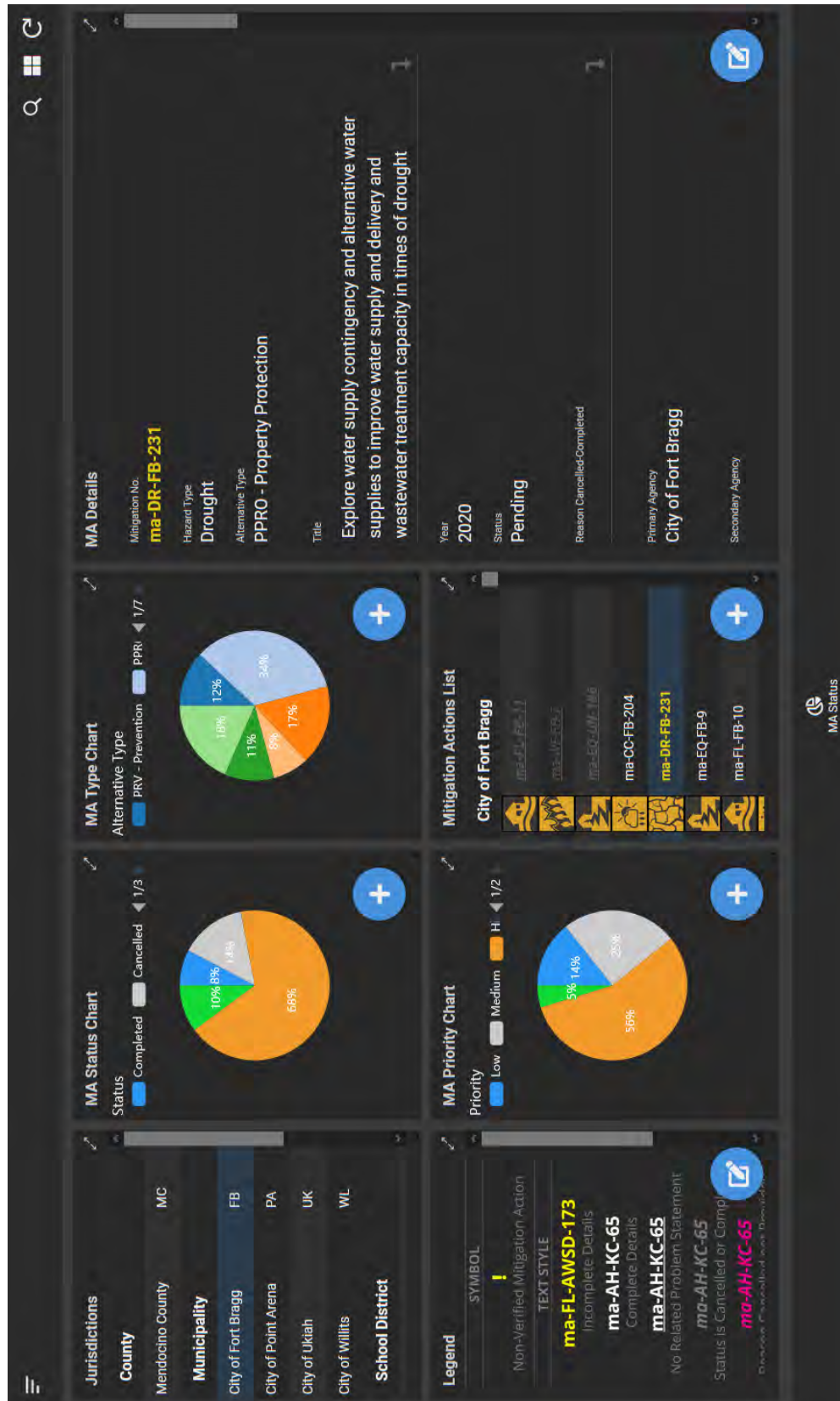


Mitigation Strategy Prioritization Process Documentation

Appendix B.4



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MAST Priority Field and Summary Chart



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Website Documentation

Appendix B.5

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NASH GONZALEZ
707-463-4441
Atlas Planning Solutions
AARON PANNENSTIEL, AICP - Project Lead
909-374-4808
Dynamic Planning + Science
BRIAN GREER
510-253-0054

Mendocino Multi-Jurisdiction Hazard Mitigation Plan

2020 Update

Executive Summary



PRINT

Mendocino County, along with 5 other participating jurisdictions, will develop an update to the [2014 Mendocino County Multi-Jurisdiction Hazard Mitigation Plan](#) to reduce losses resulting from natural disasters. Hazard mitigation is the use of sustained, long-term actions to reduce the loss of life, personal injury, and property damage that can result from a disaster. Benefits of mitigation planning include:

- Identifying actions for risk reduction through collaboration with stakeholders and the public.
- Focusing resources on the greatest risks and vulnerabilities.
- Building partnerships by involving citizens, organizations, and businesses.
- Increasing education and awareness of threats and hazards, as well as their risks.
- Communicating priorities to State and Federal officials, and
- Aligning risk reduction with other community objectives.

Planning efforts could include capital projects and other pragmatic activities that can mitigate the impacts of hazards. The 2020 MJHMP Update will cover each of the major natural hazards that pose risks to County infrastructure and residents. Recognizing that successful mitigation planning efforts must be communicated and understood by the public, the County approach will include stakeholder participation and input with the use of cutting edge GIS technology to map and update the hazard information for each hazard profiled in the 2020 MJHMP.

Participating Jurisdictions

The 2020 MJHMP update will include, at a minimum, the jurisdictions listed below. It is understood that the County also encompasses areas of land controlled by Federal and State land management agencies, including the California Department of Forestry and Fire Protection, Bureau of Land Management, and Bureau of Reclamation. While other levels of government have jurisdiction in these parts of the County, the Hazard Mitigation Plan could also be used to document and coordinate mitigation efforts among Federal, State, and local jurisdictions. In addition, it will be important to invite organizations such as public and private utility companies to be stakeholders during the update process.

The following jurisdictions will meet FEMA guidelines and requirements as a formal participating agency:

Municipalities and Jurisdictions Participating in 2020 MJHMP Update

- City of Willits
- City of Ukiah
- City of Fort Bragg
- City of Port Aransas
- Mendocino County Office of Education

Participating Jurisdictions Map

Participants not Shown on Map: Mendocino County Office of Education



Update Requirements and DMA 2000

A current and approved hazard mitigation plan is a prerequisite for jurisdictions wishing to pursue funding under the Hazard Mitigation Grant Program (HMGP) if a Federal disaster should occur. The Stafford Act constitutes the statutory authority for most Federal disaster response and recovery activities, especially as they pertain to FEMA and FEMA programs.

On October 30, 2000, the Robert T. Stafford Disaster Relief and Emergency Assistance Act was amended by Public Law 106-390 and is referred to as the Disaster Mitigation Act of 2000 (DMA 2000). As a DMA 2000 requirement, the Mendocino MJHMP must be updated every five (5) years to remain in compliance with regulations and Federal mitigation grant conditions. Federal regulations require hazard mitigation plans to include a plan for monitoring, evaluating, and updating the hazard mitigation plan. A current and approved hazard mitigation plan is a prerequisite for jurisdictions wishing to pursue funding under the Stafford Act.

Project Funding Information

Mendocino County is using an award from the Hazard Mitigation Grant Program (HMGP) to complete the MJHMP update. The County has contracted with Atlas Planning Solutions to update the current Mendocino Multi-Jurisdiction Hazard Mitigation Plan. The consultant will provide on-site process facilitation, stakeholder outreach, data collection and analysis, plan writing, and strategy development.

Mendocino HMP Website - Executive Summary



MENDOCINO COUNTY MULTI-HAZARD MITIGATION PLAN

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Mendocino

[NASH GONZALEZ](#)

707-463-4441

Atlas Planning Solutions

[AARON PIANNENSTIEL](#), AICP – Project

Lead

909-374-4828

Dynamic Planning + Science

[BRIAN GREER](#)

510-253-0054

Mendocino – Local Hazard Mitigation Plan

2020

Mitigation at Home



Perform Mitigation Around Your Home!

Mitigation around your home can better prepare you and your family for an unexpected emergency or disaster incident, and help you recover more quickly. Here are some resources to get you started.

Assess Your Own Risk

Using [Cal OES MyHazards](#), type in your address to assess your risk to natural hazards including earthquakes, flood, fire and tsunami. Learn what you should do to reduce injuries, protect your life and those of others, and reduce damage to your home and property.

Visit [Ready.gov](#) to learn about different hazards and how you can prepare your home or business for these events.

Home Mitigation Ideas

Now that you're familiar with the hazards that have the potential to affect your community, check out some of these mitigation techniques that can be performed around your home.

Wildfire Mitigation Ideas

- [California Fire Safe Council](#): Information on grants/ funding programs and community events.
- [CAL FIRE Why 100'](#): Video from CAL Fire with defensible space guidelines for your home.
- [CAL FIRE Ready for Wildfire](#): CAL Fire website for preparing your home for wildfire.
- [CAL FIRE Ready for Wildfire \(Get Ready\)](#): CAL Fire tips on defensible space, hardening your home, and fire-resistant landscapes.
- [CAL FIRE Ready for Wildfire \(Prevention\)](#): CAL Fire "One Less Spark" wildfire prevention tips for equipment use, debris burning, campfires and more.

Earthquake Mitigation Ideas

- [FEMA Earthquake Home Hazard Hunt](#): FEMA recommendations for reducing earthquake hazards in your home.
- [California Earthquake Brace and Bolt Program](#): California EBB provides \$3,000 grants to be used toward a code-compliant seismic retrofit for houses that qualify. Find out more about the program and if your house qualifies.

Flood Mitigation Ideas

- [FEMA Flood Mitigation](#): Tips for preparing your home or workplace, collecting sources of information, developing an emergency communications plan and knowing what to do when a flood is approaching your home or business.
- [California Flood Preparedness Tips](#): Tips on how to divert water away from your home during a flood including sandbag filling and placement.

Severe Weather Mitigation Ideas

- [Severe Storm Mitigation](#): Tips to equip your home with the accessories it will need to survive a storm from the National Association of Home Builders.

Drought Mitigation Ideas

- [Save Our Water](#): Tips and resources for water conservation in and around the home.

Reduce Personal Risk or Injury

Create a Plan

Every household should have a disaster plan! Meet with your family members and discuss why you need to prepare for a disaster. Discuss and explain the dangers of the various hazards that may impact your home or your community.

Build an Emergency Kit

An emergency kit is assembled so that in case of an emergency you are prepared ahead of time. It is possible that you will need to survive on your own after an emergency and this kit should have all the basic yet essential items you will need for at least 72 hours. Your kit should contain food and water, items in case there is a power shortage, and other items such as personal hygiene supplies and copies of important documents.

Mendocino HMP Website - Mitigation at Home



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Project Contacts

Mendocino

[NASH GONZALEZ](#)

707-463-4441

Atlas Planning Solutions

[AARON PFANNENSTIEL](#), AICP – Project

Lead

909-374-4828

Dynamic Planning + Science

[BRIAN GREER](#)

510-253-0054

Mendocino – Local Hazard Mitigation Plan

2020

Get Involved



The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and their property from hazards. Mendocino County developed the Multi-Hazard Mitigation Plan (MHMP) update to make the County, its residents and visitors less vulnerable to future hazard events.

Take a Survey!

Tell us what you think...

COMMUNITY SURVEY

ENCUESTA PRÓXIMAMENTE

Survey Results

Total Surveys...

376

Total Surveys (spanish)...

2

Thank you for weighing in on the hazard mitigation survey! We are integrating your input into the HMP! The information you provide will help us identify and coordinate projects focused on reducing the risk of injury or damage to property from future hazard events (e.g. wildfires, floods, earthquakes).

The survey closed on Sept. 22, 2020. Thank you!

REVIEW THE HAZARD MITIGATION PLAN!

Coming soon!

Throughout the planning process, draft sections of the 2020 Mendocino Multi-Hazard Mitigation Plan will be made available for review and comment; documents can be found on the Documents page.

Discover County Planning Documents

Does your neighborhood have its own Community Wildfire Protection Plan? Do you know where the flood zones are in the County? There are a lot of great resources available to the public and they can all be found here.

Events

Come take the survey in person and get your mitigation questions answered at one of our upcoming events.

Event details coming soon!

Mendocino HMP Website - Get Involved



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510-253-0054

Mendocino Multi-Jurisdictional Hazard Mitigation Plan

2020 Update

Documents

2020 Mendocino County Multi-Jurisdictional Hazard Mitigation Plan

This is your opportunity to be heard! Click below to open the Review PDF's for Volume 1 and find each volume 2 annex of the County's 2020 Hazard Mitigation Plan. For additional help on PDF commenting, use the instructions below in the "How to Comment on the PDF" section. Note the files may take a few moments to load due to the size of the documents and the interactive commenting feature.

The County's Multi-Jurisdictional Hazard Mitigation Plan is available in Volume 1 for review at the link below:

[CLICK HERE - DRAFT 2020 MJHMP - VOLUME 1](#)

You can also download the PDF and provide comments via the form linked below or by emailing our team directly: [Download MJHMP VOL. 1](#)

Volume 2 Draft Annexes

The Jurisdictional Annexes to Volume 1 are available for review by jurisdiction:

Fort Bragg - [Click here for Draft Annex \(9/11/2020\)](#)

Point Arena - [Click here for Draft Annex \(9/11/2020\)](#)

Ukiah - [Click here for Draft Annex \(9/11/2020\)](#)

Willits - [Click here for Draft Annex \(9/11/2020\)](#)

Office of Education - [Click here for Draft Annex \(9/11/2020\)](#)

Mendocino HMP Website - Documents



HOW TO COMMENT!

Tell us what you think...

Option 1

Click the link to the left to comment on the Draft Volume 1

Option 2

[Submit a Comment Form](#)
For Volume 1 or 2 Annexes

Option 3

[Email your comments!](#)
For Volume 1 or 2 Annexes

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707-463-4441

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[AARON PFANNENSTIEL](#), AICP - Project Lead

909-374-4828

Dynamic Planning + Science

[BRIAN GREER](#)

510-253-0054

Mendocino Multi-Jurisdictional Hazard Mitigation Plan

2020 Update

Meetings

Planning Committee Meeting Resources

Mitigation Action Support Tool review meetings (choose a time, meeting will be repeated):

Wednesday, Sept. 9, 3 PM. Calendar reminder [here](#).

<https://us02web.zoom.us/j/84104285974>; +1 669 900 6833; Meeting ID: 841 0428 5974

Thursday, Sept. 10, 9 AM. Calendar reminder [here](#).

<https://us02web.zoom.us/j/8206089028>; +1 669 900 6833; Meeting ID: 820 6089 0284

KICK-OFF MEETING

PLANNING COMMITTEE MEETING #1

PLANNING COMMITTEE MEETING #2

PLANNING COMMITTEE MEETING #3

Mendocino HMP Website - Meetings





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NASH GONZALEZ

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AARON PFANNENSTIEL, AICP – Project Lead

909-374-4828

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Mendocino Multi-Jurisdictional Hazard Mitigation Plan 2020 Update Point of Contact Database



Point of Contact Database

Click the link below to launch the point of contact database for the 2020 Mendocino County HMP update. The app is searchable for specific names, jurisdictions, emails, etc.

POC APPLICATION

Mendocino HMP Website - POC App

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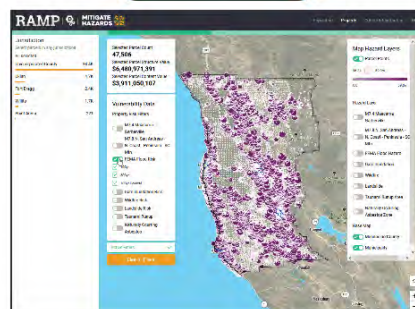


Mendocino County HMP

Risk Assessment Mapping Platform

Access the application with username and password both matching the project password.

LAUNCH RAMP



RAMP Resources

The RAMP user guide details RAMP's user interface and how to use the mapping application.

RAMP USER GUIDE

The hazards legend provides full details for each class of hazard portrayed in RAMP and provides data sources.

HAZARDS LEGEND

The GIS data dictionary itemizes the status of each GIS data layer that will be used in the project.

GIS DATA DICTIONARY

If you need additional help navigating these mapping tools or have any questions regarding data sources, analysis methods, etc., please email brian@dynamicplanning.co.

Mendocino HMP Website - RAMP



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MAST

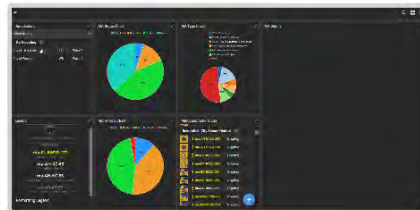
MITIGATE
HAZARDS

Using the Mitigation Action Support Tool (MAST)

The links below allow you to access the Mitigation Action Support Tool "MAST". Each stakeholder will receive an invitation to a introduction and functionality review meeting. For additional help, please reach out to our team by emailing torie@dynamicplanning.co

Mendocino County MAST

Access the application by clicking the link below

[LAUNCH MAST](#)

About MAST

MAST enables exploration, editing, and ongoing updates to the mitigation strategy for the 2020 Mendocino HMP. MAST is an important step in creating a hazard mitigation plan that can be updated, revised, and inputted into grant requests into the future.

MAST enhances traditionally planning documents by allowing direct stakeholder inputs and updated by project participants—keeping this 2020 Mendocino HMP a truly living document.

This application is for the use of 2020 Mendocino HMP stakeholders only and may not be shared or demonstrated to users outside of the stakeholder group.

If you need additional help navigating these tools or have any questions regarding the planning process please email torie@dynamicplanning.co.

Mendocino HMP Website - MAST

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Project Contacts

Mendocino

[NASH GONZALEZ](#)

707-463-4441

Atlas Planning Solutions

[AARON PFANNENSTIEL](#), AICP – Project Lead

909-374-4828

Mendocino Multi-Jurisdiction Hazard Mitigation Plan

2020 Update

Planning Process Library



This library includes links to view map products or exercises completed by each jurisdiction to meet or exceed FEMA planning requirements outlined in 44 CFR § 201.6 – Local Mitigation Plans (44 CFR Part 201 – Mitigation Planning). Most importantly §201.6(c)(2)(iii) requires that in multi-jurisdictional plans, the risk assessment section must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

Risk Assessment – explore or download each hazard exposure & damage estimation map

Hazard Prioritization – hazard prioritization risk matrices

Areas of Concern – identifies hazard problem statements

Capability Assessments – details specific technical, fiscal, and regulatory resources

If you need help navigating these mapping products, please email brian@dynamicplanning.co.

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Mendocino Multi-Jurisdictional Hazard Mitigation Plan

2020 Update

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MENDOCINO COUNTY

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

VOLUME 2

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City of Ukiah

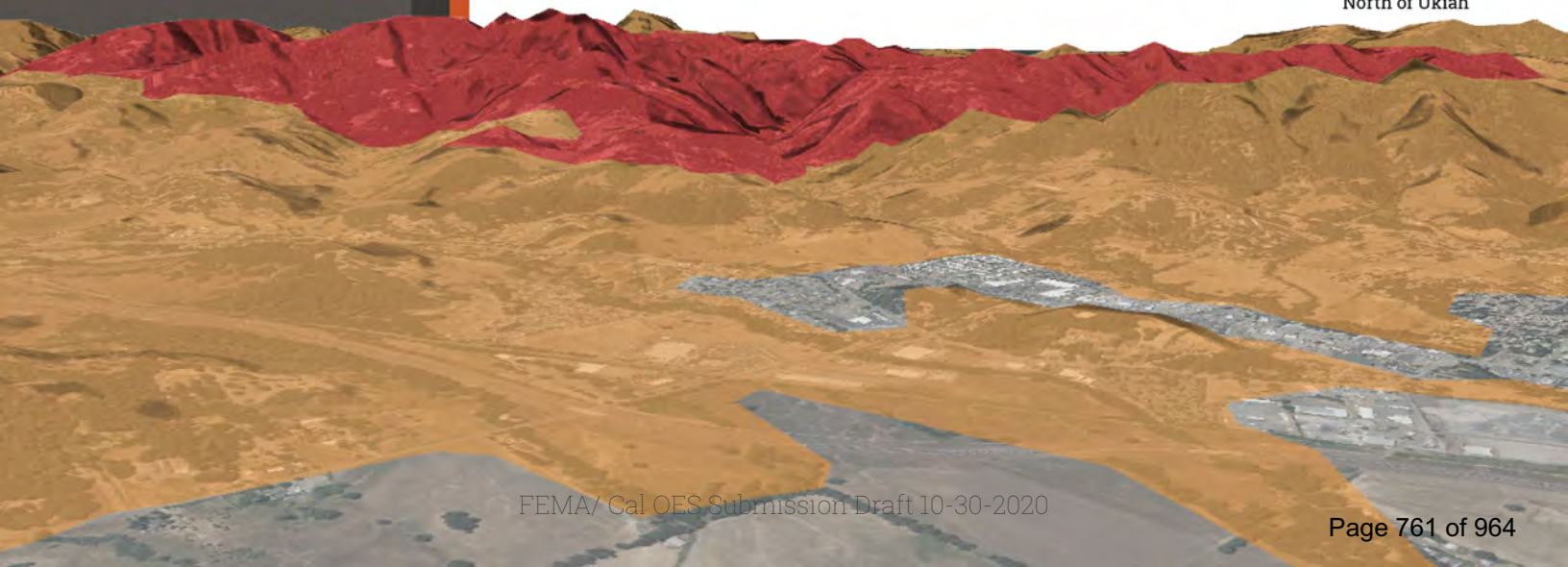
City of Fort Bragg

City of Point Arena

City of Willits

Mendocino County Office of Education

DEPICTED BELOW:
Composite Wildfire Layer
North of Ukiah





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MENDOCINO COUNTY

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Ukiah

JURISDICTIONAL ANNEX

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Mendocino County

Multi-Jurisdiction Hazard Mitigation Plan

CITY OF UKIAH (UK)

Municipal Participating Jurisdiction Annex

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Section 1. City of Ukiah

1.1 Purpose

This Annex details the hazard mitigation planning elements specific to the City of Ukiah. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Ukiah. This Annex provides additional information specific to the City of Ukiah, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Tami Bartolomei, Office of Emergency
Management Coordinator
City of Ukiah
300 Seminary Avenue,
Ukiah, CA 95482
Telephone: (707) 467-5765
e-mail Address: tbartolemei@cityofukiah.com

Alternate Point of Contact

Craig Schlatter, Community Development Director
City of Ukiah
300 Seminary Avenue,
Ukiah, CA 95482
Telephone: (707) 463-6219
e-mail Address: cschlatter@cityofukiah.com

1.2 Planning Methodology

The City of Ukiah followed the planning process detailed in Volume 1, Section 3, including participating in the County Hazard Mitigation Planning Committee (HMPC) and Steering Committee and formulating their own internal planning team to support the broader planning process. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 1-1.

Table 1-1: Planning Committee Members

Planning Committee Members	Department
Tami Bartolomei	Office of Emergency Management
Craig Schlatter	Community Development
Douglas Hutchison	Ukiah Valley Fire Authority
Greg Owen	Ukiah Municipal Airport Manager
Justin Wyatt	Police Department
Sage Sangiacomo	City Manager
Tim Eriksen	Public Works

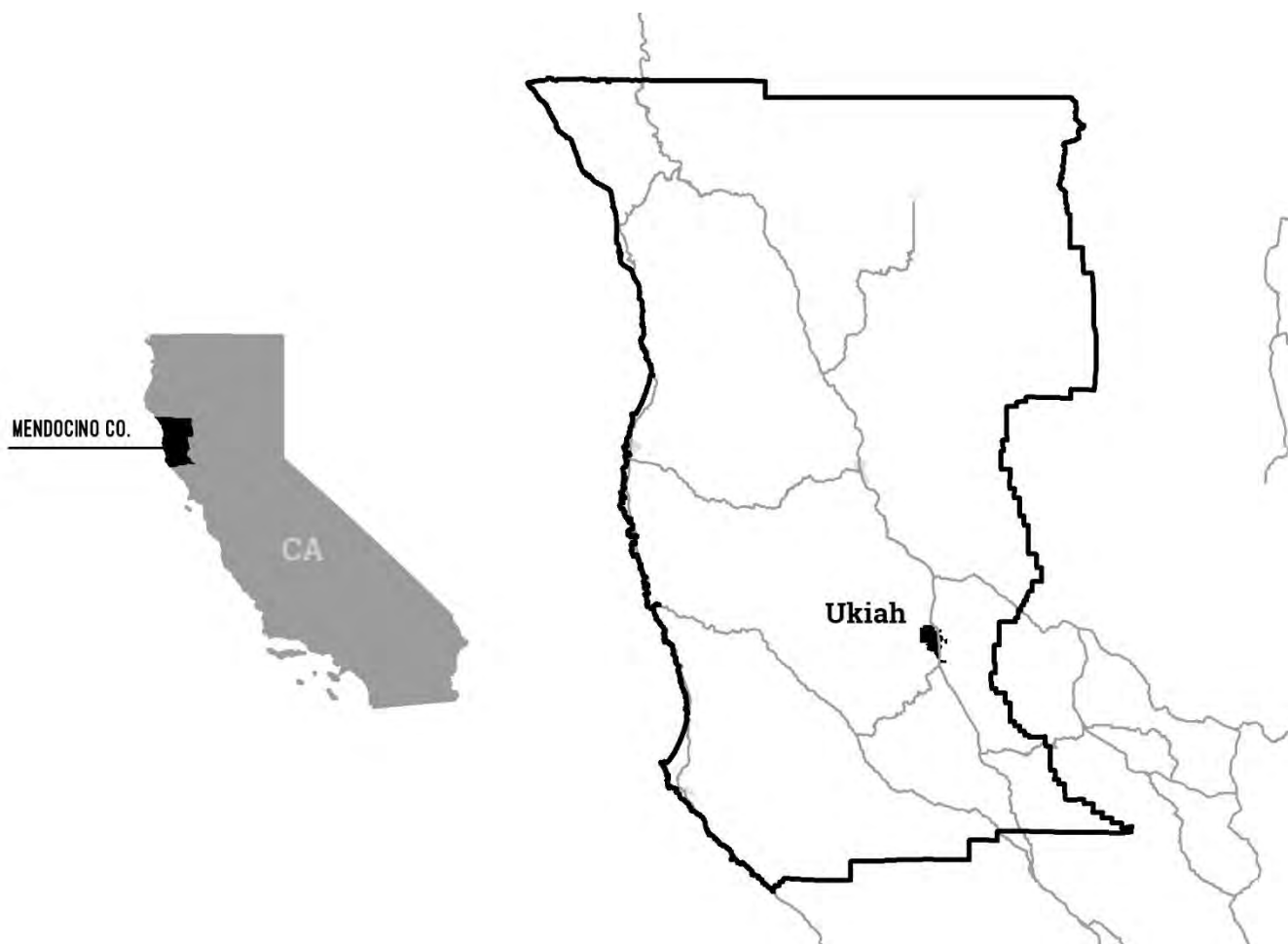


Figure 1-1: City of Ukiah Location

1.3 What's New

The City of Ukiah has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted.

The City reevaluated previous mitigation actions, including considerations of progress made on mitigation efforts, and retained them as pending or ongoing in Table 1-11; no table for cancelled mitigation actions is included. Completed mitigation actions are described in Table 1-2.

1.3.1 Mitigation Successes

Table 1-2 displays multiple important mitigation actions that have been completed by the City of Ukiah. The success story below further documents Ukiah's successful mitigation efforts to date.


Table 1-2: Completed Mitigation Actions

Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description	Responsible Party
ma-EQ-UK-80	Earthquake	Completed	2008	City of Ukiah	Strengthen, abate, or downgrade in occupancy, any structures that are owned or leased by Mendocino County or incorporated communities that do not meet the California Building Code (CBC) requirements for seismic safety or the California Codes Essential Services Building Act.	
ma-FL-UK-79	Flood	Completed	2008	City of Ukiah	Public Works has a long-term maintenance plan in place and routinely conducts storm culvert, creek and vegetation management.	
ma-FL-UK-81	Flood	Completed	2008	City of Ukiah	Public Works has upgraded both the Water treatment and Wastewater treatment facilities, and has letters of modified flood correction on file with FEMA.	
ma-WF-UK-61	Wildfire	Completed	2014	City of Ukiah	Develop a community wildfire mitigation plan that identifies and prioritizes areas for hazard fuel reduction treatments, and recommend the types of methods of treatments.	City Fire
ma-WF-UK-82	Wildfire	Completed	2008	City of Ukiah	The Fire Marshall provides regular public outreach on wild land interface dangers, and the City Council adopted new building standards for the High Fire Hazard Severity Zone.	



SUCCESS STORY 1: *Ukiah Wildfire Prevention Initiative*

In 2019, the City of Ukiah began an effort to increase wildfire mitigation capabilities. The City began conducting inspections in the region to identify any fire prone areas. They also conducted outreach by consulting local homeowners about their knowledge of fire safety issues and experiences with wildfire in the area.

During the same period, the City began creating a number of Fire Safe Councils in and around the city. These Fire Safe Councils mapped non-ambulatory neighborhood residences. The Mendocino County Fire Safe Council, in particular, is managing the Ukiah Valley Fire Fuels Reduction Project. The Projects



objective is to reduce fire fuels by performing roadside clearing, creating shaded fuel breaks, and holding neighborhood chipper days.

An additional collaboration between the County, the City, Ukiah Valley Fire Authority, Mendocino County Fire Safe Council and CalFire included vegetation management, shaded fuel breaks at the base of the western hills and ridgetop fire breaks in critical locations to reduce wildfire intensity and rate of spread around the City of Ukiah and surrounding communities.

1.4 Risk Assessment

The intent of this section is to profile the City of Ukiah's hazards and assess the City's vulnerabilities, distinct from that of the County-wide planning area. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. For more information on Risk Assessment Methodologies, see Vol. 1 and Appendix A.

1.4.1 Hazard Screening Criteria

Planning Team members from each participating jurisdiction collectively discussed which hazards should be profiled in the Plan and which should not. The results of that discussion can be found in Table 1-3. Detailed hazard profiles of the most significant County-wide hazards are described in Section 4 of Volume 1. The Planning Team reviewed previously-prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect City of Ukiah. Table 1-4 provides a crosswalk of hazards identified in Vol. 1 of this plan, City of Ukiah General Plan, and 2018 California State Hazard Mitigation Plan. The crosswalk was used to develop a preliminary hazards list, providing a framework for the Planning Team members to evaluate which hazards were truly relevant to City of Ukiah and which ones were not. Section 0 below describes the hazard risk ranking process that was performed by the planning team which prioritized hazards that are specifically relevant to City of Ukiah.



Table 1-3: County Hazard Prioritization (Vol. 1)

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	High priority county-wide, profiled hazard.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Severe Weather.
Insect Hazards	While hazardous insects exist in Mendocino County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	High priority county-wide, profiled hazard.
Severe Weather, including:	High priority county-wide for heavy wind and heavy rain.
Extreme Heat	Not a priority as extreme weather event, discussed as climate change impact.
Hail	Hail events are rare in Mendocino County and not profiled in this plan.
High Wind	Profiled as part of Severe Weather hazard.
Heavy Rain	Profiled as part of Severe Weather hazard.
Fog	While fog events do occur within Mendocino County, they are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.
Winter Storm / Extreme Cold/ Freeze Events	While winter storms are present in Mendocino County, they were not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	High priority county-wide, profiled hazard (includes erosion and naturally-occurring asbestos).
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.



Table 1-4: Document Review Crosswalk

Hazards	2014 Mendocino County MJHP	1995 City of Ukiah General Plan	2009 Mendocino County General Plan	2018 California State HMP
Agricultural Pests	■			■
Climate Change			■	■
Dam Failure	■		■	■
Drought	■	■	■	■
Earthquake	■	■	■	■
Flood	■	■	■	■
Insect Hazards	■			
Landslide		■	■	■
Levee Failure	■*			■
Manmade Hazards			■	■
Pandemic Disease	■			■
Sea Level Rise				■
Severe Weather				■
Soil Hazards	■**	■		
Terrorism & Tech Hazards				■
Tsunami	■		■	■
Volcano				■
Wildfire	■***	■	■	■

* included as part of dam failure

** included naturally occurring asbestos

*** included urban conflagration

1.4.2 Hazard Risk Ranking

The City of Ukiah's Planning Team used the same hazard prioritization process as the Mendocino County Planning Committee. This process is described in detail in Section 4.3.1 of Vol. 1. Figure 1-2 displays the results of the hazard risk ranking exercise that was performed by the Planning Team. The Planning Team chose to assess City of Ukiah's vulnerability to following hazards:

- Dam Failure
- Earthquake
- Flood
- Drought
- Climate Change
- Pandemic
- Wildfire

All of these hazards have been profiled in Vol. 1 of this document. The purpose of this annex to specifically address City of Ukiah's vulnerability to these specifically-identified hazards.



1.4.3 Vulnerability Assessment

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within City of Ukiah are vulnerable to specific hazard events. The vulnerability assessment considered unique local knowledge of hazards and impacts and a GIS overlaying method for examining such vulnerabilities more in depth. Using these methods, participating jurisdictions estimated vulnerable populations, infrastructure, and potential losses from hazards.

1.4.3.1 Risk Assessment

Each participating jurisdiction developed a risk matrix that assessed the probability and impact of various hazards within the jurisdiction. Figure 1-2 is the jurisdiction's risk assessment, which was completed in part using the web based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com. RAMP allows interactive discovery of robust risk, vulnerability, and exposure data developed especially for Mendocino County. RAMP is a mapping platform built specifically for mitigation planning. It displays County/jurisdiction facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. See Vol. 1 for a detailed description of RAMP. The Planning Team used RAMP in meetings and as needed to understand vulnerabilities to City of Ukiah. Users interactively filter facilities and buildings by natural hazard zones and/or construction characteristics.

1.4.3.2 Snapshot Exposure Maps

The included snapshot maps, displayed below in Figure 1-3 through Figure 1-9, illustrate City of Ukiah's vulnerability to specific hazards. Figures include:

- Figure 1-3: City of Ukiah Dam Inundation
- Figure 1-4: City of Ukiah M7.4 Maacama Garberville Scenario Earthquake Exposure Summary
- Figure 1-5: City of Ukiah M7.8 N. San Andreas -N. Coast -Peninsula – SC MTN
- Figure 1-6: City of Ukiah FEMA Flood Risk Exposure
- Figure 1-7: City of Ukiah Mean Fire Return Interval
- Figure 1-8: City of Ukiah Wildfire Risk Exposure Snapshot
- Figure 1-9: Drought Timeline for Russian Watershed

Based on the above risk assessment, the snapshot maps focus on those hazards prioritized by the jurisdiction. These maps helped the Planning Team understand the exposure of population, parcels, and critical infrastructure to specific hazards. Each map contains an exposure summary that displays the percent of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed to each respective hazard.



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.			
Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.			
Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.			
Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.			

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in **Vol. 1** of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



CLIMATE CHANGE

Climate Change impacts will be addressed at the end of each hazard section within the 2020 plan update and as a stand alone section for each jurisdiction...

For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above. Pandemic will be profiled for every jurisdiction.



PANDEMIC

City of Ukiah Risk Matrix

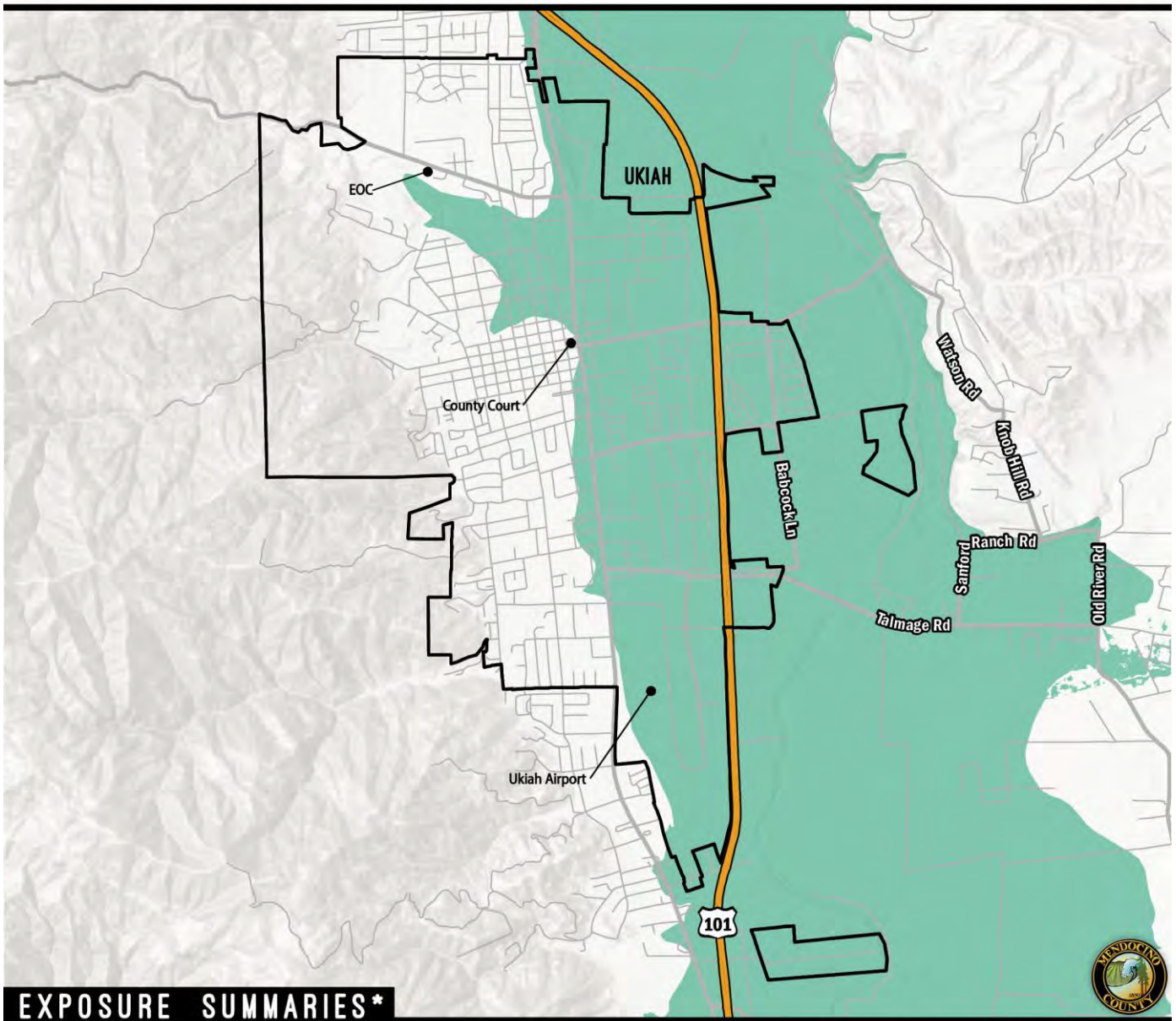
PROBABILITY	IMPACT			
	Minor	Limited	Critical	Catastrophic
Highly Likely	Medium	 FLOOD	Extreme	 WILDFIRE
Likely	Medium	 DROUGHT	High	High
Possible	 EXTREME WEATHER	 SLOPE FAILURE	 SOIL HAZARD	 DAM FAILURE
Unlikely	Low	Low	Medium	Medium

Figure 1-2: City of Ukiah Risk Assessment



DAM INUNDATION EXPOSURE SNAPSHOT

UKIAH



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
7,364	46%
Count Includes:	INUNDATION

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
1,766	39%
Count Includes:	INUNDATION

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$544,418,689	49%
Sum of Content Value	
\$385,162,189	54%
Count Includes:	INUNDATION

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	5	50%	INUNDATION
High Potential Loss	84	44%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	19	100%	82 53%

MAP LEGEND

INUNDATION ZONE

*Exposure summaries include dam inundation boundaries. Hazard data source: CGS, DWR.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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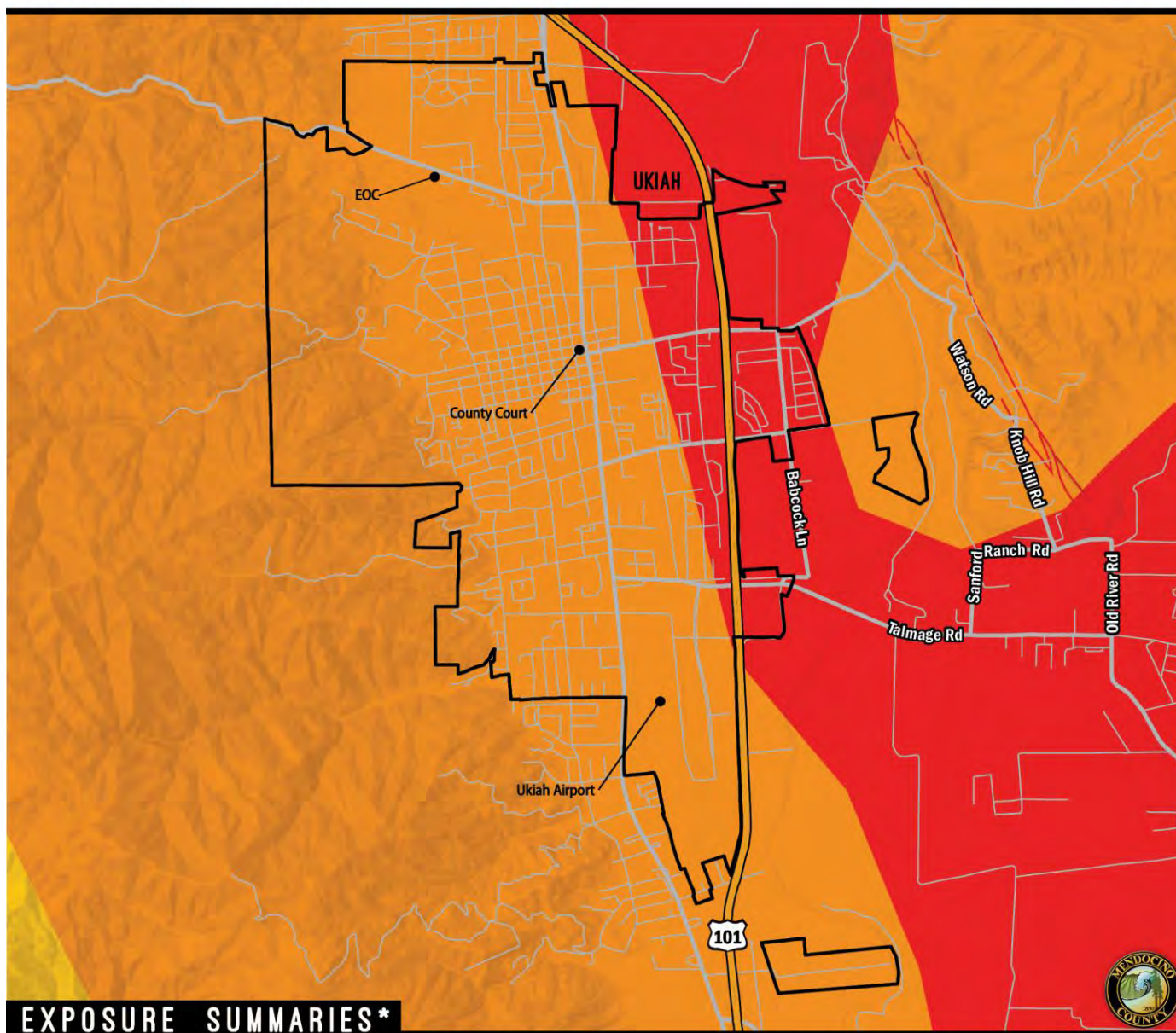


Figure 1-3: City of Ukiah Dam Inundation



M7.4 MAACAMA GARBERVILLE SNAPSHOT

UKIAH



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
15,917	100%
Count Includes: S+++E	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
4,547	100%
Count Includes: S+++E	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$1,115,545,392	100%
Sum of Content Value	
\$717,347,318	100%
Count Includes: S+++E	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	10	100%	S+++E
High Potential Loss	192	100%	Sum of Transportation & Lifeline Linear Mileage: 155 100%
Transportation & Lifeline	19	100%	



*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage
of total summary or count within jurisdiction.

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Figure 1-4: City of Ukiah M7.4 Maacama Garberville Scenario Earthquake Exposure Summary



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN SNAPSHOT

UKIAH

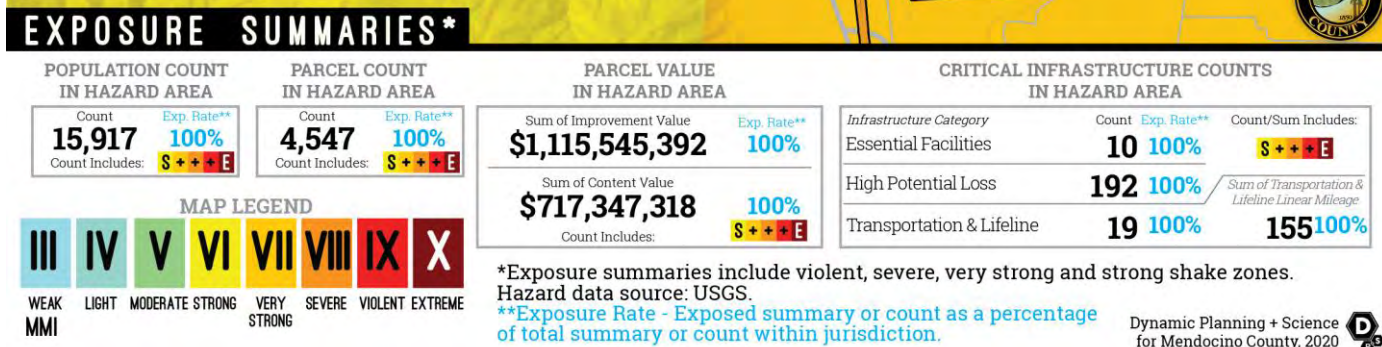
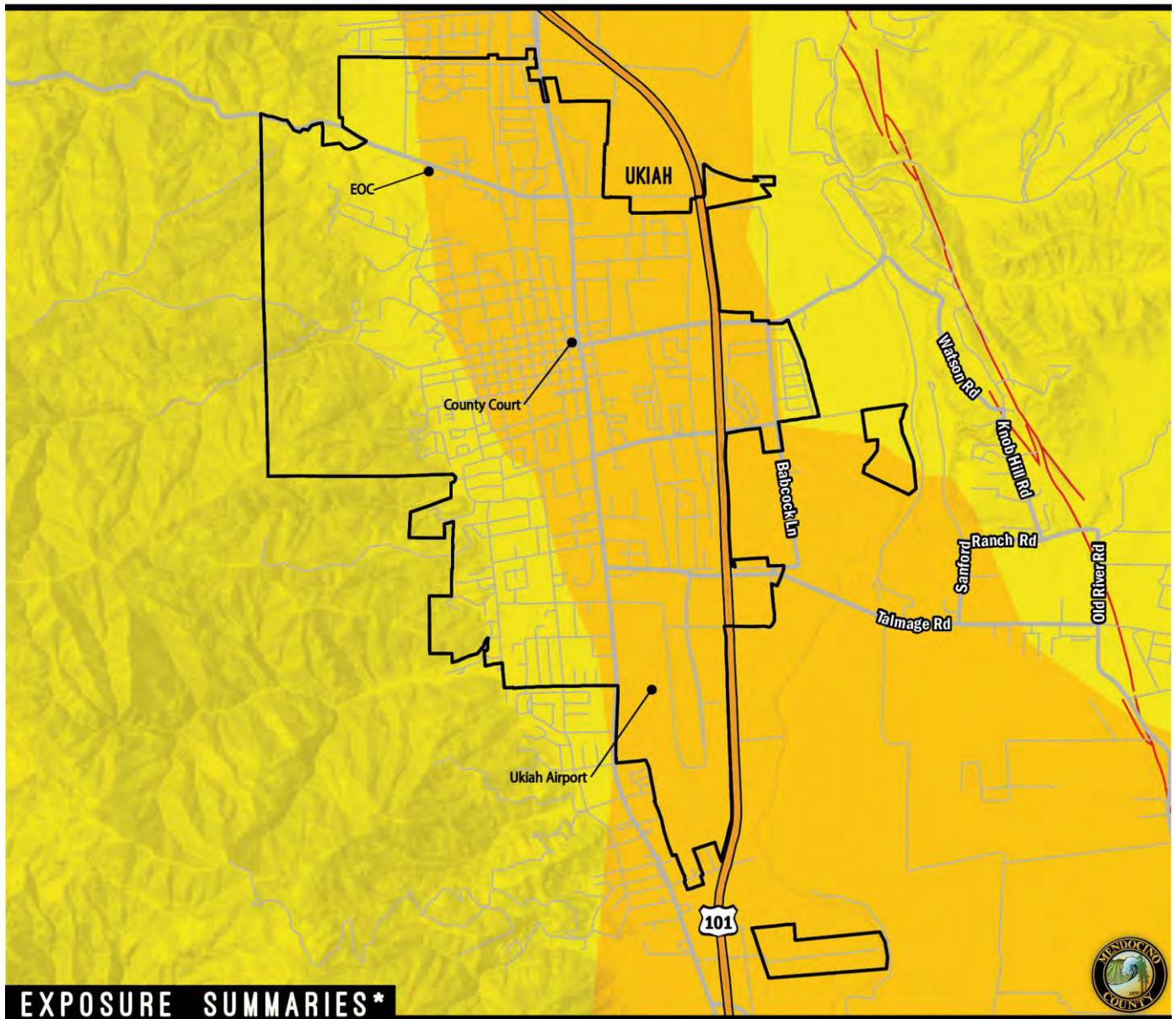
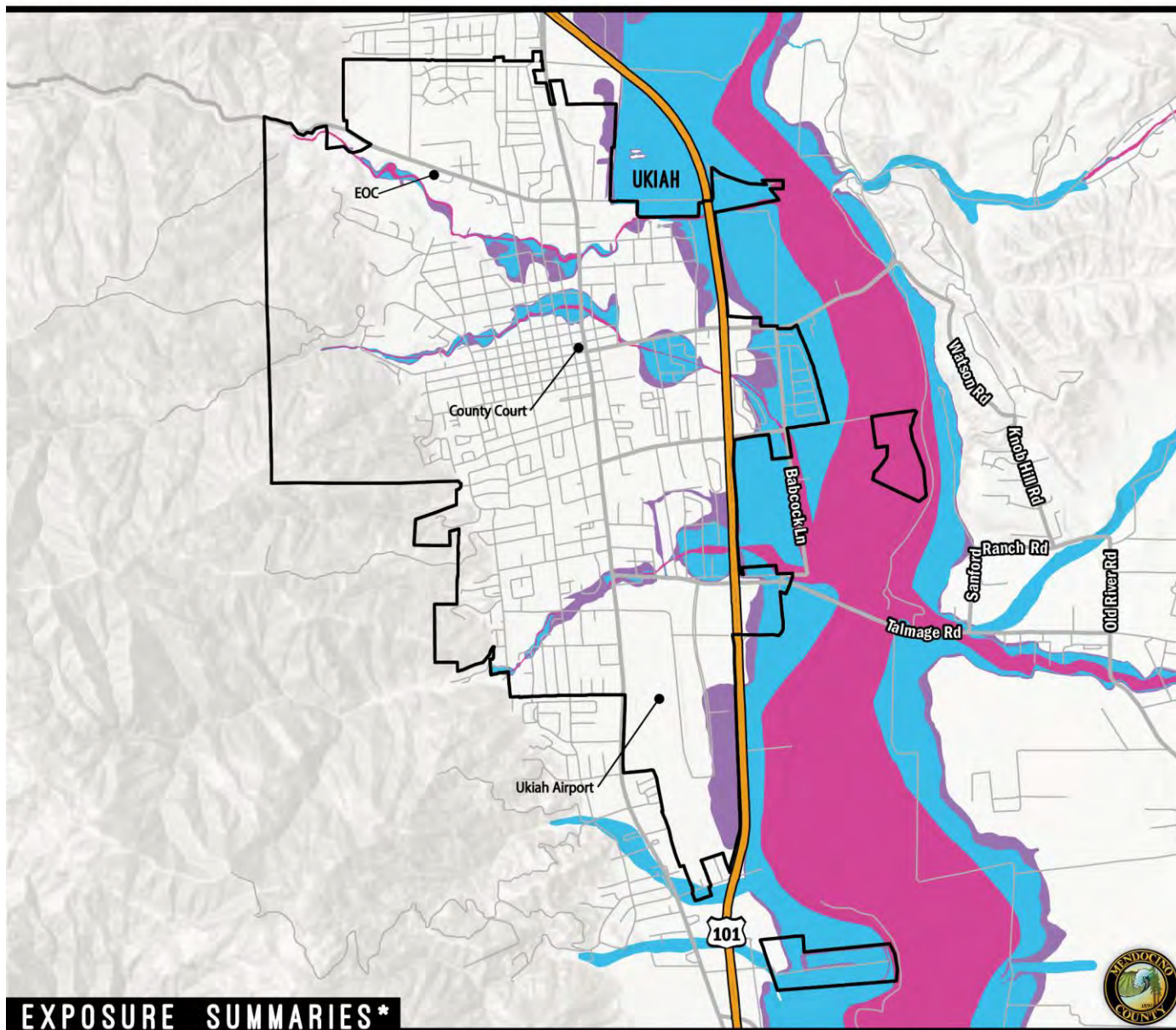


Figure 1-5: City of Ukiah M7.8 N. San Andreas -N. Coast -Peninsula – SC MTN



FEMA FLOOD RISK EXPOSURE SNAPSHOT

UKIAH



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
2,764	17%
Count Includes: 100 + + 500	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
738	16%
Count Includes: 100 + + 500	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$172,144,238	15%
Count Includes: 100 + + 500	
Sum of Content Value	Exp. Rate**
\$113,840,867	16%
Count Includes: 100 + + 500	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	0	0%	100 + + 500
High Potential Loss	17	9%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	8	42%	
			27 17%

MAP LEGEND

100-YR
100-YR COASTAL 100-YR FLOODWAY
500-YR

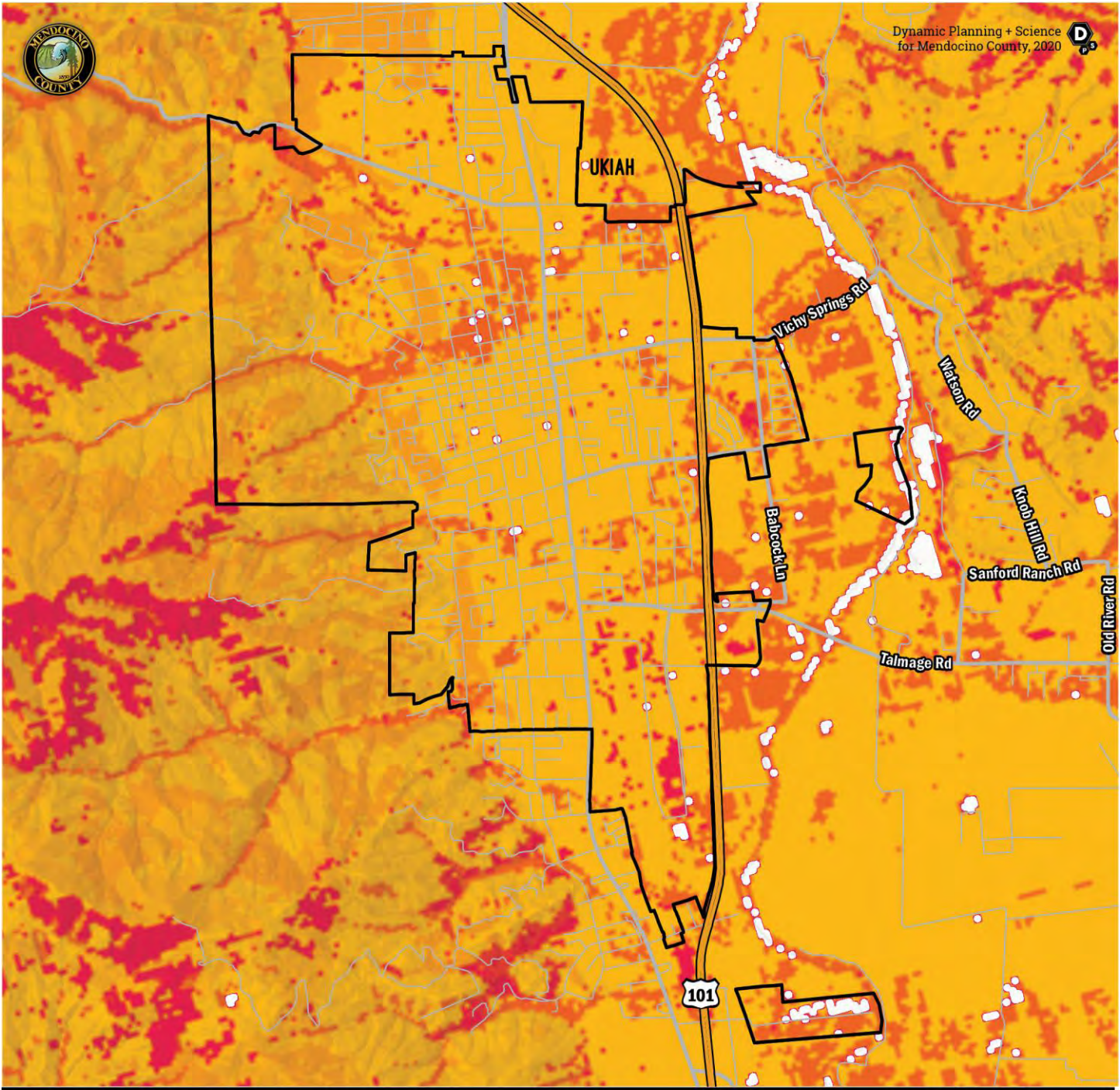
*Exposure summaries include 100YR, 500YR and 100YR Coastal Zones. Hazard data source: FEMA.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 1-6: City of Ukiah FEMA Flood Risk Exposure



MEAN FIRE RETURN INTERVAL UKIAH

*Data sources: USGS LANDFIRE.

MAP LEGEND

AVERAGE PERIOD BETWEEN FIRES (YEARS)

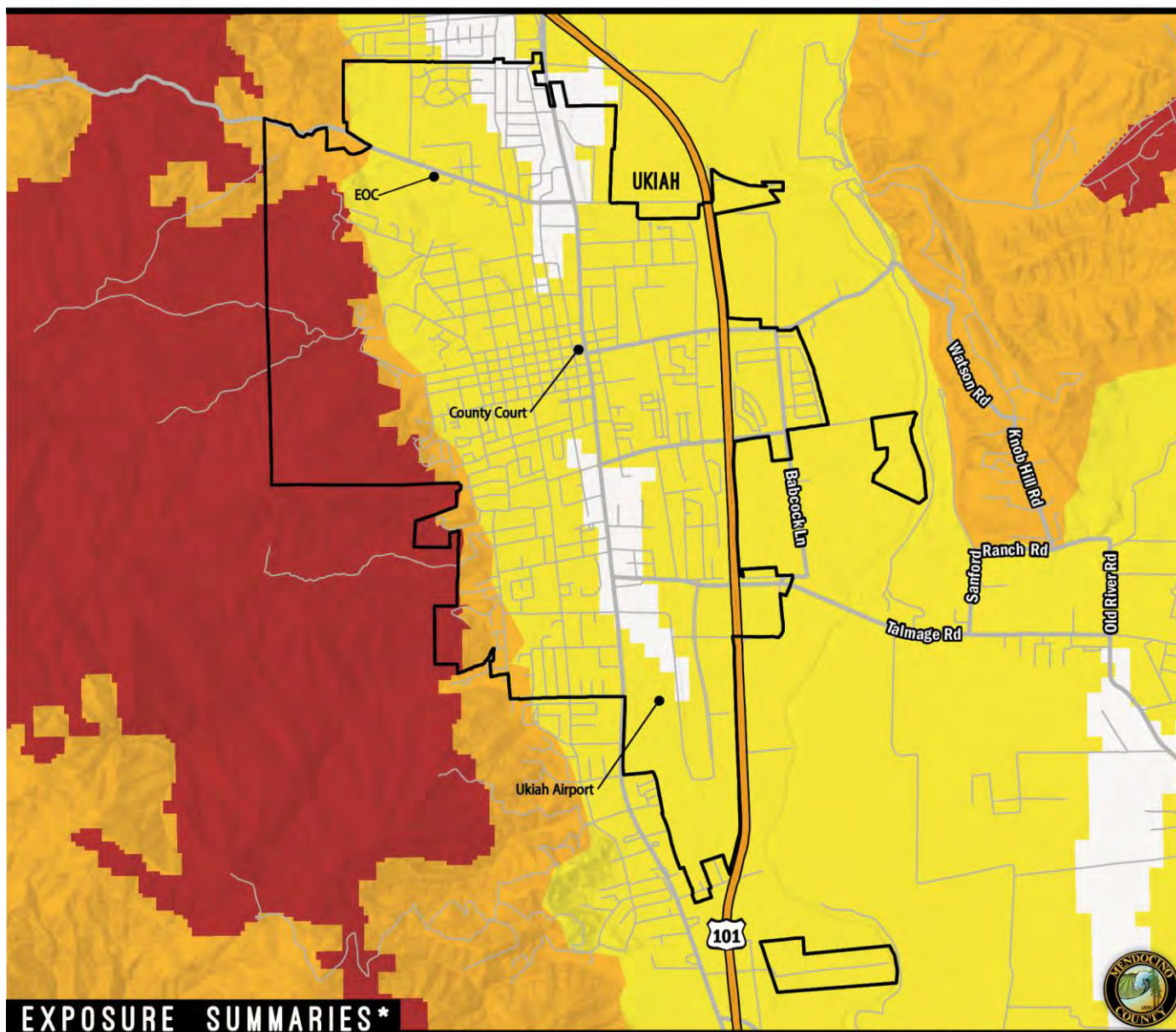
0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-60	61-70	71-80	81-90	91-100	101-125	126-150	151-200	201-300	301-500	501-1000	>1000
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Figure 1-7: City of Ukiah Mean Fire Return Interval



WILDFIRE RISK EXPOSURE SNAPSHOT

UKIAH



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
3,255	20%
Count Includes: H VH	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
295	6%
Count Includes: H VH	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$64,777,938	6%
Sum of Content Value	Exp. Rate**
\$32,991,550	5%
Count Includes: H VH	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	0	0%	H VH
High Potential Loss	8	4%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	0	0%	
			12 8%

MAP LEGEND

MODERATE
HIGH (H)
VERY HIGH (VH)

*Exposure summaries include high and very high wildfire classes. Hazard data source: Cal Fire, CPUC.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 1-8: City of Ukiah Wildfire Risk Exposure Snapshot



Table 1-5: Drought Classifications and Impacts

Category	Description	Possible Impacts
D0	Abnormally Dry	- Going into drought, short term dryness, slowing planting, growth of crops or pastures. - Coming out of drought, some lingering water deficits and pasture or crops not fully recovered.
D1	Moderate Drought	- Some damage to crops, pastures - Streams, reservoirs, or wells low, some water shortages developing or imminent - Voluntary water-use restrictions requested
D2	Severe Drought	- Crop or pasture losses likely - Water shortages common - Water restrictions imposed
D3	Extreme Drought	- Major crop/ pasture losses - Widespread water shortages or restrictions
D4	Exceptional Drought	- Exceptional and widespread crop/ pasture losses - Shortages of water in reservoirs, streams, and wells creating water

Adapted from U.S. Drought Monitor Drought Classifications and Impacts

DROUGHT SEVERITY TIMELINE

RUSSIAN

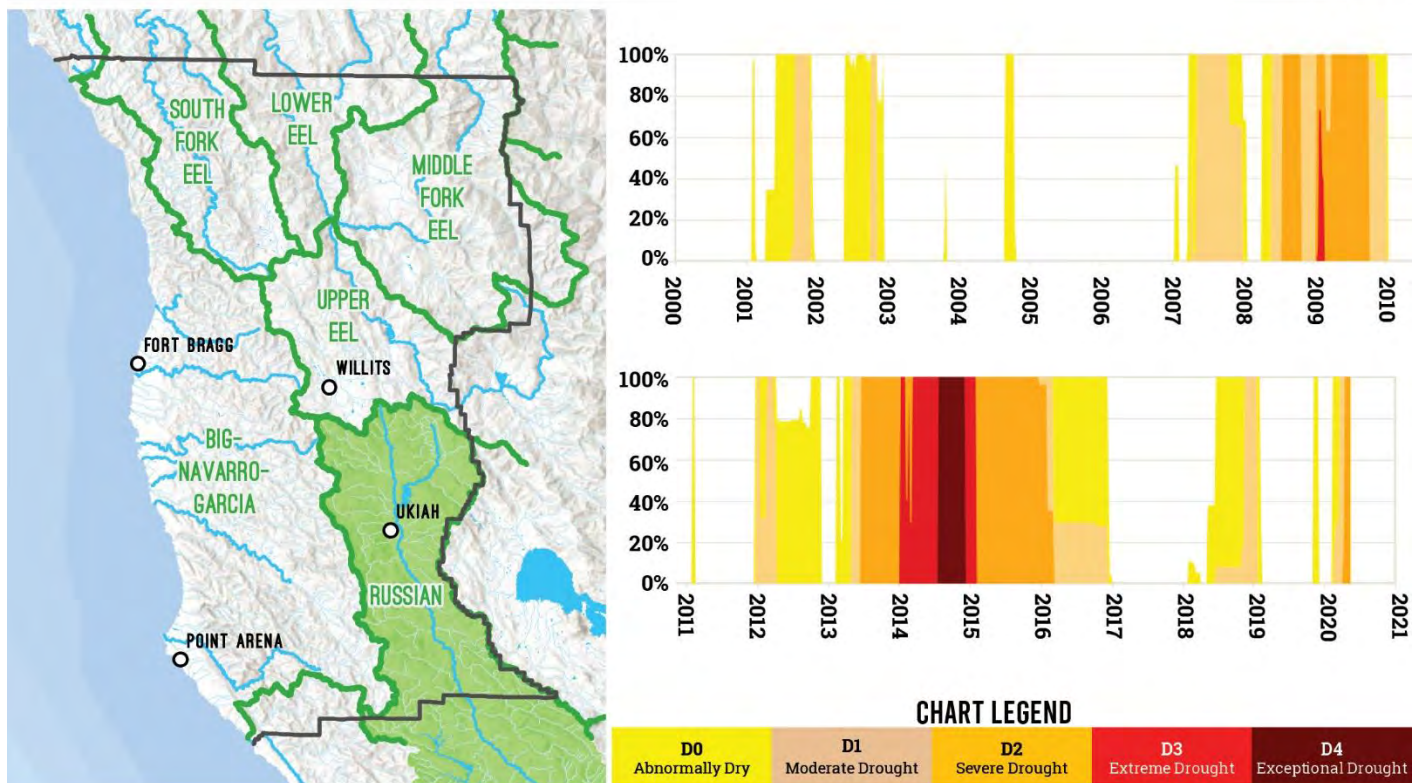


Figure 1-9: Drought Timeline for Russian Watershed



1.4.3.3 Past and Future Development

The City of Ukiah is a general law city that crafts its own development regulations and is subject to State law. Future development is subject to compliance with State of California planning, zoning, subdivision, and architecture laws.

The GP is designed to help the City address issues related to land use, circulation (traffic), housing, open space, conservation, noise, and safety. The Land Use portion of the plan helps guide the City in determining the location of future development(s), including possible future annexation. In addition to the GP, the City has other plans that guide development in specific areas, including specific plans, policy plans, and master plans. These plans help to shape future development and dictate the City's Sphere of Influence (SOI). One of the central functions in these planning documents is to decrease risk of impact from natural hazards.

While growth has occurred in hazard areas in the past, increasing hazard risks to some degree, those risks are also decreased by development standards and plan requirements that serve to mitigate or avoid those risks. Problematic development generally occurred many decades ago, and thus much of this HMP focuses on retrofits or replacements from that older construction.

The City of Ukiah is required to update building codes to meet the minimum standards to those required in the California Building Code last updated in 2019. California Building Codes provide some of the safest construction standards in the world and are meant to reduce risk to occupants from high wind, seismic activity, landslides, flood, wildfire, and other natural hazards. In addition to California minimum development standards, all jurisdictions belong to the NFIP, as such, all development must meet minimum flood protection standards set forth by FEMA. See Section 4.3.5 of Volume 1 for more information about past and future development in Mendocino County.

As the General Plan is updated and incorporates information from this HMP, City of Ukiah staff are continually improving hazard information through these hazard mitigation plan updates. With this 2020 update, improved online mapping about natural hazards available on RAMP will inform those responsible for future development to make better decisions where and how future development occurs.

City of Ukiah reviewed its general plans under the capability assessments undertaken for this hazard mitigation plan in Section 1.5.1. Deficiencies revealed by these reviews are identified as mitigation actions to decrease risks to move beyond past trends.

The City's municipal codes includes regulations to mitigate the impact of hazards on new and existing development, including:

- Drainage and stormwater retention requirements,
- Steep slope restrictions for new development,
- Waterbody buffer requirements,
- Floodplain management regulations,



- Zoning that prevents development in hazardous areas of the community such as floodplains, landslide areas, the wildland-urban interface (WUI), or other known hazard areas, and
- Building codes that include the most up-to-date California Fire Code, seismic standards, and many other provisions crafted to protect new construction from hazard events.

The City of Ukiah is largely already built out and development is severely limited and regulated in hazard areas. Even in the event that limited development did occur within a hazard area, the municipal code should ensure impacts from a hazard event are mitigated and losses are minimal. If development does occur in hazard areas, evacuation and emergency planning should take into consideration the anticipated local impacts of the hazard event, including potential interrupted services or the elimination of access.

The City has seen an uptick in development activity since 2015, as measured by the number of building permits issued. This could reflect an increased rate of growth but is also premature to mark a clear trend. The anticipated growth in the City will not cause significant change in vulnerability to the City for identified priority hazards.

1.4.3.3.1 National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. FEMA has prepared a detailed Flood Insurance Study (FIS) for Mendocino County and municipalities. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood and the 0.2-percent annual chance flood (the 500-YR flood). Base flood elevations and the boundaries of the 100- and 500-YR floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principle tool for identifying the extent and location of the flood hazard. FIRMs are the most detailed and consistent data source available, and for many communities they represent the minimum area of oversight under their floodplain management program. See Section 4 of Volume 1 for general information on the NFIP.

The City of Ukiah has participated in the NFIP since 1982. City of Ukiah is currently in good standing with the provisions of the NFIP. Compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA. Maintaining compliance under the NFIP is an important component of flood risk reduction. See Table 1-6 for more information on the City's policies and historic flood insurance claims.



Table 1-6: NFIP Status Table

NFIP Status	Participating since 07/19/82
Policies in Force	257
Policies in SFHA	227
Policies in non-SFHA	30
Total Claims Paid	61
Paid Losses	\$1,126,463.00
Repetitive Loss Properties	1
Severe Repetitive Loss Properties	0
Repetitive Loss Payment by NFIP on Building	\$1,755.30
Repetitive Loss Payment by NFIP on Contents	N/D

See Volume 1, Section 4.5 for more information on the NFIP.

1.4.3.4 Identify Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping and static snapshot maps. Problem statements focused on the impact, victim, or threat that the hazard could create in the jurisdiction, as described in Figure 1-10. Identifying common issues and weaknesses through these problem statements assisted the Planning Committee in understanding the realm of resources needed for mitigation. Jurisdiction problem statements are listed in Table 1-7.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 1-12 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 1-7 and Table 1-12.



IMPACT

Casualties
Property Damage
Business Interruption
Financial Loss
Environmental Contamination



VICTIM

School Children in Hazard High Hazard Areas
Care Facilities in High Hazard Area
Vulnerable Population Exposed to hazards



THREAT

Increased Fuels due to drought
Hotter, drier climates
More Intense Storms
Impervious surfaces = greater runoff
Increases of Invasive Species

Figure 1-10: Guidance for Problem Statements

Table 1-7: Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-AH-UK-147	All Hazard	Impact	ES - Emergency Services , SP - Structural Projects	City of Ukiah	Only 1 fire station (Central) has backup power	ma-AH-UK-276
ps-AH-UK-165	All Hazard	Victim	PRV - Prevention , ES - Emergency Services	City of Ukiah	Adventist Health Ukiah Valley may not have enough generators for amount of ventilators needed to respond to pandemic.	ma-AH-UK-276
ps-AH-UK-166	All Hazard	Impact	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	Loss of power from a second hazard event (flood, wildfire, earthquake), hospitals and critical elderly care facilities need back up generators.	ma-AH-UK-276
ps-CC-UK-170	Climate Change	Impact	PRV - Prevention	City of Ukiah	City parks and golf courses currently use treated drinking water for irrigation (also drought)	ma-DR-UK-64, ma-CC-UK-297
ps-CC-UK-171	Climate Change	Impact	PRV - Prevention	City of Ukiah	Loss of hydroelectric power during drought (hydro = 35% of City's supply). City could use additional energy storage and local electric production to address this power loss. (also drought)	ma-DR-UK-64



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-DF-UK-172	Dam Failure	Impact	PRV - Prevention, ES - Emergency Services, SP - Structural Projects	City of Ukiah	PGE and City of Ukiah Electric Utility substations in dam inundation zone. Critical facilities in dam inundation include water and wastewater treatment plants.	ma-AH-UK-276, ma-AH-UK-70
ps-DF-UK-173	Dam Failure	Victim	PE&A - Public Education & Awareness, ES - Emergency Services	City of Ukiah	Reverse 911 capabilities needed to improve critical response times to prevent loss of human life.	ma-DF-UK-73, ma-DF-MC-199
ps-DF-UK-174	Dam Failure	Impact	PPRO - Property Protection, SP - Structural Projects	City of Ukiah	Like flood, loss of power from dam inundation as transformers need to shut down with 8' of water covering ground.	ma-AH-UK-276
ps-DR-UK-175	Drought	Impact	PPRO - Property Protection, NRP - Natural Resource Protection, SP - Structural Projects	City of Ukiah	City parks and golf courses currently use treated drinking water for irrigation (also climate change)	ma-DR-UK-64, ma-CC-UK-297
ps-EQ-UK-144	Earthquake	Impact	PPRO - Property Protection, SP - Structural Projects	City of Ukiah	Critical facilities in the violent shake zone for Maacama/ Garberville include water and wastewater treatment plants, statefairgrounds, and the fire stations. May not be properly retrofitted or with inside bracing.	ma-EQ-UK-77, ma-EQ-UK-278
ps-EQ-UK-145	Earthquake	Impact	PPRO - Property Protection, SP - Structural Projects	City of Ukiah	At least 3 groundwater pumping wells may not function post-earthquake.	ma-EQ-UK-77
ps-EQ-UK-146	Earthquake	Impact	PPRO - Property Protection, ES - Emergency Services	City of Ukiah	Fire Stations do not meet seismic req's for emergency/ essential facilities. Talmage Fire Station at high risk and is a converted warehouse/ commercial facility that does not likely have any earthquake bracing or retrofitting	ma-EQ-UK-77, ma-EQ-UK-278
ps-EQ-UK-148	Earthquake	Victim	PPRO - Property Protection, SP - Structural Projects	City of Ukiah	Downtown Ukiah has many unreinforced masonry (URM) buildings	ma-EQ-UK-277, ma-EQ-UK-280, ma-AH-UK-70
ps-EQ-UK-149	Earthquake	Victim	PE&A - Public Education & Awareness	City of Ukiah	Residential renters in upstairs apartments in older URM buildings may not be aware of earthquake vulnerability	ma-EQ-UK-280



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-UK-150	Earthquake	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	City of Ukiah	Many residential and commercial buildings in Ukiah are likely soft floor construction.	ma-EQ-UK-277
ps-FL-UK-157	Flood	Impact	PPRO - Property Protection , SP - Structural Projects	City of Ukiah	Recent flooding destroyed water treatment storage bays, damaged perc ponds for water treatment.	ma-FL-UK-75
ps-FL-UK-158	Flood	Impact	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	Loss of access to neighborhoods during flood events (Vichy Springs, Talmadge).	ma-WS-UK-62, ma-FL-UK-78, ma-FL-UK-275, ma-AH-UK-70
ps-FL-UK-159	Flood	Victim	PPRO - Property Protection , NRP - Natural Resource Protection	City of Ukiah	Residents in the Oak Manor region currently experience repetitive losses and regular flooding and power losses	ma-WS-UK-62, ma-FL-UK-76, ma-FL-UK-275
ps-FL-UK-160	Flood	Impact	PPRO - Property Protection , NRP - Natural Resource Protection	City of Ukiah	PG&E substation and a number of City of Ukiah Electric Utility pad mount facilities located in floodplain (near Oak Manor neighborhood).	ma-WS-UK-62
ps-FL-UK-161	Flood	Victim	PRV - Prevention , PPRO - Property Protection , PE&A - Public Education & Awareness	City of Ukiah	Residents along tributaries to the Russian River on west side of town regularly experience loss of power due to inundation of transformers and necessary "powering down."	ma-WS-UK-62
ps-FL-UK-162	Flood	Threat	PPRO - Property Protection , SP - Structural Projects	City of Ukiah	Mudflows from tributaries west of town regularly create debris piles and block stormwater drainage, exacerbating impact from flood events.	ma-WS-UK-62
ps-PN-UK-167	Pandemic	Victim	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	Need for additional sheltering locations in event of pandemic social distancing needs paired with another hazard event (flood, wildfire, earthquake).	ma-PN-UK-282, ma-PN-UK-283



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Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-PN-UK-168	Pandemic	Victim	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	Utilities and critical facilities may not have adequate fresh air/ ventilation to be appropriate for essential work during pandemic.	ma-PN-UK-281
ps-PN-UK-169	Pandemic	Threat	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	Community center/ evacuation center does not have adequate staffing space or structural barriers from public interaction to be used safely during pandemic.	ma-PN-UK-282
ps-WF-UK-151	Wildfire	Victim	PPRO - Property Protection , NRP - Natural Resource Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	Limited access exists to get above the residences if wildfire starts west of town.	ma-AH-UK-70, ma-WF-UK-289
ps-WF-UK-152	Wildfire	Victim	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Ukiah	City has limited fire department staffing and response ability	ma-WF-UK-60, ma-WF-UK-74, ma-AH-UK-70, ma-WF-UK-289, ma-WF-UK-296
ps-WF-UK-153	Wildfire	Victim	PRV - Prevention , PPRO - Property Protection , SP - Structural Projects	City of Ukiah	Sparks from wildfire can enter westside where many older wooden construction home are located, creating urban conflagration.	ma-WF-UK-74, ma-WF-UK-296
ps-WF-UK-154	Wildfire	Victim	PE&A - Public Education & Awareness , ES - Emergency Services	City of Ukiah	Current hazard shelters are located within City limits; in major fire event evacuees would need to leave City limits.	ma-WF-UK-285
ps-WF-UK-155	Wildfire	Threat	PRV - Prevention , NRP - Natural Resource Protection	City of Ukiah	Capacity to enforce and conduct inspections of debris and weed abatement limited within City limits.	ma-WF-UK-60, ma-WF-UK-74, ma-AH-UK-70, ma-WF-UK-289



1.4.3.5 Mitigation Action Support Tool (MAST)

As a living document, hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for participating jurisdictions. The Mitigation Action Support Tool (MAST) is accessible through <https://mitigatehazards.com/mendocino-county/>.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdictions and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Participating jurisdictions can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction's ability to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.



1.5 Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section (a.k.a. problem statements) with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success.

1.5.1 Capabilities Assessment

This section examines the planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards.

Capabilities assessments include considerations of a community's adaptive capacity for climate change, as outlined in Cal OES' 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region's existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity. (Cal. Adaptation Planning Guide, 2020, p. 94)

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (Column 1, Status)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (Column 2, Current Mitigation Use)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (Column 3, Future Opportunity)

The capabilities assessment is easily-digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.

For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Volume 1. Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities as well.



Table 1-8: City of Ukiah Planning and Regulatory Mitigation Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Construction and Future Development Regulations				
Building Codes				2019 California Building Code
BCEGS Rating				Not provided
Public Protection (ISO Class)				Not provided
Hazard Related Development Standards				Erosion and Sediment Control (Ch. 7); Construction Site Control Measures (§9704).
Zoning Ordinance				
Hazard-Specific Ordinance				Fire Prevention Code (Div. 6, Ch. 3); Emergency Services (Div. 6, Ch. 2); State of Emergency (§5128)
Growth Management Ordinance				
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				City of Ukiah Five Year CIP Plan.
Erosion/Sediment Control Program				The City includes erosion and sediment control practices in their 2006 Storm Water Management Plan.
Hazard-Related Public Outreach Program				See education and outreach capabilities below. The City hosts "Building Together" Training Sessions for disaster preparedness outreach efforts.
Stormwater Management Program (Annual Inspections)				
Seismic Safety Program (Non-structural)				
Earthquake Modernization Plan (Building Safety)				
Hazard Plans				
General Plan Safety Element				Adopted 1995.



Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Community Wildfire Protection Plan (CWPP)				2016 County-wide CWPP in existence.
Floodplain Management Plan				
Stormwater Management Plan				
Emergency Operations Plan				Mendocino County Operational Area Emergency Operations Plan (2016)
Climate Action Plan				Drafted in 2014, not adopted, future opportunity
Ground Water Management Planning / Plans				Ukiah Valley Basin Grounwater Sustainability Agency is in the process of developing a groundwater sustainability plan for the basin.
National Flood Protection Program (NFIP)				
Floodplain Management Regulations				
Flood Insurance Education and Technical Assist.				
Flood Hazard Mapping / Re-Mapping				
Community Rating System (CRS)				



1.5.1.1 Administrative and Technical Capabilities

Table 1-9: Administrative and Technical Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Community Planning and Development Services				
Community Planner				Community Development Department, Planning Services.
Civil Engineer				Department of Public Works.
Building Code Official (Full time or Augmented)				
Floodplain Administrator				Tim Eriksen, Director of Public Works
Fire Marshal				Ukiah Valley Fire Department.
Dedicated Public Outreach Personnel				
GIS Specialist and Capability				
Emergency Manager				Office of Emergency Management.
Full-Time Building Official				Building and Code Enforcement Services.
Grant Manager, Writer, or Specialist				
Other				
Warning Systems/Services				
General				MendoAlert and Nixle Alerts.
Flood				MendoAlert and Nixle Alerts.
Wildfire				MendoAlert and Nixle Alerts.
Geological Hazards				MendoAlert and Nixle Alerts.



1.5.1.2 Financial Capabilities

Table 1-10: Fiscal Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				
Utilities Fees				
Benefit assessments				
System Development Fee				
General Obligation Bonds to Incur Debt				
Special Tax Bonds to Incur Debt				
Withheld Spending in Hazard-Prone Areas				
Stormwater Service Fees				
Capital Improvement Project Funding				City of Ukiah Five Year CIP Plan.



1.5.1.3 Education and Outreach

Table 1-11: Education / Outreach Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				
Dedicated Social Media				
Hazard Info. Avail. at Library/ Planning Desk				
Annual Public Safety Events				The Ukiah Valley Fire Authority and Office of Emergency Managment host community awareness and safety programs.
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				
Fire Safe Councils				The Mendocino County Fire Safe Council assists local Councils a variety of needs. These Councils include: the Caspar Community and Island Cove Estates (south of Point Arena) on the coast; Pine Mountain, Ridgewood Park, and Willowbrook/Sherwood Forest Hills (past Brooktrails) in the Willits area; and Deerwood, Oak Knoll Road, Upper Parducci Road, Black Bart Trail and Robinson Creek Road in the Ukiah area.
Resource Conservation Districts				The Mendocino County Resource Conservation District has implemented a wide range of programs across the County.
Other				



1.5.2 Mitigation Actions

Mitigation actions were developed based upon the jurisdiction's priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Section 5.5.1 of Volume 1. Table 1-12 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon the Planning Committee consensus.

Each participating jurisdiction, including the City of Ukiah, considered ongoing relevancy of mitigation actions from the existing MJHMP and retained or removed such actions while adding new relevant actions as well. Mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the previous HMP effort were not included because they were an inherent part of the HMP update process or were not detailed enough for implementation at a local Jurisdiction level.

City of Ukiah has made significant changes to other mitigation actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices. Volume 1, Section 5.5.2 provides a record of County-wide mitigation actions, the status, and additional notes for each action.

Table 1-12 lists each mitigation action for City of Ukiah. Each participating jurisdiction developed unique mitigation actions, targeted at their own unique priorities and vulnerabilities. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST. The detail in Table 1-12 meets the regulatory requirements of FEMA and DMA 2000.

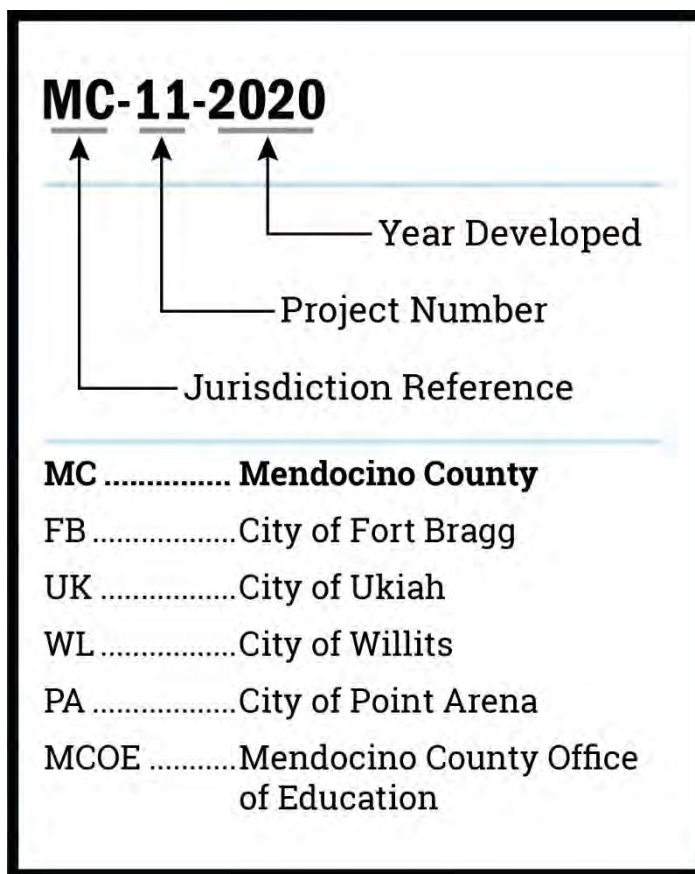


Figure 1-11: Mitigation Action Key



Table 1-12. City of Ukiah Mitigation Actions

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-DR-UK-64	All Hazard	PRV - Prevention	Pending	2014	City of Ukiah	Develop a climate action plan and/or drought contingency plan to provide an effective and systematic means of assessing drought conditions, develop mitigation actions and programs to reduce risks of climate change and drought, and develop response options that minimize hardships	City Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	High	ps-DR-UK-175, ps-CC-UK-171, ps-CC-UK-170
ma-AH-UK-70	All Hazard	PPRO - Property Protection	Pending	2014	City of Ukiah	Create a GIS-based pre-application review for new construction and major remodels of residential and/or non-residential structures in hazard areas, such high and/or very high wildfire areas.	Planning	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	5%	HMGP / BRIC	Medium	ps-FL-UK-158, ps-WF-UK-152, ps-WF-UK-151, ps-WF-UK-155, ps-DF-UK-172, ps-EQ-UK-148
ma-AH-UK-276	All Hazard	ES - Emergency Services	Pending	2020	City of Ukiah	Construct backup generators at critical facilities (fire stations, Adventist Health Ukiah Valley) and pump stations to respond to hazard events in loss of power.	Fire, Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	Extreme	ps-AH-UK-147, ps-AH-UK-165, ps-AH-UK-166, ps-DF-UK-172, ps-DF-UK-174
ma-CC-UK-297	Climate Change	PRV - Prevention	Ongoing	2020	City of Ukiah	Continue the installation of purple pipes throughout the City to supply untreated irrigation water to City landscaping	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Funding Dependent	Project	HMGP / BRIC	Medium	ps-DR-UK-175, ps-CC-UK-170
ma-DF-UK-73	Dam Failure	PE&A - Public Education & Awareness	Pending	2014	City of Ukiah	Develop a public outreach program that informs property owners located in the dam or levee inundation areas about voluntary flood insurance.	Office of Emergency Management	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	5%	HMGP / BRIC	Medium	ps-DF-UK-173
ma-EQ-UK-77	Earthquake	PPRO - Property Protection	Ongoing	2014	City of Ukiah	Seismically retrofit or replace public works and/or emergency response facilities that are necessary during and/or immediately after a disaster or emergency.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , CDBG DRI	Extreme	ps-EQ-UK-144, ps-EQ-UK-145, ps-EQ-UK-146



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EQ-UK-277	Earthquake	PE&A - Public Education & Awareness	Ongoing	2020	City of Ukiah	Encourage privately owned critical facilities (e.g. churches, hotels, other gathering facilities) to evaluate the ability of the buildings to withstand earthquakes and to address any deficiencies identified.	Planning & Comm. Dev.	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Planning	HMGP / BRIC	High	ps-EQ-UK-148, ps-EQ-UK-150
ma-EQ-UK-278	Earthquake	SP - Structural Projects	Pending	2020	City of Ukiah	Install seismic gas shut-off valves on County buildings to prevent the flow of gas into buildings during a seismic event	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	Medium	ps-EQ-UK-144, ps-EQ-UK-146
ma-EQ-UK-280	Earthquake	PE&A - Public Education & Awareness	Ongoing	2020	City of Ukiah	Develop and outreach and education program for owners and tenants in downtown unreinforced masonry buildings to understand earthquake risks and precautions and, for owners, to understand retrofitting options and available funding mechanisms	Public Information	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Planning	HMGP / BRIC , CDBG DRI	High	ps-EQ-UK-149, ps-EQ-UK-148
ma-WS-UK-62	Flood	PPRO - Property Protection	Pending	2014	City of Ukiah	Manage vegetation in areas within and adjacent to rights- of-way and in close proximity to critical facilities in order to reduce the risk of tree failure and property damage and avoid creation of wind acceleration corridors within vegetated areas.	City Fire	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-5 years	N/A	N/A	Medium	ps-FL-UK-158, ps-FL-UK-159, ps-FL-UK-160, ps-FL-UK-161, ps-FL-UK-162
ma-FL-UK-75	Flood	PPRO - Property Protection	Pending	2014	City of Ukiah	Retrofit wastewater and potable water facilities that subject to flooding. Retrofitting activities may include elevating vulnerable equipment, electrical controls, and other equipment, fastening and sealing manhole covers to prevent floodwater infiltration, and protecting wells and other potable water from infiltration and flood damage by raising controls and well pipes.	Planning and Community Development and Fire	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , CDBG DRI	Extreme	ps-FL-UK-157



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-FL-UK-76	Flood	PPRO - Property Protection	Pending	2014	City of Ukiah	Acquire, relocate, or elevate residential structures, in particular those that have been identified as Repetitive Loss (RL) properties that are located within the 100-year floodplain.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC , FMA , CDBG DRI	High	ps-FL-UK-159
ma-FL-UK-78	Flood	PPRO - Property Protection	Pending	2014	City of Ukiah	Reinforce County and local ramps, bridges, and roads from flooding through protection activities, including elevating the road and installing culverts beneath the road or building a higher bridge across the area that experiences regular flooding.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-FL-UK-158
ma-FL-UN-192	Flood	PPRO - Property Protection	Pending	2008	City of Ukiah	Carry out minor flood and stormwater management projects that would reduce damage to infrastructure and residential buildings due to flooding. These projects include the modifying or replacing existing culverts and bridges, upgrading capacity of storm drains, stabilizing streambanks, clearing streambanks of debris and vegetation, and creating of debris or flood/stormwater retention basins in small watersheds.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC , FMA	High	
ma-PN-UK-281	Pandemic	SP - Structural Projects	Pending	2020	City of Ukiah	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic, including adequate ventilation and physical barriers	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-UK-168
ma-PN-UK-282	Pandemic	SP - Structural Projects	Pending	2020	City of Ukiah	Institute necessary structural improvements to evacuation centers/sheltering locations to allow for proper ventilation, space for staff, and structural barriers to be used during pandemic and hazard event.	Fire/ Office of Emergency Management	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-PN-UK-169, ps-PN-UK-167



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-PN-UK-283	Pandemic	ES - Emergency Services	Pending	2020	City of Ukiah	Develop alternative sheltering/evacuation locations for social distancing required during pandemic and other hazard event	Office of Emergency Management	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-PN-UK-167
ma-WF-UK-60	Wildfire	PPRO - Property Protection	Pending	2014	City of Ukiah	Implement a fuel modification program and code requirements.	City Fire	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-5 years	Planning	HMGP / BRIC , AFG , FP&S	High	ps-WF-UK-155, ps-WF-UK-152
ma-WF-UK-74	Wildfire	PPRO - Property Protection	Pending	2014	City of Ukiah	Create a vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Planning and Community Development and Fire	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	5%	HMGP / BRIC	Medium	ps-WF-UK-155, ps-WF-UK-153, ps-WF-UK-152
ma-WF-UK-285	Wildfire	PE&A - Public Education & Awareness	Ongoing	2020	City of Ukiah	Coordinate with County on designated shelters outside of City limits in event of wildfire; integrate shelter location information into community outreach	Office of Emergency Management	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	N/A	N/A	Extreme	ps-WF-UK-154
ma-WF-UK-289	Wildfire	PPRO - Property Protection	Ongoing	2020	City of Ukiah	Implement CWPP projects in partnership with County, Fire Safe Council, and CAL FIRE	City Fire	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC , AFG , FP&S	Medium	ps-WF-UK-151, ps-WF-UK-152, ps-WF-UK-155
ma-WF-UK-296	Wildfire	PE&A - Public Education & Awareness	Pending	2020	City of Ukiah	Develop a cost share program for residential mitigation and retrofits to be more fireproof	Community Development	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-WF-UK-153, ps-WF-UK-152



MENDOCINO COUNTY

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Fort Bragg

JURISDICTIONAL ANNEX

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Mendocino County

Multi-Jurisdiction Hazard Mitigation Plan

CITY OF FORT BRAGG (FB)

Municipal Participating Jurisdiction Annex

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Section 2. City of Fort Bragg

2.1 Purpose

This Annex details the hazard mitigation planning elements specific to the City of Fort Bragg. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Fort Bragg. This Annex provides additional information specific to the City of Fort Bragg, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

Hazard Mitigation Plan Point of Contact

Primary Point of Contact

John Smith, Public Works Director
City of Fort Bragg
416 North Franklin Street,
Fort Bragg, CA 9437
Telephone: (707) 961-2823, ext. 136
e-mail Address: jsmith@fortbragg.com

Alternate Point of Contact

John Naulty, Interim Chief
City of Fort Bragg Police Department
416 North Franklin Street,
Fort Bragg, CA 9437
Telephone: (707) 961-2800 Ext. 105
e-mail Address: jnaulty@fortbragg.com

2.2 Planning Methodology

The City of Fort Bragg followed the planning process detailed in Volume 1, Section 3, including participating in the County Hazard Mitigation Planning Committee (HMPC) and Steering Committee and formulating their own internal planning team to support the broader planning process. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 2-1.

Table 2-1: Planning Committee Members

Planning Committee Members	Department
John Smith	Public Works
John Naulty	Police Department
Tabatha Miller	City Manager's Office

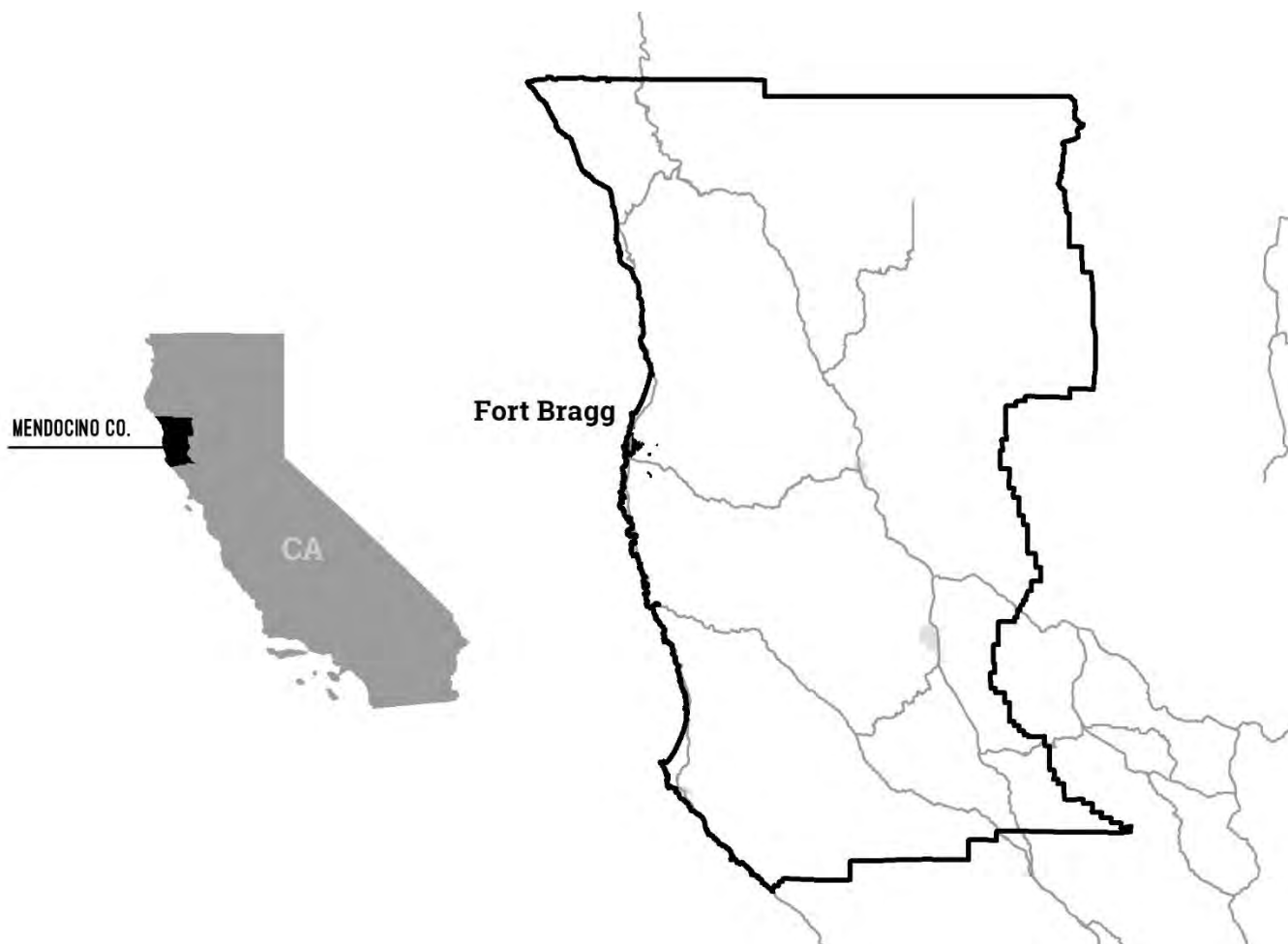


Figure 2-1: City of Fort Bragg Location

2.3 What's New

The City of Fort Bragg has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted.

The City reevaluated previous mitigation actions, including considerations of progress made on mitigation efforts, and retained them as pending or ongoing in Table 2-12; no table for cancelled mitigation actions is included. Completed mitigation actions are described in Table 2-2.



2.3.1 Mitigation Successes

The City has successfully completed multiple mitigation actions, listed in Table 2-2, and the following describes its other success stories.

Table 2-2: Completed Mitigation Actions

Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description	Responsible Party
ma-FL-FB-11	Flood	Completed	2008	City of Fort Bragg	Retrofit wastewater and potable water facilities that subject to flooding. Retrofitting activities may include elevating vulnerable equipment, electrical controls, and other equipment, fastening and sealing manhole covers to prevent floodwater infiltration, and protecting wells and other potable water from infiltration and flood damage by raising controls and well pipes.	

2.4 Risk Assessment

The intent of this section is to profile the City of Fort Bragg's hazards and assess the City's vulnerabilities, distinct from that of the County-wide planning area. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. For more information on Risk Assessment Methodologies, see Vol. 1 and Appendix A.

2.4.1 Hazard Screening Criteria

Planning Team members from each participating jurisdiction collectively discussed which hazards should be profiled in the Plan and which should not. The results of that discussion can be found in Table 2-3. Detailed hazard profiles of the most significant County-wide hazards are described in Section 4 of Volume 1. The Planning Team reviewed previously-prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect City of Fort Bragg. Table 2-4 provides a crosswalk of hazards identified in Vol. 1 of this plan, City of Fort Bragg General Plan, and 2018 California State Hazard Mitigation Plan. The crosswalk was used to develop a preliminary hazards list, providing a framework for the Planning Team members to evaluate which hazards were truly relevant to City of Fort Bragg and which ones were not. Section 0 below describes the hazard risk ranking process that was performed by the planning team which prioritized hazards that are specifically relevant to City of Fort Bragg.



Table 2-3: County Hazard Prioritization (Vol. 1)

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	High priority county-wide, profiled hazard.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Severe Weather.
Insect Hazards	While hazardous insects exist in Mendocino County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	High priority county-wide, profiled hazard.
Severe Weather, including:	High priority county-wide for heavy wind and heavy rain.
Extreme Heat	Not a priority as extreme weather event, discussed as climate change impact.
Hail	Hail events are rare in Mendocino County and not profiled in this plan.
High Wind	Profiled as part of Severe Weather hazard.
Heavy Rain	Profiled as part of Severe Weather hazard.
Fog	While fog events do occur within Mendocino County, they are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.
Winter Storm / Extreme Cold/ Freeze Events	While winter storms are present in Mendocino County, they were not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	High priority county-wide, profiled hazard (includes erosion and naturally-occurring asbestos).
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.



Table 2-4: Document Review Crosswalk

Hazards	2014 Mendocino County MJHMP	2012 City of Fort Bragg Inland General Plan	2008 City of Fort Bragg Coastal General Plan	2009 Mendocino County General Plan	2018 California State HMP
Agricultural Pests	■				■
Climate Change		■		■	■
Dam Failure	■			■	■
Drought	■	■	■	■	■
Earthquake	■	■	■	■	■
Flood	■	■	■	■	■
Insect Hazards	■				
Landslide		■	■	■	■
Levee Failure	■*				■
Manmade Hazards				■	■
Pandemic Disease	■				■
Sea Level Rise		■	■		■
Severe Weather					■
Soil Hazards	■**	■	■		
Terrorism & Tech Hazards					■
Tsunami	■	■	■	■	■
Volcano					■
Wildfire	■***	■		■	■

* included as part of dam failure

** included naturally occurring asbestos

*** included urban conflagration

2.4.2 Hazard Risk Ranking

The City of Fort Bragg's Planning Team used the same hazard prioritization process as the Mendocino County Planning Committee. This process is described in detail in Section 4.3.1 of Vol. 1. Figure 2-2 displays the results of the hazard risk ranking exercise that was performed by the Planning Team. The Planning Team chose to assess City of Fort Bragg's vulnerability to following hazards:

- Climate Change
- Flood
- Wildfire
- Earthquake
- Extreme Weather
- Drought
- Pandemic
- Slope Failure

All of these hazards have been profiled in Vol. 1 of this document. The purpose of this annex to specifically address City of Fort Bragg's vulnerability to these specifically-identified hazards.



2.4.3 Vulnerability Assessment

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within City of Fort Bragg are vulnerable to specific hazard events. The vulnerability assessment considered unique local knowledge of hazards and impacts and a GIS overlaying method for examining such vulnerabilities more in depth. Using these methods, participating jurisdictions estimated vulnerable populations, infrastructure, and potential losses from hazards.

2.4.3.1 Risk Assessment

Each participating jurisdiction developed a risk matrix that assessed the probability and impact of various hazards within the jurisdiction. Figure 2-2 is the jurisdiction's risk assessment, which was completed in part using the web based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com. RAMP allows interactive discovery of robust risk, vulnerability, and exposure data developed especially for Mendocino County. RAMP is a mapping platform built specifically for mitigation planning. It displays County/jurisdiction facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. See Vol. 1 for a detailed description of RAMP. The Planning Team used RAMP in meetings and as needed to understand vulnerabilities to City of Fort Bragg. Users interactively filter facilities and buildings by natural hazard zones and/or construction characteristics.

2.4.3.2 Snapshot Exposure Maps

The included snapshot maps, displayed below in Figure 2-3 through Figure 2-11, illustrate City of Fort Bragg's vulnerability to specific hazards. Figures include:

- Figure 2-3: City of Fort Bragg M7.4 Maacama Garberville Snapshot
- Figure 2-4: City of Fort Bragg M7.8 N. San Andreas -N. Coast -Peninsula – SC MTN Snapshot
- Figure 2-5: City of Fort Bragg FEMA Flood Risk Exposure Snapshot
- Figure 2-6: City of Fort Bragg Average Annual Precipitation (1981-2010. Inches)
- Figure 2-7: City of Fort Bragg Annual Average Wind Speed (Power Class)
- Figure 2-8: City of Fort Bragg Landslide Risk Exposure Snapshot
- Figure 2-9: City of Fort Bragg Mean Fire Return Intervals
- Figure 2-10: City of Fort Bragg Wildfire Risk Exposure Snapshot
- Figure 2-11: Drought Timeline for Big Navarro-Garcia Watershed

Based on the above risk assessment, the snapshot maps focus on those hazards prioritized by the jurisdiction. These maps helped the Planning Team understand the exposure of population, parcels, and critical infrastructure to specific hazards. Each map contains an exposure summary that displays the percent of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed to each respective hazard.



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.	Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.	Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in Vol. 1 of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



Climate Change impacts will be addressed at the end of each hazard section within the 2020 plan update and as a stand alone section for each jurisdiction...

For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above. Pandemic will be profiled for every jurisdiction.



City of Fort Bragg Risk Matrix

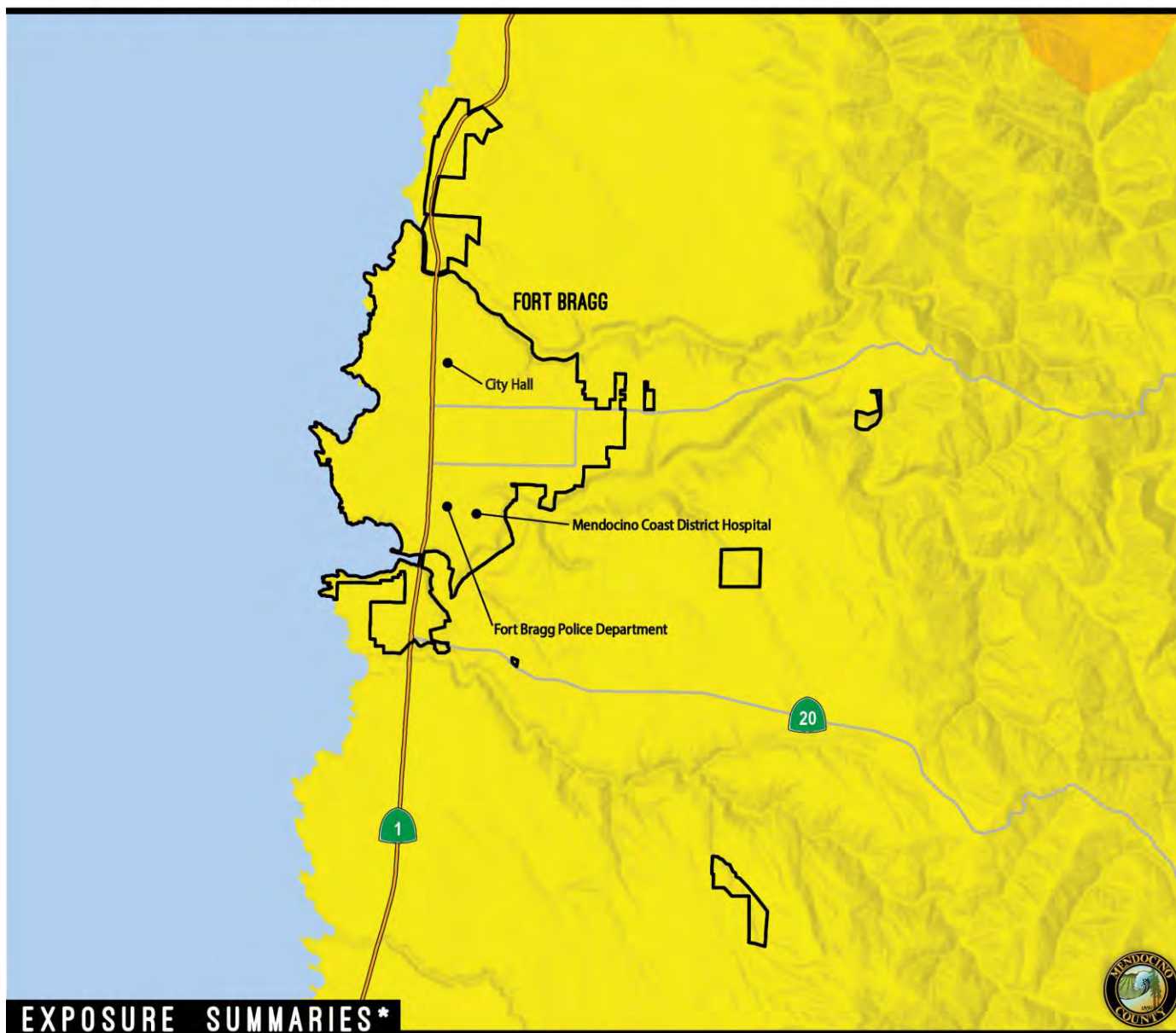
		IMPACT			
		Minor	Limited	Critical	Catastrophic
PROBABILITY	Highly Likely	Medium	EXTREME WEATHER	SLOPE FAILURE WILDFIRE	Extreme
	Likely	SOIL HAZARD	FLOOD	DROUGHT	Extreme
	Possible	Low	Medium	High	EARTHQUAKE
	Unlikely	DAM FAILURE	Low	Medium	Medium

Figure 2-2: City of Fort Bragg Risk Assessment



M7.4 MAACAMA GARBERVILLE SNAPSHOT

FORT BRAGG



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
7,269	100%
Count Includes: S+++E	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
2,290	100%
Count Includes: S+++E	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$430,594,668	100%
Sum of Content Value	
\$247,928,168	100%
Count Includes: S+++E	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	13	100%	S+++E
High Potential Loss	143	100%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	6	100%	
			85100%



*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage
of total summary or count within jurisdiction.

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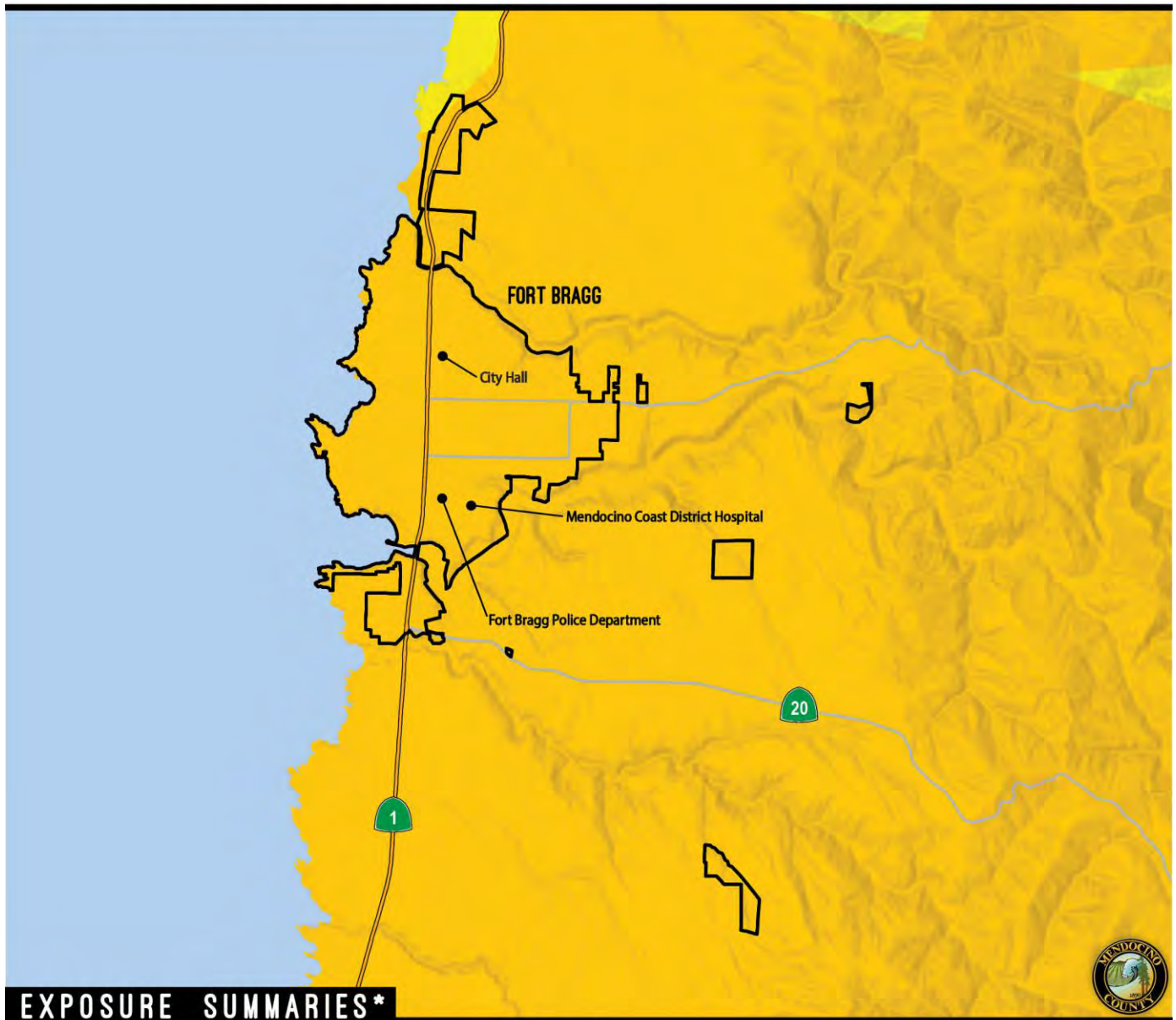


Figure 2-3: City of Fort Bragg M7.4 Maacama Garberville Snapshot



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN SNAPSHOT

FORT BRAGG



EXPOSURE SUMMARIES*

**POPULATION COUNT
IN HAZARD AREA**

Count	Exp. Rate**
7,269	100%
Count Includes: S+++E	

**PARCEL COUNT
IN HAZARD AREA**

Count	Exp. Rate**
2,290	100%
Count Includes: S+++E	

**PARCEL VALUE
IN HAZARD AREA**

Sum of Improvement Value	Exp. Rate**
\$430,594,668	100%
Sum of Content Value	
\$247,928,168	100%
Count Includes: S+++E	

**CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA**

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	13	100%	S+++E
High Potential Loss	143	100%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	6	100%	
			85100%

MAP LEGEND

III	IV	V	VI	VII	VIII	IX	X
WEAK	LIGHT	MODERATE	STRONG	VERY STRONG	SEVERE	VERY SEVERE	EXTREME

*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 2-4: City of Fort Bragg M7.8 N. San Andreas -N. Coast -Peninsula – SC MTN Snapshot

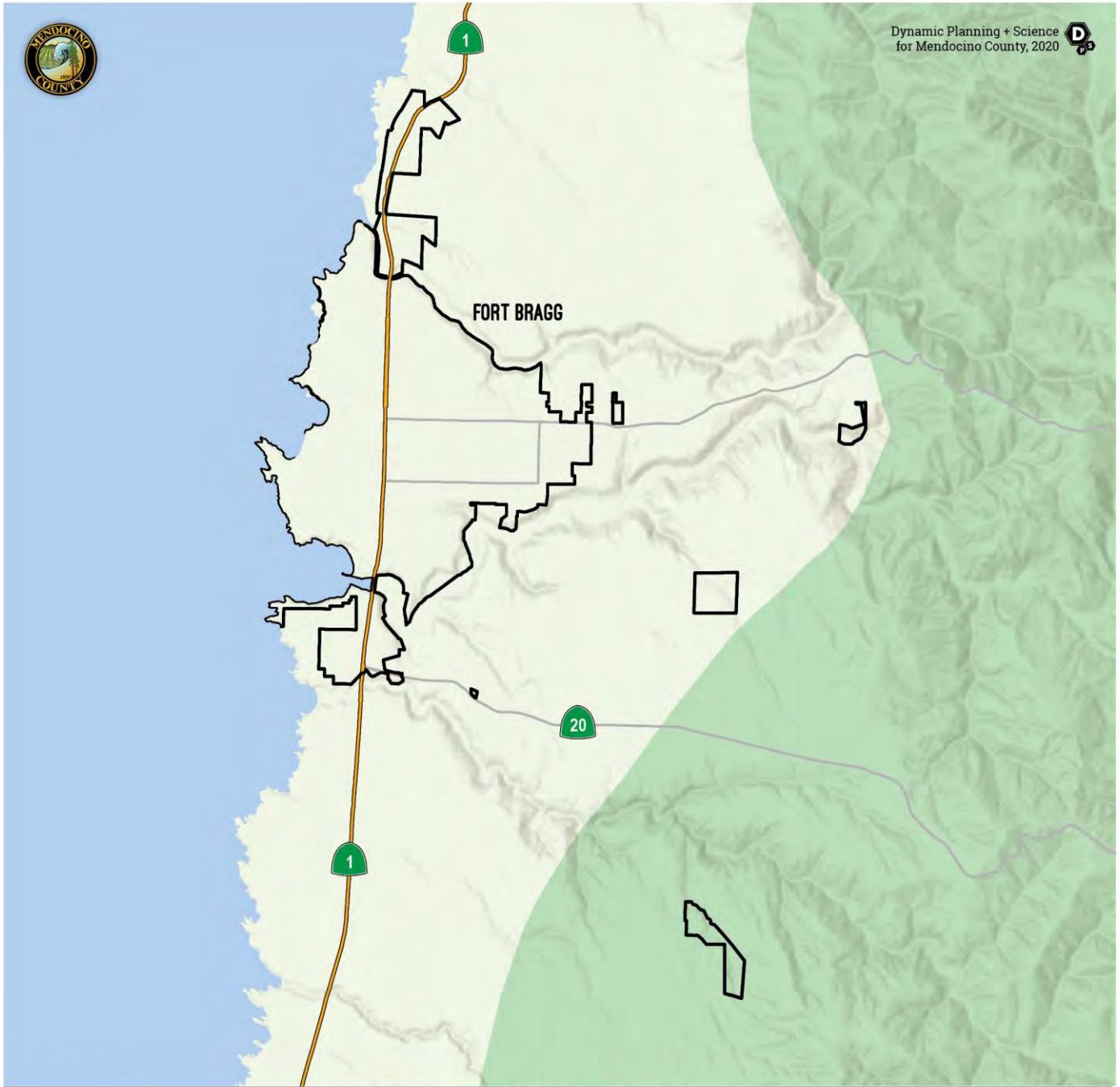


FEMA FLOOD RISK EXPOSURE SNAPSHOT

FORT BRAGG



Figure 2-5: City of Fort Bragg FEMA Flood Risk Exposure Snapshot



AVERAGE ANNUAL PRECIPITATION (1981-2010, INCHES) FORT BRAGG

*Data sources: USDA - 1981-2010 Annual Average Precipitation by State.

MAP LEGEND

34	45	60	70	85
44	59	69	84	97

INCHES

Figure 2-6: City of Fort Bragg Average Annual Precipitation (1981-2010. Inches)

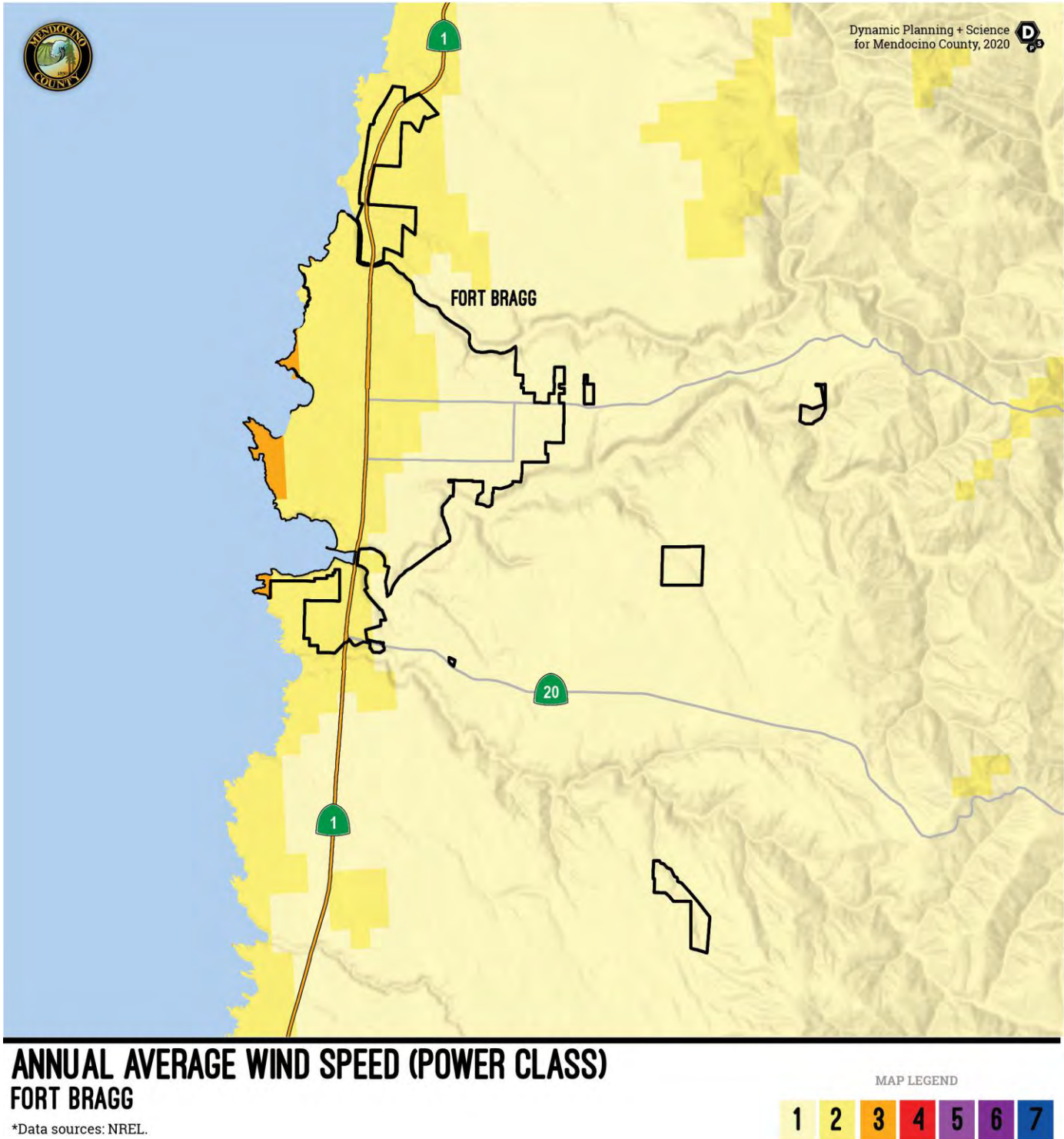


Figure 2-7: City of Fort Bragg Annual Average Wind Speed (Power Class)



LANDSLIDE RISK EXPOSURE SNAPSHOT

FORT BRAGG

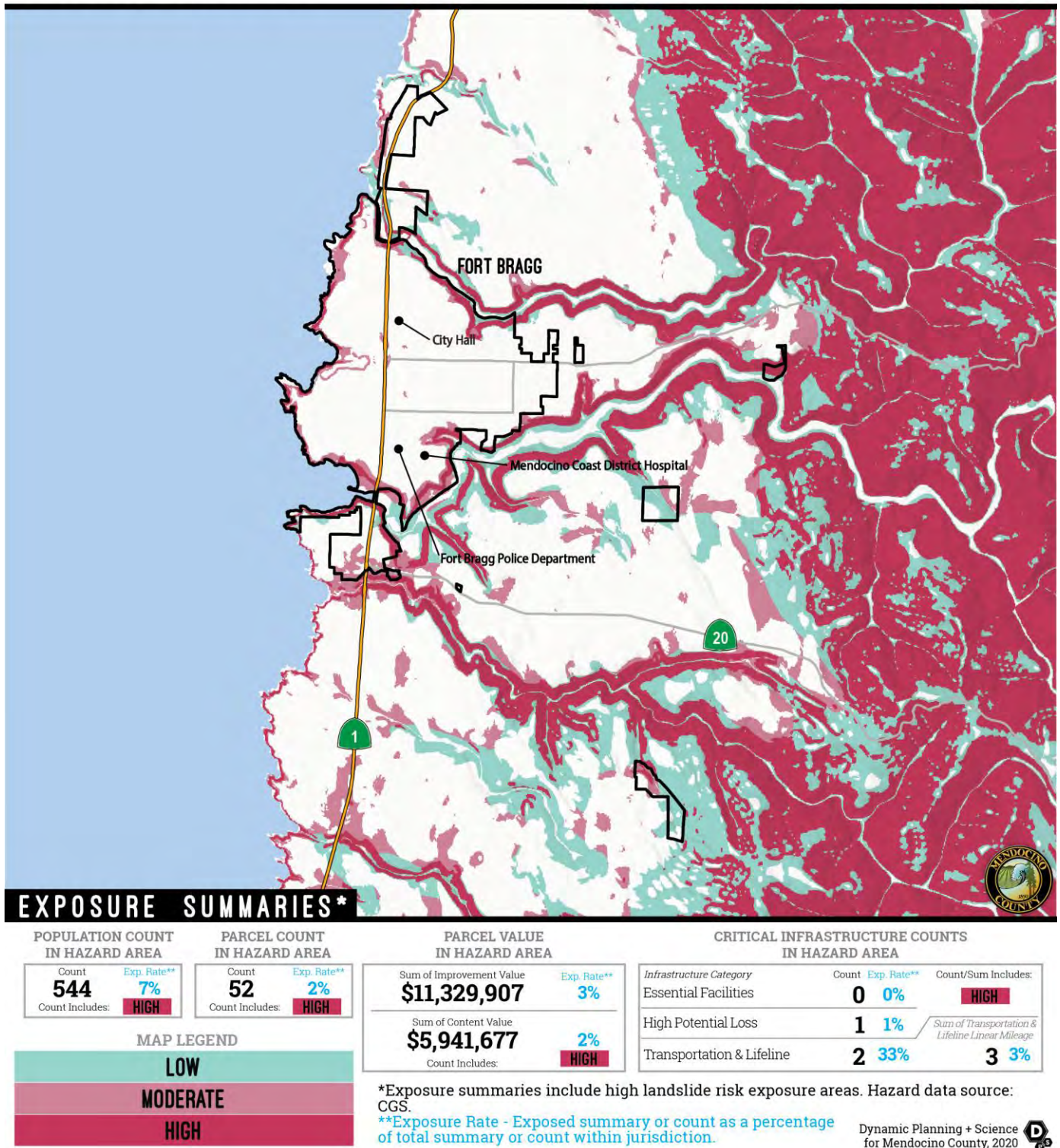
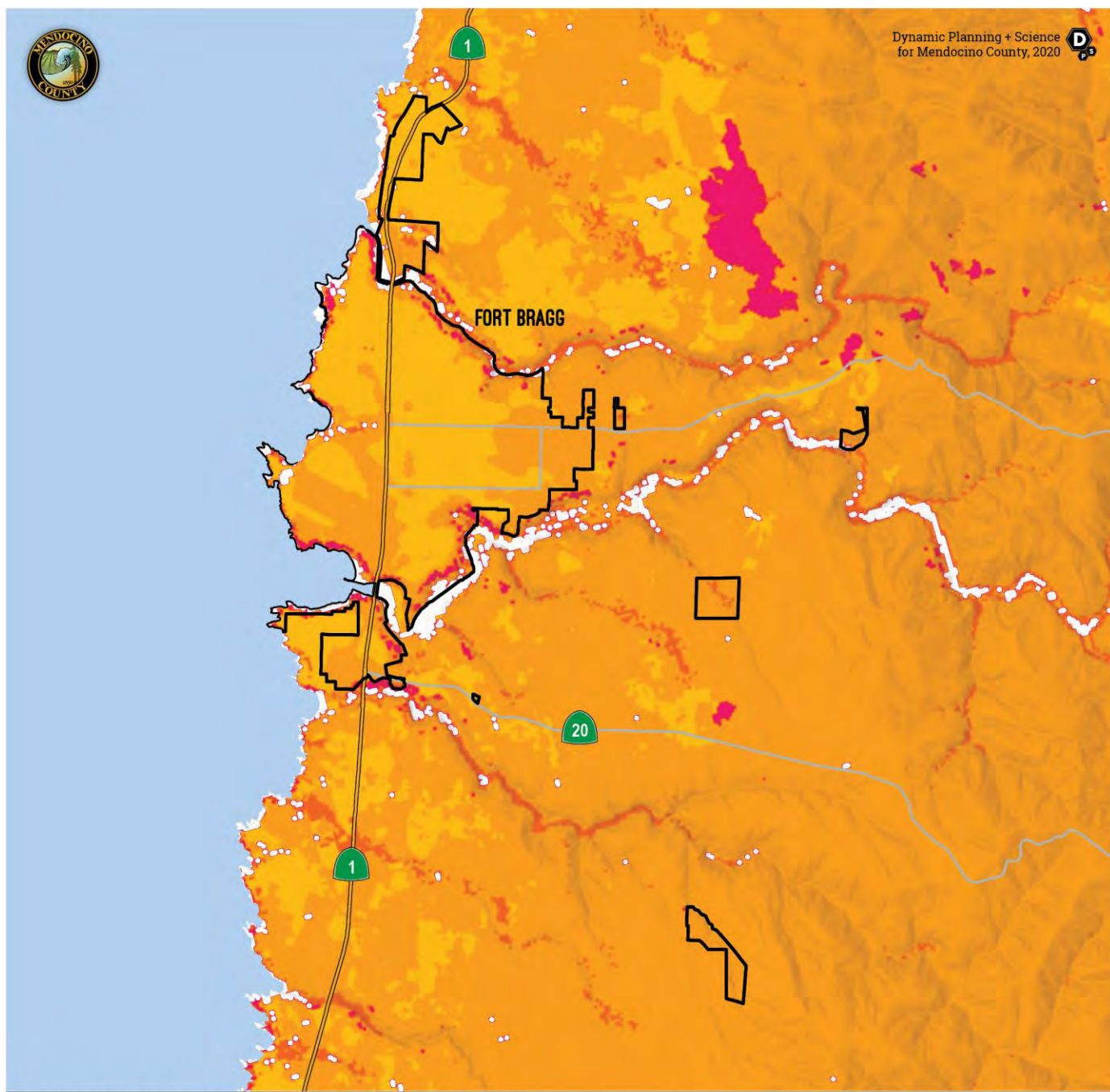


Figure 2-8: City of Fort Bragg Landslide Risk Exposure Snapshot



MEAN FIRE RETURN INTERVAL FORT BRAGG

*Data sources: USGS LANDFIRE.

MAP LEGEND

AVERAGE PERIOD BETWEEN FIRES (YEARS)

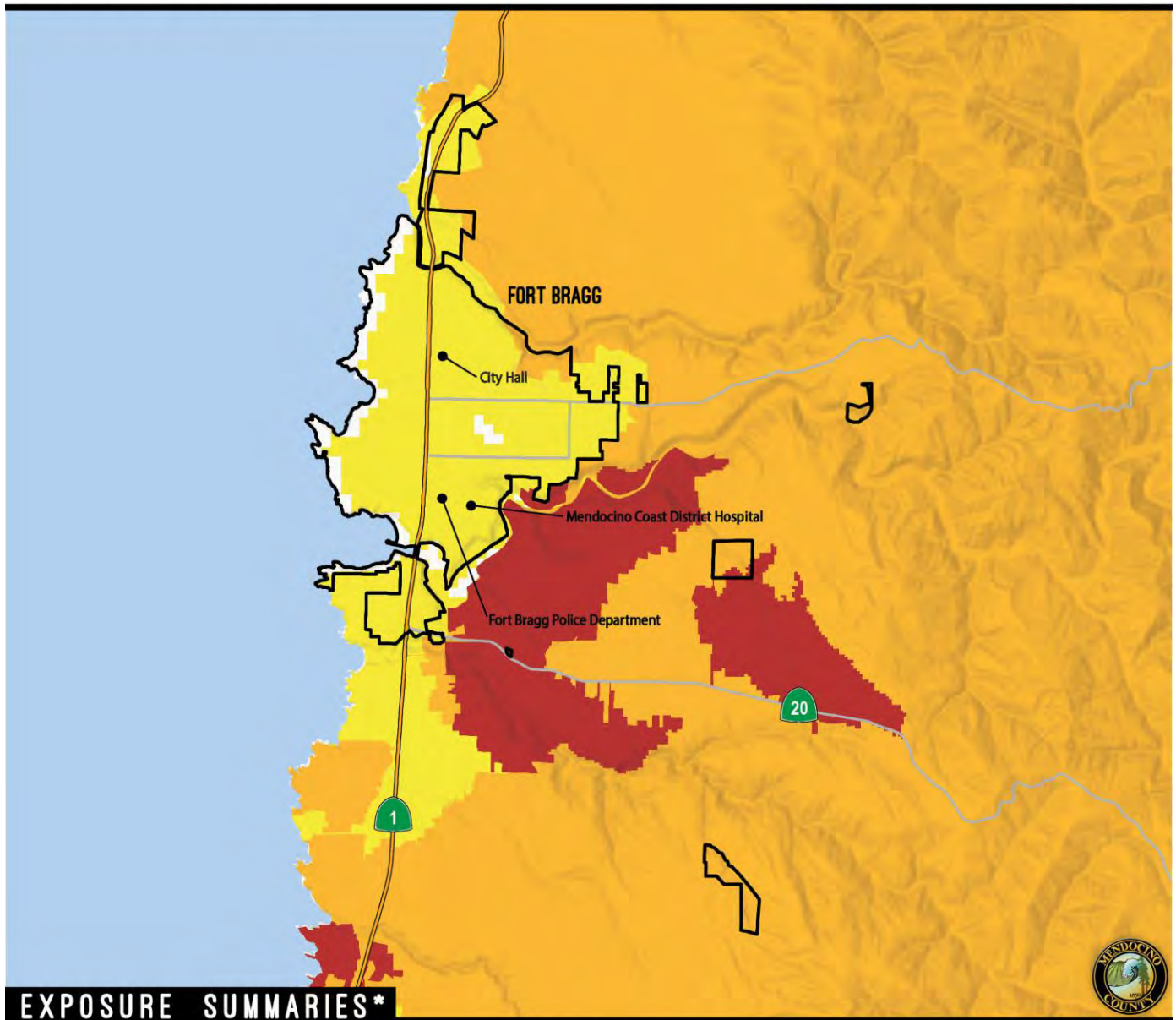
0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-60	61-70	71-80	81-90	91-100	101-125	126-150	151-200	201-300	301-500	501-1000	>1000
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Figure 2-9: City of Fort Bragg Mean Fire Return Intervals



WILDFIRE RISK EXPOSURE SNAPSHOT

FORT BRAGG



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
582	8%
Count Includes: H VH	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
23	1%
Count Includes: H VH	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$5,108,325	1%
Sum of Content Value	
\$3,068,887	1%
Count Includes: H VH	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	1	8%	H VH
High Potential Loss	10	7%	
Transportation & Lifeline	0	0%	2 3%

MAP LEGEND

MODERATE
HIGH (H)
VERY HIGH (VH)

*Exposure summaries include high and very high wildfire classes. Hazard data source: Cal Fire, CPUC.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

Dynamic Planning + Science
for Mendocino County, 2020

Figure 2-10: City of Fort Bragg Wildfire Risk Exposure Snapshot



Table 2-5: Drought Classifications and Impacts

Category	Description	Possible Impacts
D0	Abnormally Dry	- Going into drought, short term dryness, slowing planting, growth of crops or pastures. - Coming out of drought, some lingering water deficits and pasture or crops not fully recovered.
D1	Moderate Drought	- Some damage to crops, pastures - Streams, reservoirs, or wells low, some water shortages developing or imminent - Voluntary water-use restrictions requested
D2	Severe Drought	- Crop or pasture losses likely - Water shortages common - Water restrictions imposed
D3	Extreme Drought	- Major crop/ pasture losses - Widespread water shortages or restrictions
D4	Exceptional Drought	- Exceptional and widespread crop/ pasture losses - Shortages of water in reservoirs, streams, and wells creating water

Adapted from U.S. Drought Monitor Drought Classifications and Impacts

DROUGHT SEVERITY TIMELINE

BIG-NAVARRO-GARCIA

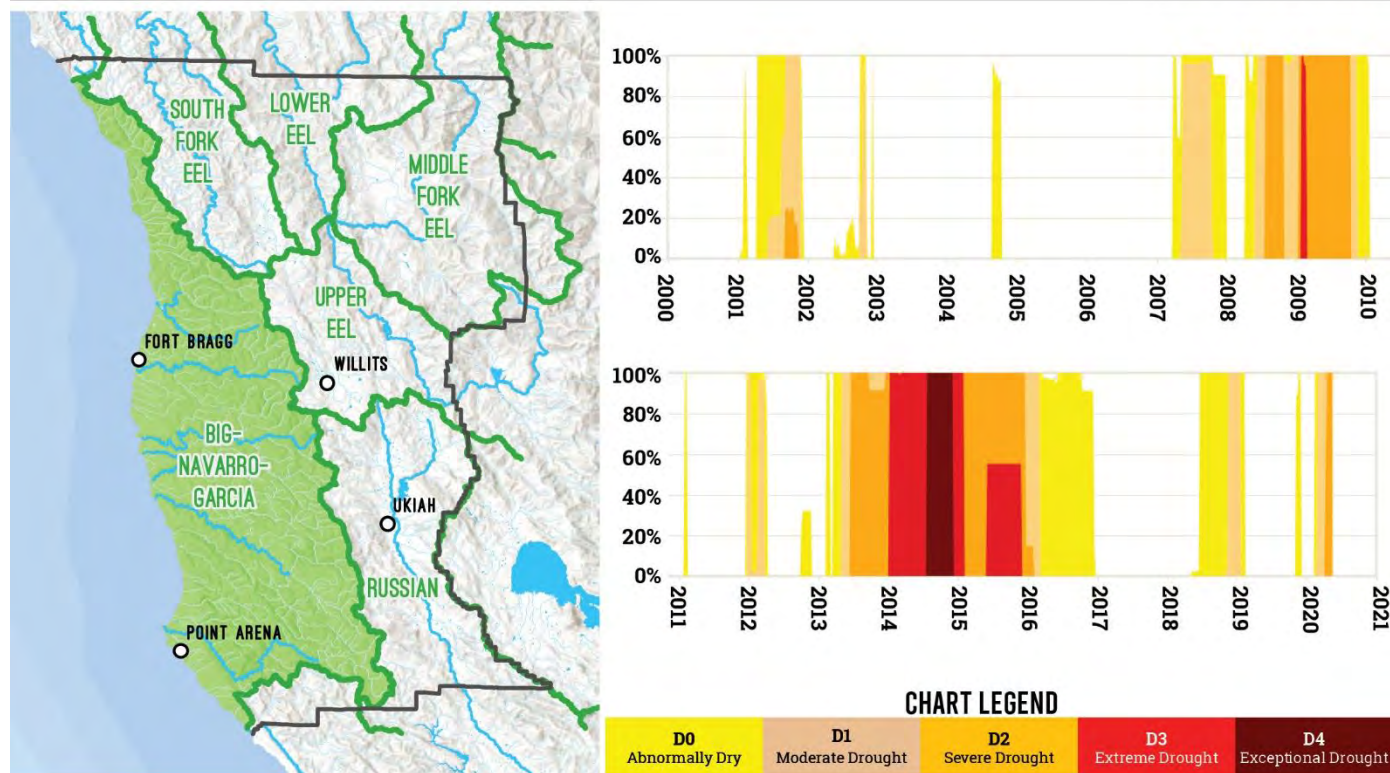


Figure 2-11: Drought Timeline for Big Navarro-Garcia Watershed



2.4.3.3 Past and Future Development

The City of Fort Bragg is a general law city that crafts its own development regulations and is subject to State law. Future development is subject to compliance with State of California planning, zoning, subdivision, and architecture laws.

The GP is designed to help the City address issues related to land use, circulation (traffic), housing, open space, conservation, noise, and safety. The Land Use portion of the plan helps guide the City in determining the location of future development(s), including possible future annexation. In addition to the GP, the City has other plans that guide development in specific areas, including specific plans, policy plans, and master plans. These plans help to shape future development and dictate the City's Sphere of Influence (SOI). One of the central functions in these planning documents is to decrease risk of impact from natural hazards.

While growth has occurred in hazard areas in the past, increasing hazard risks to some degree, those risks are also decreased by development standards and plan requirements that serve to mitigate or avoid those risks. Problematic development generally occurred many decades ago, and thus much of this HMP focuses on retrofits or replacements from that older construction.

City of Fort Bragg is required to update building codes to meet the minimum standards to those required in the California Building Code last updated in 2019. California Building Codes provide some of the safest construction standards in the world and are meant to reduce risk to occupants from high wind, seismic activity, landslides, flood, wildfire, and other natural hazards. In addition to California minimum development standards, all jurisdictions belong to the NFIP, as such, all development must meet minimum flood protection standards set forth by FEMA. See Section 4.3.5 of Volume 1 for more information about past and future development in Mendocino County.

As the General Plan is updated and incorporates information from this HMP, City of Fort Bragg staff are continually improving hazard information through these hazard mitigation plan updates. With this 2020 update, improved online mapping about natural hazards available on RAMP will inform those responsible for future development to make better decisions where and how future development occurs.

City of Fort Bragg reviewed its general plans under the capability assessments undertaken for this hazard mitigation plan in Section 2.5.1. Deficiencies revealed by these reviews are identified as mitigation actions to decrease risks to move beyond past trends.

The City's municipal codes includes regulations to mitigate the impact of hazards on new and existing development, including:

- Drainage and stormwater retention requirements,
- Steep slope restrictions for new development,
- Waterbody buffer requirements,
- Floodplain management regulations,



- Zoning that prevents development in hazardous areas of the community such as floodplains, landslide areas, the wildland-urban interface (WUI), or other known hazard areas, and
- Building codes that include the most up-to-date California Fire Code, seismic standards, and many other provisions crafted to protect new construction from hazard events.

Even in the event that limited development did occur within a hazard area, the municipal code should ensure impacts from a hazard event are mitigated and losses are minimal. If development does occur in hazard areas, evacuation and emergency planning should take into consideration the anticipated local impacts of the hazard event, including potential interrupted services or the elimination of access. The anticipated growth in the City will not cause significant change in vulnerability to the City for identified priority hazards.

2.4.3.3.1 National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. FEMA has prepared a detailed Flood Insurance Study (FIS) for Mendocino County and municipalities. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood and the 0.2-percent annual chance flood (the 500-YR flood). Base flood elevations and the boundaries of the 100- and 500-YR floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principle tool for identifying the extent and location of the flood hazard. FIRMs are the most detailed and consistent data source available, and for many communities they represent the minimum area of oversight under their floodplain management program. See Section 4 of Volume 1 for general information on the NFIP.

The City of Fort Bragg has participated in the NFIP since 1982. City of Fort Bragg is currently in good standing with the provisions of the NFIP. Compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA. Maintaining compliance under the NFIP is an important component of flood risk reduction. See Table 2-6 for more information on the City's policies and historic flood insurance claims. ***See Volume 1, Section 4.5 for more information on the NFIP.***

Table 2-6: NFIP Status Table

NFIP Status	Participating since 12/07/1982
Policies in Force	5
Policies in SFHA	0
Policies in non-SFHA	5
Total Claims Paid	0
Paid Losses	\$0
Repetitive Loss Properties	0
Severe Repetitive Loss Properties	0
Repetitive Loss Payment by NFIP on Building	N/D
Repetitive Loss Payment by NFIP on Contents	N/D



2.4.3.4 Identify Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping and static snapshot maps. Problem statements focused on the impact, victim, or threat that the hazard could create in the jurisdiction, as described in Figure 2-12. Identifying common issues and weaknesses through these problem statements assisted the Planning Committee in understanding the realm of resources needed for mitigation. Jurisdiction problem statements are listed in Table 2-7.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 2-12 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 2-7 and Table 2-12.



IMPACT

Casualties
Property Damage
Business Interruption
Financial Loss
Environmental Contamination



VICTIM

School Children in Hazard High Hazard Areas
Care Facilities in High Hazard Area
Vulnerable Population Exposed to hazards



THREAT

Increased Fuels due to drought
Hotter, drier climates
More Intense Storms
Impervious surfaces = greater runoff
Increases of Invasive Species

Figure 2-12: Guidance for Problem Statements



Table 2-7: Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-CC-FB-19	Climate Change	Impact	PPRO - Property Protection , NRP - Natural Resource Protection	City of Fort Bragg	Drought along with sea level rise or coastal flooding could cause the river intake to be infiltrated by salt. (Also drought)	ma-CC-FB-204
ps-DR-FB-2	Drought	Impact	PRV - Prevention , PE&A - Public Education & Awareness	City of Fort Bragg	City sees increased tourist populations and increased water use in summers, which poses additional challenges in drought years.	ma-DR-FB-231
ps-DR-FB-3	Drought	Impact	PRV - Prevention , SP - Structural Projects	City of Fort Bragg	Limited water storage means drought has significant effect on City's water supply. Additional storage or alternative water supplies, including desalinization, are needed.	ma-DR-FB-231
ps-FL-FB-11	Drought	Impact	PPRO - Property Protection , NRP - Natural Resource Protection	City of Fort Bragg	Drought along with sea level rise or coastal flooding could cause the river intake to be infiltrated by salt	ma-CC-FB-204, ma-DR-FB-231
ps-EQ-FB-4	Earthquake	Impact	PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Fort Bragg	Fort Bragg's hospital needs significant seismic upgrades by 2035 to remain safe during a strong earthquake.	ma-EQ-FB-9
ps-EQ-FB-5	Earthquake	Impact	SP - Structural Projects	City of Fort Bragg	Fort Bragg's fire department needs significant seismic upgrades to remain safe during a strong earthquake.	ma-EQ-FB-9
ps-EQ-FB-6	Earthquake	Impact	PRV - Prevention , PPRO - Property Protection , SP - Structural Projects	City of Fort Bragg	Fort Bragg's corporation yard needs significant seismic upgrades to remain safe during a strong earthquake.	ma-EQ-FB-9



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-FB-7	Earthquake	Impact	PRV - Prevention , PPRO - Property Protection , SP - Structural Projects	City of Fort Bragg	A significant number of residential homes and commercial buildings in Fort Bragg are older construction, pre-1974, and may require additional retrofitting.	ma-EQ-FB-12
ps-EW-FB-8	Extreme Weather	Impact	PE&A - Public Education & Awareness , ES - Emergency Services , SP - Structural Projects	City of Fort Bragg	City experiences power loss from extreme weather approximately three times a year for a day or two.	ma-EW-FB-13
ps-EW-FB-9	Extreme Weather	Victim	ES - Emergency Services	City of Fort Bragg	Loss of power for medical baseline customers may cause additional health effects.	ma-EW-FB-13
ps-FL-FB-10	Flood	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness	City of Fort Bragg	Ocean Lake Adult Mobile Home Park is particularly susceptible to flooding, tsunamis, and sea level rise.	ma-FL-FB-10, ma-FL-FB-232
ps-PN-FB-12	Pandemic	Victim	PRV - Prevention , PE&A - Public Education & Awareness	City of Fort Bragg	EOC is not designed for possible social distancing guidelines to be in place during a hazard event (flood, wildfire, earthquake), nor does it have adequate fresh air ventilation	ma-PN-FB-233
ps-PN-FB-13	Pandemic	Impact	PRV - Prevention , ES - Emergency Services	City of Fort Bragg	Evacuation center does not have adequate staffing space or structural barriers from public interaction to be used safely during pandemic.	ma-PN-FB-235
ps-PN-FB-14	Pandemic	Impact	ES - Emergency Services , SP - Structural Projects	City of Fort Bragg	Need for additional sheltering locations in event of pandemic social distancing needs paired with another hazard event (flood, wildfire, earthquake)	ma-PN-FB-236
ps-SF-FB-15	Slope Failure	Impact	SP - Structural Projects	City of Fort Bragg	Water delivery system traverses steep slopes in multiple points, and landslides can take out pipes in steep areas.	ma-SF-FB-237



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-SF-FB-16	Slope Failure	Impact	PE&A - Public Education & Awareness, ES - Emergency Services, SP - Structural Projects	City of Fort Bragg	Landslides affect important access routes to and from the City, both on Hwy 20 inland and along Hwy 1 (this is a particular secondary concern in seismic hazards too)	ma-SF-FB-245
ps-WF-FB-17	Wildfire	Threat	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness	City of Fort Bragg	Development on the east side of the City approaches the WUI and causes some concern. In general, the City boundaries only have moderate wildfire concerns with portions of the City without any wildfire concern.	ma-WF-FB-14
ps-WF-FB-18	Wildfire	Impact	PRV - Prevention, PE&A - Public Education & Awareness, ES - Emergency Services	City of Fort Bragg	City can be designated as an evacuation center for inland wildfires. Concerns about compounding other hazards like drought or pandemic.	ma-PN-FB-233, ma-PN-FB-235, ma-PN-FB-236

2.4.3.5 Mitigation Action Support Tool (MAST)

As a living document, hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for participating jurisdictions. The Mitigation Action Support Tool (MAST) is accessible through <https://mitigatehazards.com/mendocino-county/>.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdictions and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Participating jurisdictions can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction's ability to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.



2.5 Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section (a.k.a. problem statements) with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success.

2.5.1 Capabilities Assessment

This section examines the planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards.

Capabilities assessments include considerations of a community's adaptive capacity for climate change, as outlined in Cal OES' 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region's existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity. (Cal. Adaptation Planning Guide, 2020, p. 94)

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (Column 1, Status)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (Column 2, Current Mitigation Use)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (Column 3, Future Opportunity)

The capabilities assessment is easily-digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.

For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Volume 1. Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities as well.



2.5.1.1 Planning and Regulatory Capabilities

Table 2-8: Planning and Regulatory Mitigation Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Construction and Future Development Regulations				
Building Codes				2019 California Building Code.
BCEGS Rating				
Public Protection (ISO Class)				Class 3
Hazard Related Development Standards				Floodplain Management (Ch.15.32.170-200)
Zoning Ordinance				
Hazard-Specific Ordinance				Flood-Related Erosion-Prone areas (Ch. 15.32.200)
Growth Management Ordinance				
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				City of Fort Bragg Budget Fiscal Year 2020/2021.
Erosion/Sediment Control Program				
Hazard-Related Public Outreach Program				
Stormwater Management Program (Annual Inspections)				
Seismic Safety Program (Non-structural)				
Earthquake Modernization Plan (Building Safety)				
Hazard Plans				
General Plan Safety Element				
Community Wildfire Protection Plan (CWPP)				2016 County-wide CWPP in existence.
Floodplain Management Plan				



Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Stormwater Management Plan				Coastal Mendocino Co Storm Water Resource Plan, 2019 Update
Emergency Operations Plan				Mendocino County Operational Area Emergency Operations Plan (2016)
Climate Action Plan				Draft Climate Action Plan 2012
Ground Water Management Planning / Plans				Ukiah Valley is the only groundwater basin required to have a groundwater sustainability plan in the County.
National Flood Protection Program (NFIP)				
Floodplain Management Regulations				Floodplain Management (Ch.15.32.190-200)
Flood Insurance Education and Technical Assist.				
Flood Hazard Mapping / Re-Mapping				
Community Rating System (CRS)				



2.5.1.2 Administrative and Technical Capabilities

Table 2-9: Administrative and Technical Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Community Planning and Development Services				
Community Planner				The Community Development Department has a Senior Planner as dedicated staff.
Civil Engineer				The Public Works has two or more staff dedicated to engineering.
Building Code Official (Full time or Augmented)				
Floodplain Administrator				
Fire Marshal				The Fort Bragg Fire Department includes a full-time Fire Chief and a Fire Prevention Officer.
Dedicated Public Outreach Personnel				
GIS Specialist and Capability				
Emergency Manager				City Manager is the emergency services director for the City.
Full-Time Building Official				
Grant Manager, Writer, or Specialist				
Other	N/A	N/A	N/A	
Warning Systems/Services				
General				MendoAlert. The City uses local radio stations (KOZT FM 95.3 / 95.9), the county web site, as well as the city web site to post information about emergency or disaster situation that affects the city.
Flood				
Wildfire				
Geological Hazards				



2.5.1.3 Financial Capabilities

Table 2-10: Fiscal Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				
Utilities Fees				
Benefit assessments				
System Development Fee				
General Obligation Bonds to Incur Debt				
Special Tax Bonds to Incur Debt				
Withheld Spending in Hazard-Prone Areas				
Stormwater Service Fees				
Capital Improvement Project Funding				Recent examples are the 2020 Maple Street Storm Drain and Alley Project and the Wastewater Treatment Facility Upgrade.



2.5.1.4 Education and Outreach

Table 2-11: Education / Outreach Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				
Dedicated Social Media				
Hazard Info. Avail. at Library/ Planning Desk				
Annual Public Safety Events				
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				
Fire Safe Councils				The Mendocino County Fire Safe Council assists local Councils with a variety of needs.
Resource Conservation Districts				The Mendocino County Resource Conservation District has implemented a wide range of programs across the County.
Other	N/A	N/A	N/A	



2.5.2 Mitigation Actions

Mitigation actions were developed based upon the jurisdiction's priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Section 5.5.1 of Volume 1. Table 2-12 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon the Planning Committee consensus.

Each participating jurisdiction, including the City of Fort Bragg, considered ongoing relevancy of mitigation actions from the existing MJHMP and retained or removed such actions while adding new relevant actions as well. Mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the previous HMP effort were not included because they were an inherent part of the HMP update process or were not detailed enough for implementation at a local Jurisdiction level. City of Fort Bragg has made significant changes to other mitigation actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices. Volume 1, Section 5.5.2 provides a record of County-wide mitigation actions, the status, and additional notes for each action.

Table 2-12 lists each mitigation action for City of Fort Bragg. Each participating jurisdiction developed unique mitigation actions, targeted at their own unique priorities and vulnerabilities. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST. The detail in Table 2-12 meets the regulatory requirements of FEMA and DMA 2000.

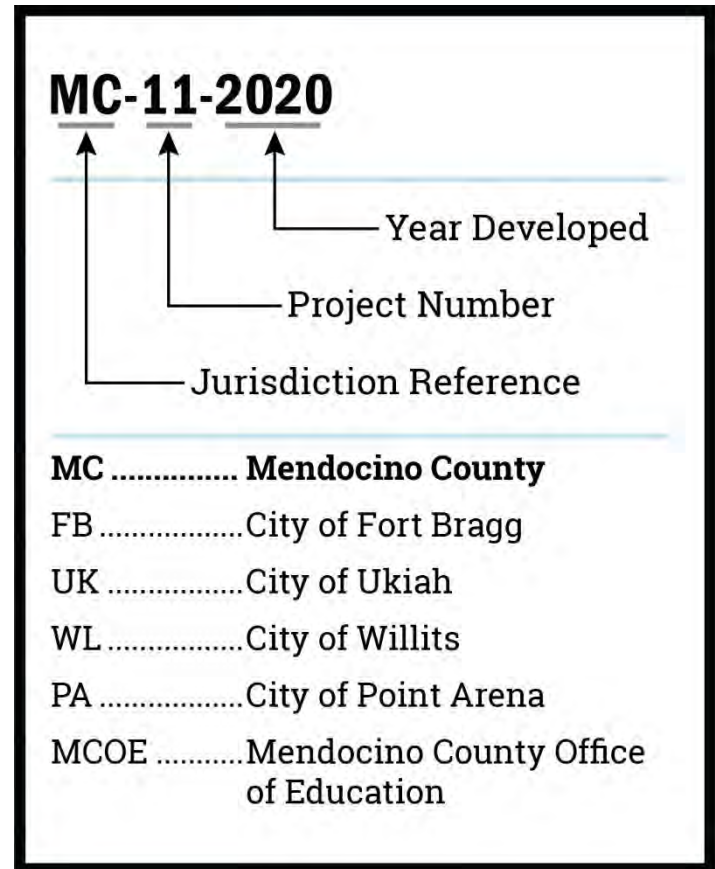


Figure 2-13: Mitigation Action Key



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Table 2-12: City of Fort Bragg Mitigation Actions

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-CC-FB-204	Climate Change	PRV - Prevention	Pending	2020	City of Fort Bragg	Develop project to address increased salinity in drinking water intakes due to reduced river levels (drought) paired with sea level rise or tsunami effects	Public Works/ Engineering	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-CC-FB-19, ps-FL-FB-11
ma-DR-FB-231	Drought	PPRO - Property Protection	Pending	2020	City of Fort Bragg	Explore water supply contingency and alternative water supplies to improve water supply and delivery and wastewater treatment capacity in times of drought	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	3-5 Years	Planning	HMGP / BRIC	Medium	ps-DR-FB-2, ps-DR-FB-3, ps-FL-FB-11
ma-EQ-FB-9	Earthquake	PPRO - Property Protection	Pending	2014	City of Fort Bragg	Seismically retrofit or replace public works and/or emergency response facilities that are necessary during and/or immediately after a disaster or emergency. Specific needs for fire department, corporation yard, and hospital.	Public Works Department/ Engineering Division	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , AFG , FP&S	High	ps-EQ-FB-4, ps-EQ-FB-5, ps-EQ-FB-6
ma-EQ-FB-12	Earthquake	PE&A - Public Education & Awareness	Ongoing	2008	City of Fort Bragg	Develop an unreinforced masonry grant program to correct problems, such as bracing chimneys, on residential and nonresidential buildings.		High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC	High	ps-EQ-FB-7
ma-EW-FB-13	Extreme Weather	PPRO - Property Protection	Ongoing	2008	City of Fort Bragg	Install underground utilities or clear right-of-way for utilities that provide power and communication to critical facilities and are at-risk to failure during a winter storm event.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC , FP&S , CDBG DRI	High	ps-EW-FB-8, ps-EW-FB-9
ma-FL-FB-10	Flood	PPRO - Property Protection	Pending	2014	City of Fort Bragg	Reinforce County and local ramps, bridges, and roads from flooding through protection activities, including elevating the road and installing culverts beneath the road or building a higher bridge across the area that experiences regular flooding.	Public Works Department/ Engineering Division	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-FL-FB-10
ma-FL-FB-232	Flood	PE&A - Public Education & Awareness	Ongoing	2020	City of Fort Bragg	Develop a public outreach program that informs property owners located in areas of concern for flood but not necessarily in flood zone, such as Ocean Lake Mobile Home Park, about voluntary flood insurance.	City Manager initially	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	Ongoing	5%	HMGP / BRIC	High	ps-FL-FB-10



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-PN-FB-233	Pandemic	ES - Emergency Services	Pending	2020	City of Fort Bragg	Install additional barriers and proper ventilation in Emergency Operations Center (EOC, City Hall) to allow for operation of EOC during pandemic and hazard event	Directorate of Emergency Services	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , AFG , FP&S , CDBG DRI	High	ps-PN-FB-12, ps-WF-FB-18
ma-PN-FB-235	Pandemic	ES - Emergency Services	Pending	2020	City of Fort Bragg	Institute necessary structural improvements to evacuation centers/ sheltering locations to allow for proper ventilation, space for staff, and structural barriers to be used during pandemic and hazard event.	Directorate of Emergency Services	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , AFG , FP&S , CDBG DRI	High	ps-PN-FB-13, ps-WF-FB-18
ma-PN-FB-236	Pandemic	ES - Emergency Services	Pending	2020	City of Fort Bragg	Develop alternative sheltering/ evacuation locations for distancing required during pandemic and other hazard event	Directorate of Emergency Services	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-FB-14, ps-WF-FB-18
ma-SF-FB-237	Slope Failure	PPRO - Property Protection	Ongoing	2020	City of Fort Bragg	Retrofit well and water delivery pipes frequently subjected to landslides.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Project	HMGP / BRIC , CDBG DRI	High	ps-SF-FB-15
ma-SF-FB-245	Slope Failure	PPRO - Property Protection	Ongoing	2020	City of Fort Bragg	Initiate process to understand landslide susceptibility for emergency egress, including land ownership and CalTrans funding opportunities, both north and west of Fort Bragg (Hwy 1 and Hwy 20).	Admin, Public Works	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	3-5 Years	Planning	HMGP / BRIC	Medium	ps-SF-FB-16
ma-WF-FB-7	Wildfire	PRV - Prevention	Pending	2014	City of Fort Bragg	Develop a community wildfire mitigation plan that identifies and prioritizes areas for hazard fuel reduction treatments, and recommend the types of methods of treatments.	Community Development Department	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 years, ongoing	Planning	HMGP / BRIC , AFG , FP&S	Medium	
ma-WF-FB-14	Wildfire	PPRO - Property Protection	Ongoing	2008	City of Fort Bragg	Develop an urban fire prevention program that provides grant funding for property owners to update structures that currently not meet the CBC and California Fire Code, focusing on areas in eastern portion of City.	City Admin	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	3-5 Years	Planning	AFG , FP&S	Medium	ps-WF-FB-17



**MENDOCINO COUNTY
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN**

**City of Point
Arena**

JURISDICTIONAL ANNEX

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Mendocino County

Multi-Jurisdiction Hazard Mitigation Plan

CITY OF POINT ARENA (PA)

Municipal Participating Jurisdiction Annex

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Section 3. City of Point Arena

3.1 Purpose

This Annex details the hazard mitigation planning elements specific to the City of Point Arena. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Point Arena. This Annex provides additional information specific to the City of Point Arena, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Paul Andersen, Administrative Assistant
City of Point Arena
451 School Street,
24000S. Highway 1
Point Arena, CA 95468
Telephone: (707) 882-2122
e-mail Address: admin@pointarena.ca.gov

Alternate Point of Contact

Richard Shoemaker, City Manager
City of Point Arena
451 School Street,
24000S. Highway 1
Point Arena, CA 95468
Telephone: 707-882-2122
e-mail Address: cm@pointarena.ca.gov

3.2 Planning Methodology

The City of Point Arena followed the planning process detailed in Volume 1, Section 3, including participating in the County Hazard Mitigation Planning Committee (HMPC) and Steering Committee and formulating their own internal planning team to support the broader planning process. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 3-1.

Table 3-1: Planning Committee Members

Planning Committee Members	Department
Paul Andersen	City of Point Arena
Richard Shoemaker	City Manager

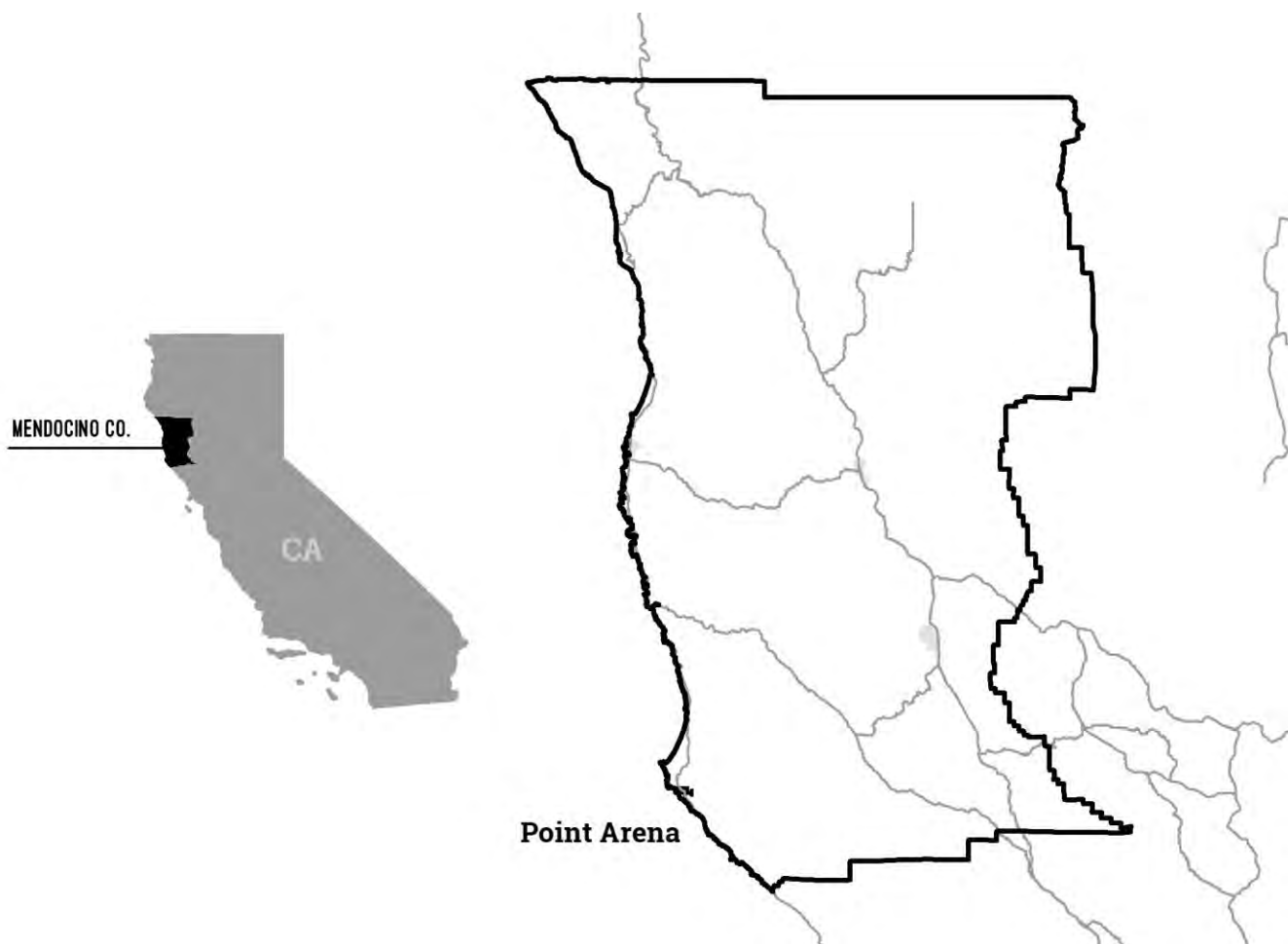


Figure 3-1: City of Point Arena Location

3.3 What's New

The City of Point Arena has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted.

The City reevaluated previous mitigation actions. The City determined to cancel some due to reprioritization, lack of funding, or other listed reasons. Currently there are no previous mitigation actions designated completed. Table 3-2 lists those cancelled mitigation actions along with an explanation for why. Other mitigation actions are pending or ongoing and are included in Table 3-11.



Table 3-2: Cancelled Mitigation Actions

Mitigation No.	Hazard Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Reason Cancelled
ma-AH-PA-38	All Hazard	Cancelled	2014	City of Point Arena	Integrate the Mendocino County HMP, in particular the hazard analysis and mitigation strategy sections, into local planning documents, including general plans, emergency operations plans, and capital improvement plans.	Planning	Ongoing work, opportunities for integration reflected in capabilities assessment.
ma-SF-PA-42	Slope Failure	Cancelled	2008	City of Point Arena	Retrofit critical infrastructure or mitigate land (e.g., slope stabilization, vegetation management) around critical infrastructure so that the infrastructure provides safe ingress for emergency response vehicles and safe egress for community members before or during a disaster.		No longer a priority

3.3.1 Mitigation Successes

The City of Point Arena has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted. The City has instituted several mitigation actions from the existing MJHMP. See Vol. 1 for a listing of historic mitigation actions. Listed below is a success story where the City of Point Arena successfully implemented a hazard mitigation project or planning process.

SUCCESS STORY: *Arena Cove Restoration*

The City is working with the Federal Emergency Management Agency and the California Office of Economic Services to obtain funding to mitigate the yearly damage at the Point Arena Pier and the adjacent Arena Cove parking lot by winter storms. In January of 2017, a strong storm caused significant damage to pilings on the Point Arena Pier as well rip-rap that provides a buffer against storm surge invading the Arena Cove parking lot. Yearly storm surges have resulted in the moving of significant debris and flooding of the parking lot which affects local businesses and the ability of the commercial and sport fishing communities utilizing the Cove. Funding will be used to engineer and replace damaged and missing wooden pilings on the Pier and to raise the parking lot and provide a seawall buffer to prevent storm surges from causing further erosion of the parking lot.



Figure 3-2: Damage to Arena Cover Parking Lot in 2017



3.4 Risk Assessment

The intent of this section is to profile the City of Point Arena's hazards and assess the City's vulnerabilities, distinct from that of the County-wide planning area. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. For more information on Risk Assessment Methodologies, see Vol. 1 and Appendix A.

3.4.1 Hazard Screening Criteria

Planning Team members from each participating jurisdiction collectively discussed which hazards should be profiled in the Plan and which should not. The results of that discussion can be found in Table 3-3. Detailed hazard profiles of the most significant County-wide hazards are described in Section 4 of Volume 1. The Planning Team reviewed previously-prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect City of Point Arena. Table 3-4 provides a crosswalk of hazards identified in Vol. 1 of this plan, City of Point Arena General Plan, and 2018 California State Hazard Mitigation Plan. The crosswalk was used to develop a preliminary hazards list, providing a framework for the Planning Team members to evaluate which hazards were truly relevant to City of Point Arena and which ones were not. Section 0 below describes the hazard risk ranking process that was performed by the planning team which prioritized hazards that are specifically relevant to City of Point Arena.



Table 3-3: County Hazard Prioritization (Vol. 1)

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	High priority county-wide, profiled hazard.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Severe Weather.
Insect Hazards	While hazardous insects exist in Mendocino County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	High priority county-wide, profiled hazard.
Severe Weather, including:	High priority county-wide for heavy wind and heavy rain.
Extreme Heat	Not a priority as extreme weather event, discussed as climate change impact.
Hail	Hail events are rare in Mendocino County and not profiled in this plan.
High Wind	Profiled as part of Severe Weather hazard.
Heavy Rain	Profiled as part of Severe Weather hazard.
Fog	While fog events do occur within Mendocino County, they are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.
Winter Storm / Extreme Cold/ Freeze Events	While winter storms are present in Mendocino County, they were not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	High priority county-wide, profiled hazard (includes erosion and naturally-occurring asbestos).
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.



Table 3-4: Document Review Crosswalk

Hazards	2014 Mendocino County MJHMP	2006 City of Point Arena General Plan /Local Coastal Plan	2009 Mendocino County General Plan	2018 California State HMP
Agricultural Pests	■			■
Climate Change			■	■
Dam Failure	■		■	■
Drought	■	■	■	■
Earthquake	■	■	■	■
Flood	■	■	■	■
Insect Hazards	■			
Landslide		■	■	■
Levee Failure	■*			■
Manmade Hazards			■	■
Pandemic Disease	■			■
Sea Level Rise		■		■
Severe Weather				■
Soil Hazards	■**			
Terrorism & Tech Hazards				■
Tsunami	■	■	■	■
Volcano				■
Wildfire	■***	■	■	■

* included as part of dam failure

** included naturally occurring asbestos

*** included urban conflagration

3.4.2 Hazard Risk Ranking

The City of Point Arena's Planning Team used the same hazard prioritization process as the Mendocino County Planning Committee. This process is described in detail in Section 4.3.1 of Vol. 1. Figure 3-3 displays the results of the hazard risk ranking exercise that was performed by the Planning Team. The Planning Team chose to assess City of Point Arena's vulnerability to following hazards:

- Climate Change
- Earthquake
- Pandemic
- Flood
- Extreme Weather
- Wildfire

All of these hazards have been profiled in Vol. 1 of this document. The purpose of this annex to specifically address City of Point Arena's vulnerability to these specifically-identified hazards.



3.4.3 Vulnerability Assessment

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within City of Point Arena are vulnerable to specific hazard events. The vulnerability assessment considered unique local knowledge of hazards and impacts and a GIS overlaying method for examining such vulnerabilities more in depth. Using these methods, participating jurisdictions estimated vulnerable populations, infrastructure, and potential losses from hazards.

3.4.3.1 Risk Assessment

Each participating jurisdiction developed a risk matrix that assessed the probability and impact of various hazards within the jurisdiction. Figure 3-3 is the jurisdiction's risk assessment, which was completed in part using the web based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com. RAMP allows interactive discovery of robust risk, vulnerability, and exposure data developed especially for Mendocino County. RAMP is a mapping platform built specifically for mitigation planning. It displays County/jurisdiction facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. See Vol. 1 for a detailed description of RAMP. The Planning Team used RAMP in meetings and as needed to understand vulnerabilities to City of Point Arena. Users interactively filter facilities and buildings by natural hazard zones and/or construction characteristics.

3.4.3.2 Snapshot Exposure Maps

The included snapshot maps, displayed below in Figure 3-4 through Figure 3-10, illustrate City of Point Arena's vulnerability to specific hazards. Figures include:

- Figure 3-4: City of Point Arena M7.4 Maacama Garberville Snapshot
- Figure 3-5: City of Point Arena M7.8 N. San Andreas -N. Coast – Peninsula – SC MTN Snapshot
- Figure 3-6: City of Point Arena FEMA Flood Risk Exposure Snapshot
- Figure 3-7: City of Point Arena Average Annual Precipitation (1981-2010. Inches)
- Figure 3-8: City of Point Arena Annual Average Wind Speed (Power Class)
- Figure 3-9: City of Point Arena Mean Fire Return Interval
- Figure 3-10: City of Point Arena Wildfire Risk Exposure Snapshot

Based on the above risk assessment, the snapshot maps focus on those hazards prioritized by the jurisdiction. These maps helped the Planning Team understand the exposure of population, parcels, and critical infrastructure to specific hazards. Each map contains an exposure summary that displays the percent of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed to each respective hazard.



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.	Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.	Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in **Vol. 1** of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



CLIMATE CHANGE



PANDEMIC

Climate Change impacts will be addressed at the end of each hazard section within the 2020 plan update and as a stand alone section for each jurisdiction...

For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above. Pandemic will be profiled for every jurisdiction.

City of Point Arena Risk Matrix

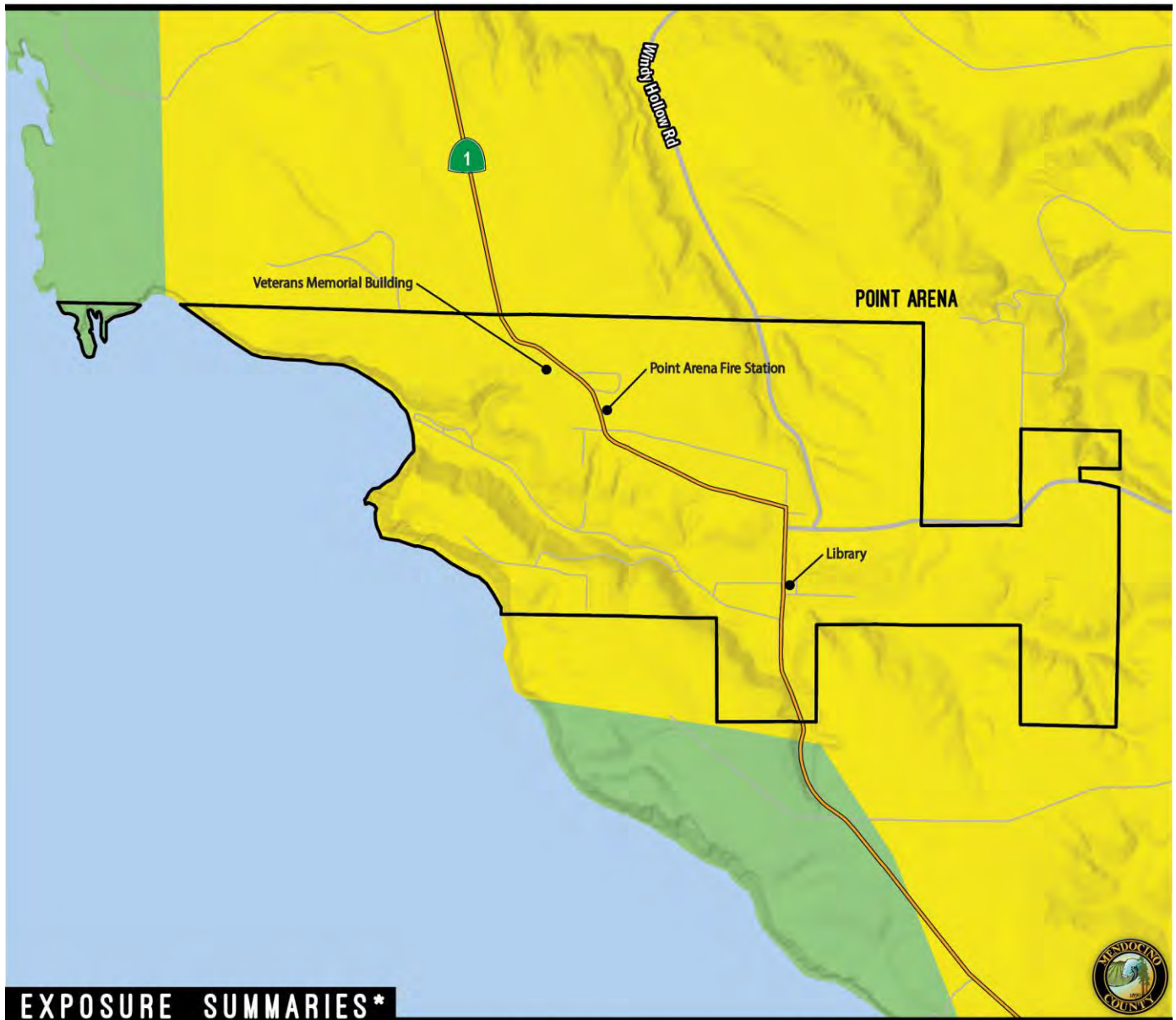
PROBABILITY	IMPACT			
	Minor	Limited	Critical	Catastrophic
	Highly Likely	Medium  FLOOD	Extreme	Extreme
	Likely	 SLOPE FAILURE	 EXTREME WEATHER	High
	Possible	 SOIL HAZARD	 DROUGHT	Medium
Unlikely	 WILDFIRE	 EARTHQUAKE	High	High
	 DAM FAILURE	Low	Medium	Medium

Figure 3-3: City of Point Arena Risk Assessment



M7.4 MAACAMA GARBERVILLE SNAPSHOT

POINT ARENA



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
469	99%
Count Includes: S+++E	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
191	100%
Count Includes: S+++E	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$27,541,217	100%
Sum of Content Value	
\$16,346,380	100%
Count Includes: S+++E	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	4	100%	S+++E
High Potential Loss	32	100%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	2	100%	
			14100%

MAP LEGEND

III	IV	V	VI	VII	VIII	IX	X
WEAK MMI	LIGHT	MODERATE	STRONG	VERY STRONG	SEVERE	VIOLENT	EXTREME

*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage
of total summary or count within jurisdiction.

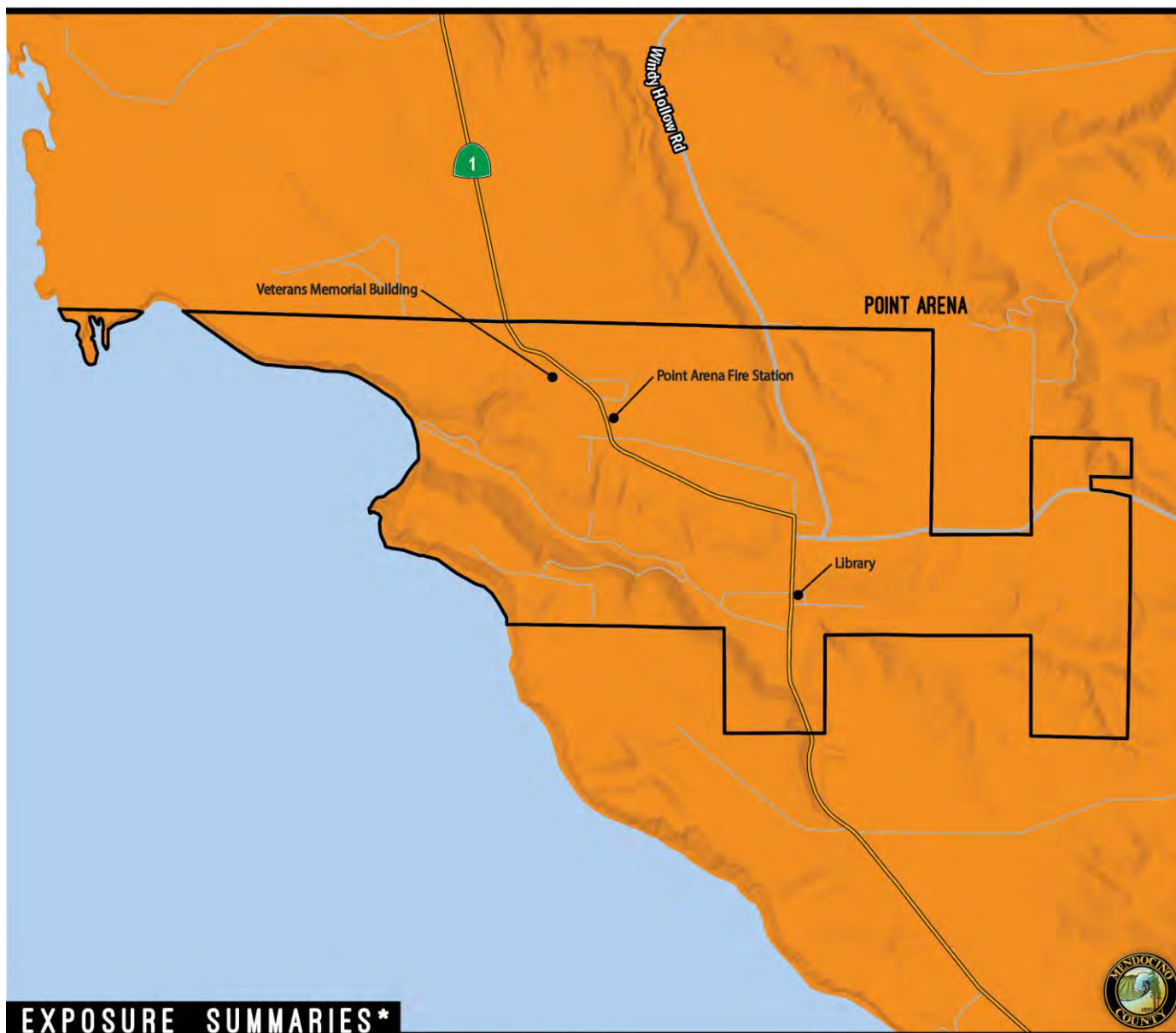
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for Mendocino County, 2020

Figure 3-4: City of Point Arena M7.4 Maacama Garberville Snapshot



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN SNAPSHOT

POINT ARENA



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
472	100%
Count Includes: S+++E	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
191	100%
Count Includes: S+++E	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$27,541,217	100%
Sum of Content Value	Exp. Rate**
\$16,346,380	100%
Count Includes: S+++E	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	4	100%	S+++E
High Potential Loss	32	100%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	2	100%	14 100%



*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage
of total summary or count within jurisdiction.

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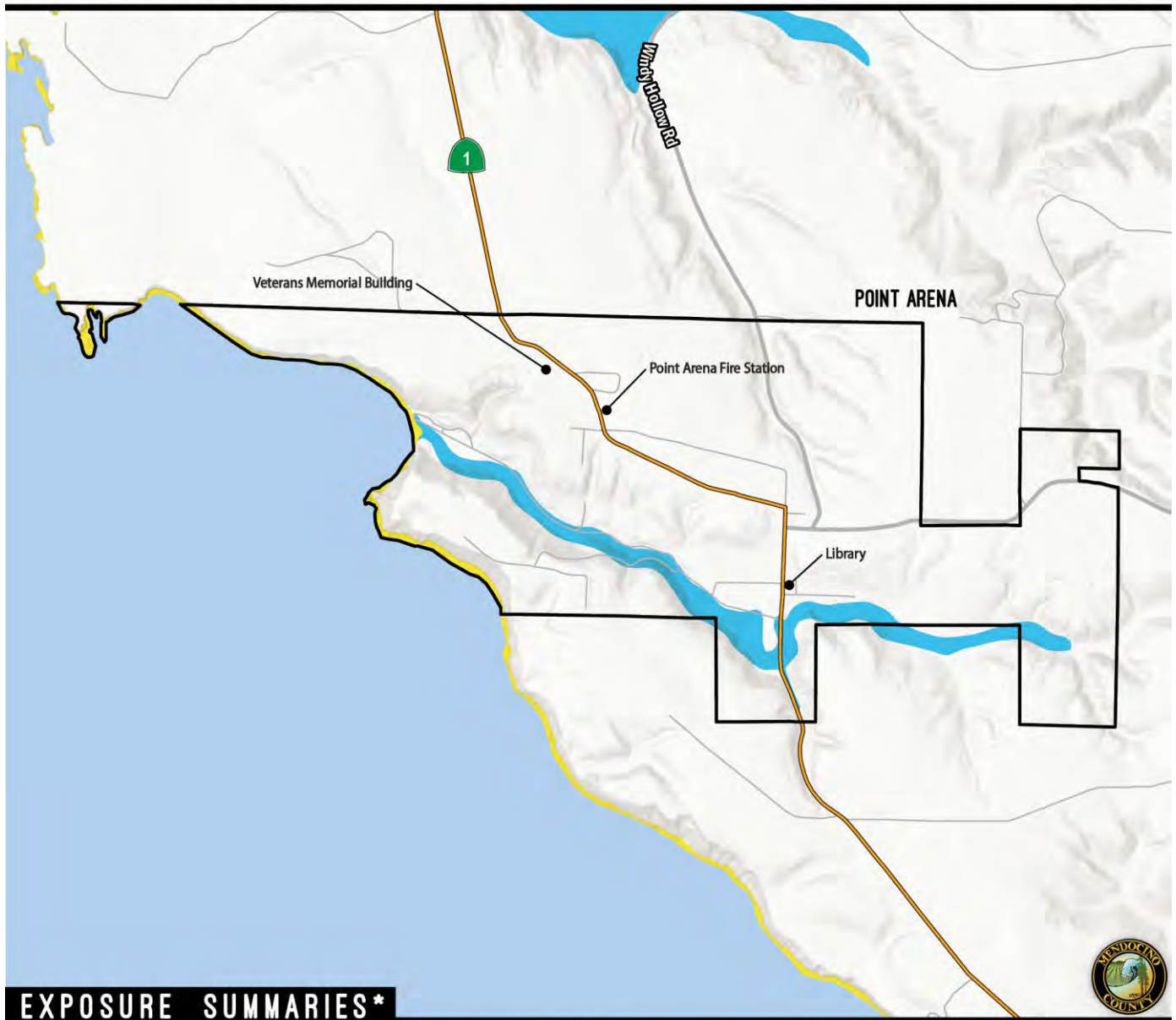


Figure 3-5: City of Point Arena M7.8 N. San Andreas -N. Coast – Peninsula – SC MTN Snapshot



FEMA FLOOD RISK EXPOSURE SNAPSHOT

POINT ARENA



EXPOSURE SUMMARIES*

POPULATION COUNT IN HAZARD AREA		PARCEL COUNT IN HAZARD AREA		PARCEL VALUE IN HAZARD AREA		CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA		
Count	Exp. Rate**	Count	Exp. Rate**	Sum of Improvement Value	Exp. Rate**	Infrastructure Category	Count	Exp. Rate**
36	8%	11	6%	\$619,454	2%	Essential Facilities	0	0%
Count Includes: 100 + + 500		Count Includes: 100 + + 500		Sum of Content Value	2%	High Potential Loss	4	13%
				\$321,621		Transportation & Lifeline	0	0%
				Count Includes: 100 + + 500				Sum of Transportation & Lifeline Linear Mileage
								2 13%

MAP LEGEND

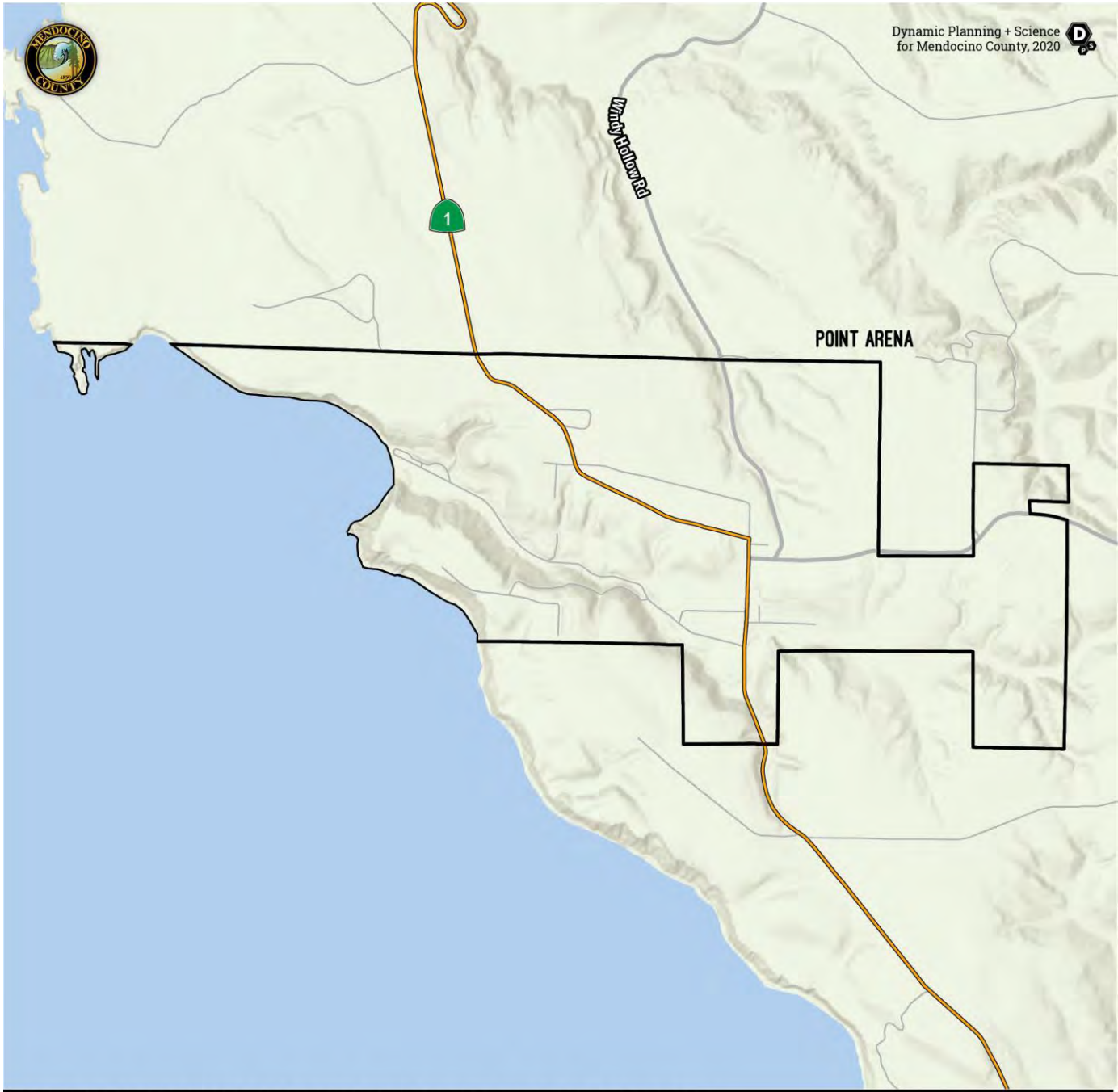
100-YR
100-YR COASTAL 100-YR FLOODWAY
500-YR

*Exposure summaries include 100YR, 500YR and 100YR Coastal Zones. Hazard data source: FEMA.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

Dynamic Planning + Science
for Mendocino County, 2020

Figure 3-6: City of Point Arena FEMA Flood Risk Exposure Snapshot



AVERAGE ANNUAL PRECIPITATION (1981-2010, INCHES) POINT ARENA

*Data sources: USDA - 1981-2010 Annual Average Precipitation by State.

MAP LEGEND

34	45	60	70	85
44	59	69	84	97
INCHES				

Figure 3-7: City of Point Arena Average Annual Precipitation (1981-2010. Inches)

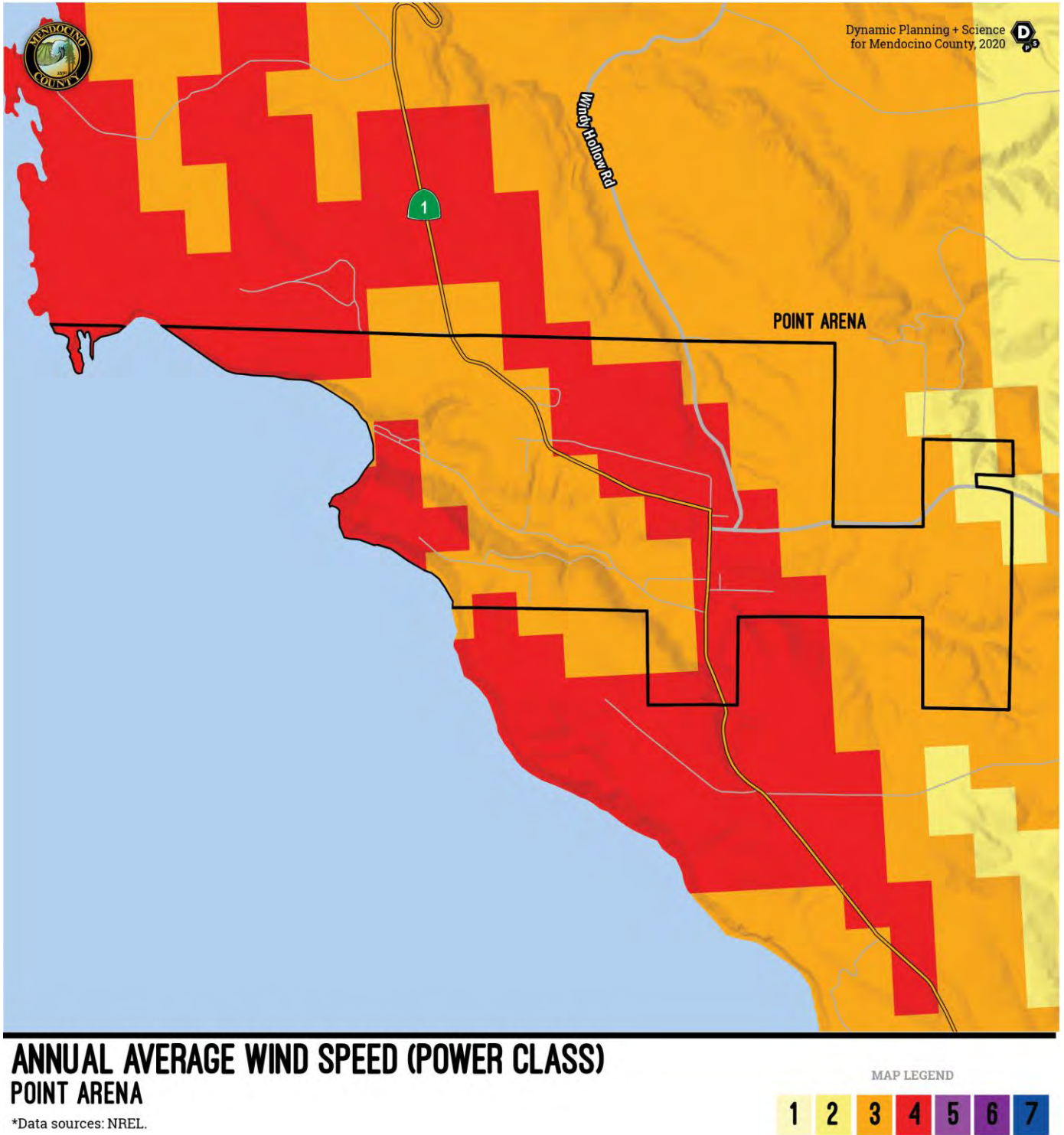


Figure 3-8: City of Point Arena Annual Average Wind Speed (Power Class)

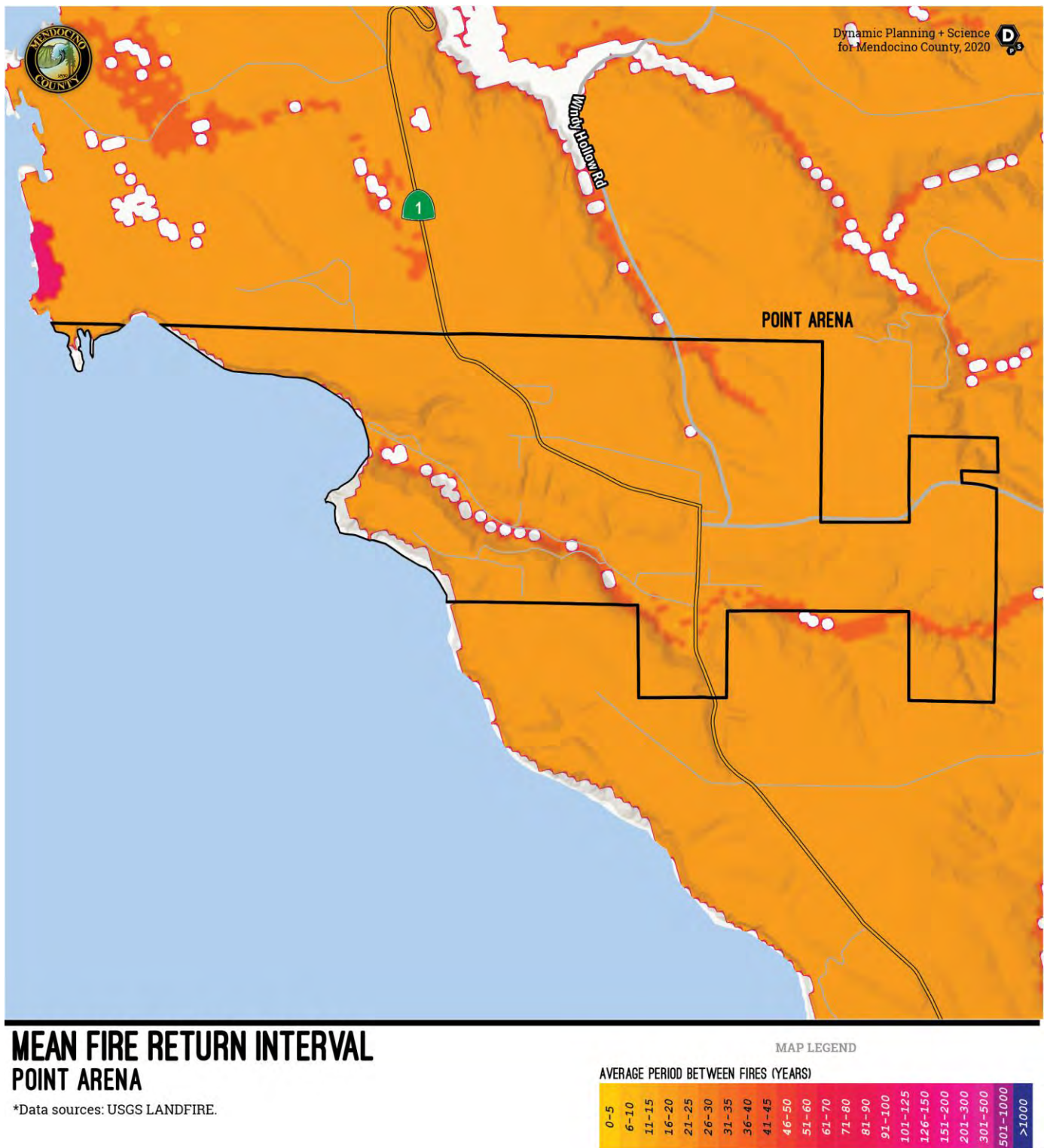
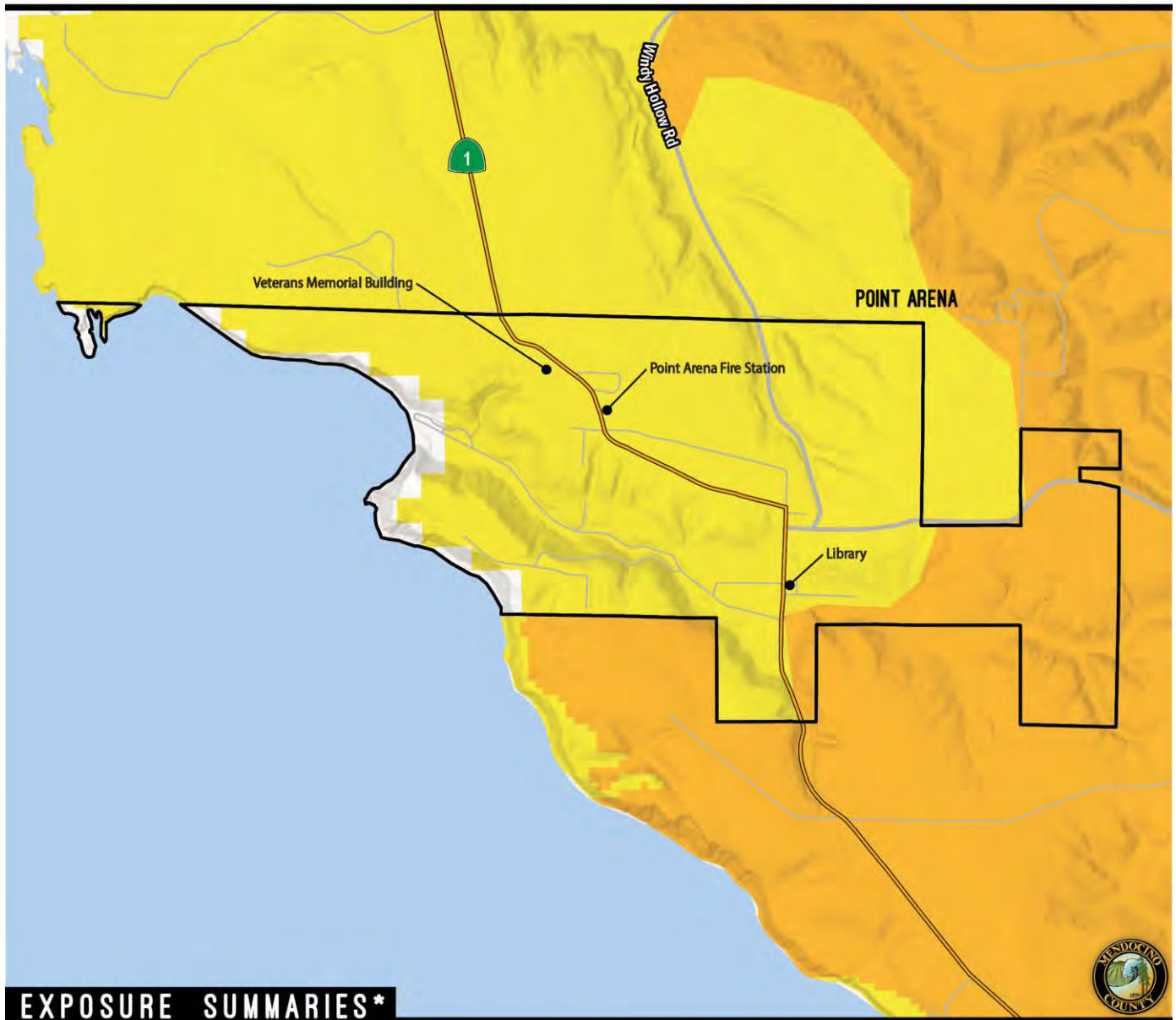


Figure 3-9: City of Point Arena Mean Fire Return Interval



WILDFIRE RISK EXPOSURE SNAPSHOT

POINT ARENA



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
95	20%
Count Includes:	H VH

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
5	3%
Count Includes:	H VH

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$211,026	1%
Sum of Content Value	Exp. Rate**
\$117,407	1%
Count Includes:	H VH

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	0	0%	H VH
High Potential Loss	0	0%	
Transportation & Lifeline	2	100%	1 7%

MAP LEGEND

MODERATE
HIGH (H)
VERY HIGH (VH)

*Exposure summaries include high and very high wildfire classes. Hazard data source: Cal Fire, CPUC.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 3-10: City of Point Arena Wildfire Risk Exposure Snapshot



3.4.3.3 Past and Future Development

The City of Point Arena is a general law city that crafts its own development regulations and is subject to State law. Future development is subject to compliance with State of California planning, zoning, subdivision, and architecture laws.

The GP is designed to help the City address issues related to land use, circulation (traffic), housing, open space, conservation, noise, and safety. The Land Use portion of the plan helps guide the City in determining the location of future development(s), including possible future annexation. In addition to the GP, the City has other plans that guide development in specific areas, including specific plans, policy plans, and master plans. These plans help to shape future development and dictate the City's Sphere of Influence (SOI). One of the central functions in these planning documents is to decrease risk of impact from natural hazards.

While growth has occurred in hazard areas in the past, increasing hazard risks to some degree, those risks are also decreased by development standards and plan requirements that serve to mitigate or avoid those risks. Problematic development generally occurred many decades ago, and thus much of this HMP focuses on retrofits or replacements from that older construction.

City of Point Arena is required to update building codes to meet the minimum standards to those required in the California Building Code last updated in 2019. California Building Codes provide some of the safest construction standards in the world and are meant to reduce risk to occupants from high wind, seismic activity, landslides, flood, wildfire, and other natural hazards. In addition to California minimum development standards, all jurisdictions belong to the NFIP, as such, all development must meet minimum flood protection standards set forth by FEMA. See Section 4.3.5 of Volume 1 for more information about past and future development in Mendocino County.

As the General Plan is updated and incorporates information from this HMP, City of Point Arena staff are continually improving hazard information through these hazard mitigation plan updates. With this 2020 update, improved online mapping about natural hazards available on RAMP will inform those responsible for future development to make better decisions where and how future development occurs.

City of Point Arena reviewed its general plans under the capability assessments undertaken for this hazard mitigation plan in Section 3.5.1. Deficiencies revealed by these reviews are identified as mitigation actions to decrease risks to move beyond past trends.



The City's municipal codes includes regulations to mitigate the impact of hazards on new and existing development, including:

- Drainage and stormwater retention requirements,
- Steep slope restrictions for new development,
- Waterbody buffer requirements,
- Floodplain management regulations,
- Zoning that prevents development in hazardous areas of the community such as floodplains, landslide areas, the wildland-urban interface (WUI), or other known hazard areas, and
- Building codes that include the most up-to-date California Fire Code, seismic standards, and many other provisions crafted to protect new construction from hazard events.

Even in the event that limited development did occur within a hazard area, the municipal code should ensure impacts from a hazard event are mitigated and losses are minimal. If development does occur in hazard areas, evacuation and emergency planning should take into consideration the anticipated local impacts of the hazard event, including potential interrupted services or the elimination of access.

The anticipated growth in the City will not cause significant change in vulnerability to the City for identified priority hazards.

3.4.3.3.1 National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. FEMA has prepared a detailed Flood Insurance Study (FIS) for Mendocino County and municipalities. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood and the 0.2-percent annual chance flood (the 500-YR flood). Base flood elevations and the boundaries of the 100- and 500-YR floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principle tool for identifying the extent and location of the flood hazard. FIRMs are the most detailed and consistent data source available, and for many communities they represent the minimum area of oversight under their floodplain management program. See Section 4 of Volume 1 for general information on the NFIP.

The City of Point Arena has participated in the NFIP since 1984. City of Point Arena is currently in good standing with the provisions of the NFIP. Compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA. Maintaining compliance under the NFIP is an important component of flood risk reduction. See Table 3-5 for more information on the City's policies and historic flood insurance claims.



Table 3-5: NFIP Status Table

NFIP Status	Participating since 08/03/84
Policies in Force	3
Policies in SFHA	1
Policies in non-SFHA	2
Total Claims Paid	2
Paid Losses	\$0
Repetitive Loss Properties	0
Severe Repetitive Loss Properties	0
Repetitive Loss Payment by NFIP on Building	N/D
Repetitive Loss Payment by NFIP on Contents	N/D

See Volume 1, Section 4.5 for more information on the NFIP.

3.4.3.4 Identify Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping and static snapshot maps. Problem statements focused on the impact, victim, or threat that the hazard could create in the jurisdiction, as described in Figure 3-11. Identifying common issues and weaknesses through these problem statements assisted the Planning Committee in understanding the realm of resources needed for mitigation. Jurisdiction problem statements are listed in Table 3-6.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 3-11 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 3-6 and Table 3-11.



IMPACT

Casualties
Property Damage
Business Interruption
Financial Loss
Environmental Contamination



VICTIM

School Children in Hazard High Hazard Areas
Care Facilities in High Hazard Area
Vulnerable Population Exposed to hazards



THREAT

Increased Fuels due to drought
Hotter, drier climates
More Intense Storms
Impervious surfaces = greater runoff
Increases of Invasive Species

Figure 3-11: Guidance for Problem Statements

Table 3-6: Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-CC-PA-98	Climate Change	Impact	PRV - Prevention , PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	City of Point Arena	Extreme rain events, one of the biggest issues for the City, are projected to worsen along with flood and wildfire.	
ps-EQ-PA-109	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	WWTP and water treatment are both blocked from Arena Creek by berming that could be compromised during earthquake. Could cause creek pollution.	ma-AH-PA-211
ps-EQ-PA-110	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	City Firehouse is unreinforced masonry, currently houses public works vehicles, other storage. Needs significant repairs to be utilized for public use. Recent study identifies recommended repairs.	ma-EQ-PA-41
ps-EQ-PA-111	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	WWTP and water treatment facilities have not been inspected for seismic structural or non-structural repairs in many years.	ma-AH-PA-211



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Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-PA-112	Earthquake	Victim	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	The City Hall (which includes law enforcement, EOP) has not had recent seismic upgrades or even assessment in many years. There is an upcoming assessment of general repairs needed for facility that will capture many hazard-related upgrades needed.	ma-EQ-PA-41
ps-EQ-PA-113	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	A large water tank is located immediately upstream of town and thus could create significant damage if fails during EQ	ma-EQ-PA-212
ps-EW-PA-99	Extreme Weather	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , ES - Emergency Services , SP - Structural Projects	City of Point Arena	Primary impact is from severe rainfall for Point Arena, not really any other severe weather issues.	ma-AH-PA-211
ps-EW-PA-100	Extreme Weather	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	City of Point Arena	Arena Cove experiences localized flooding from severe rain events, can be compounded by high tide and coastal erosion.	ma-AH-PA-211
ps-EW-PA-101	Extreme Weather	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	City of Point Arena	Extreme rain events can create landslides that block access to the wastewater treatment plant.	ma-AH-PA-211
ps-EW-PA-102	Extreme Weather	Impact	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	Mill Road experiences significant sheet flow from north to south, through homeowners' properties and into Arena Creek. The City has undertaken design work to address this issue and needs funding to complete project.	ma-EW-PA-213
ps-EW-PA-103	Extreme Weather	Threat	NRP - Natural Resource Protection , SP - Structural Projects	City of Point Arena	Historic cattle grazing and over-vegetation along Arena Creek create flooding on Port Rd, important economically to access Arena Cove.	ma-AH-PA-214
ps-FL-PA-91	Flood	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	City of Point Arena	Arena Cove experiences localized flooding from severe rain events, including parking lot, and can be compounded by high tide and coastal erosion.	



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-FL-PA-92	Flood	Impact	PPRO - Property Protection , SP - Structural Projects	City of Point Arena	WWTP and pump station are in close proximity to Arena Creek and subject to flooding, loss of power which could impede water service.	ma-AH-PA-211
ps-FL-PA-93	Flood	Impact	NRP - Natural Resource Protection , SP - Structural Projects	City of Point Arena	Historic cattle grazing and over-vegetation along Arena Creek create flooding on Port Rd, important economically to access Arena Cove.	ma-AH-PA-214
ps-FL-PA-105	Flood	Victim	PRV - Prevention , PE&A - Public Education & Awareness , ES - Emergency Services	City of Point Arena	Hwy 1 north of town regularly floods for periods of up to three days, blocking northerly access to Ft Bragg hospital	
ps-PN-PA-94	Pandemic	Victim	PRV - Prevention , ES - Emergency Services , SP - Structural Projects	City of Point Arena	City EOP facility (City Hall) does not have proper social distancing facilities needs (plastic barriers for public interaction on desks, adequate ventilation).	ma-PN-PA-217
ps-PN-PA-95	Pandemic	Victim	PRV - Prevention , SP - Structural Projects	City of Point Arena	Need for additional sheltering locations in event of pandemic social distancing needs paired with another hazard event (flood, wildfire, earthquake)	ma-PN-PA-218
ps-PN-PA-96	Pandemic	Victim	PRV - Prevention , ES - Emergency Services , SP - Structural Projects	City of Point Arena	Utilities and critical facilities may not have adequate fresh air/ventilation to be appropriate for essential work during pandemic.	ma-PN-PA-219
ps-PN-PA-97	Pandemic	Threat	PRV - Prevention , PPRO - Property Protection , ES - Emergency Services , SP - Structural Projects	City of Point Arena	Community center/ evacuation center may not have adequate staffing space, structural barriers, or ventilation to be used safely during pandemic.	ma-PN-PA-220
ps-WF-PA-104	Wildfire	Impact	PRV - Prevention , PPRO - Property Protection , NRP - Natural Resource Protection	City of Point Arena	BLM land abuts northwest end of town (west of Hwy 1) with significant dead trees. A fire is in line with prevailing winds to bring fire towards town.	ma-WF-PA-35, ma-WF-PA-43



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-WF-PA-106	Wildfire	Victim	PRV - Prevention , PPRO - Property Protection , SP - Structural Projects	City of Point Arena	City Hall is close to the concerning wildfire area northwest of City.	
ps-WF-PA-107	Wildfire	Victim	PRV - Prevention , ES - Emergency Services	City of Point Arena	Wildfires cause PSPS.	ma-AH-PA-286
ps-WF-PA-108	Wildfire	Victim	PRV - Prevention , PPRO - Property Protection , SP - Structural Projects	City of Point Arena	Because PG&E failed to designate a community resource center within Point Area at the Veteran's Bldg, the City does not have financial support to provide needed sheltering during PSPS events.	ma-AH-PA-286

3.4.3.5 Mitigation Action Support Tool (MAST)

As a living document, hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for participating jurisdictions. The Mitigation Action Support Tool (MAST) is accessible through <https://mitigatehazards.com/mendocino-county/>.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdictions and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Participating jurisdictions can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction's ability to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.



3.5 Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section (a.k.a. problem statements) with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success.

3.5.1 Capabilities Assessment

This section examines the planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards.

Capabilities assessments include considerations of a community's adaptive capacity for climate change, as outlined in Cal OES' 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region's existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity. (Cal. Adaptation Planning Guide, 2020, p. 94)

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (Column 1, Status)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (Column 2, Current Mitigation Use)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (Column 3, Future Opportunity)

The capabilities assessment is easily-digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.

For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Volume 1. Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities as well.



3.5.1.1 Planning and Regulatory Capabilities

Table 3-7: Planning and Regulatory Mitigation Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Construction and Future Development Regulations				
Building Codes				2019 California Building Code.
BCEGS Rating				
Public Protection (ISO Class)				Class 8. (Mendocino County Community Wildfire Protection Plan, 2005).
Hazard Related Development Standards				Floodplain Management (Ch.16.10.170-200, 220).
Zoning Ordinance				
Hazard-Specific Ordinance				Health and Safety (Ch. 8.20); Fire Regulations (8.20.010).
Growth Management Ordinance				
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				
Erosion/Sediment Control Program				
Hazard-Related Public Outreach Program				
Stormwater Management Program (Annual Inspections)				
Seismic Safety Program (Non-structural)				
Earthquake Modernization Plan (Building Safety)				
Hazard Plans				
General Plan Safety Element				Adopted in 1995, updated in 2006.
Community Wildfire Protection Plan (CWPP)				2016 County-wide CWPP in existence.



Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Floodplain Management Plan				
Stormwater Management Plan				
Emergency Operations Plan				Mendocino County Operational Area Emergency Operations Plan (2016).
Climate Action Plan				
Ground Water Management Planning / Plans				Ukiah Valley is the only groundwater basin required to have a groundwater sustainability plan in the County.
National Flood Protection Program (NFIP)				
Floodplain Management Regulations				Floodplain Management (Ch.16.10); Updated in 2017.
Flood Insurance Education and Technical Assist.				
Flood Hazard Mapping / Re-Mapping				
Community Rating System (CRS)				



3.5.1.2 Administrative and Technical Capabilities

Table 3-8: Administrative and Technical Capabilities

CAPABILITY ASSESSMENT LEGEND				
Status	Current Mitigation Use		Future Opportunity	
Currently in use or present.	Used widely for mitigation.		Opportunity to expand and integrate.	
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.		Limited opportunity to expand and integrate.	
(No) Not present or available.	Not used in mitigation planning.		No opportunity to expand or integrate.	

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Community Planning and Development Services				
Community Planner				The City has one staff dedicated to planning.
Civil Engineer				No on staff, regular relationship with a civil engineer through SHN.
Building Code Official (Full time or Augmented)				The City's building procedures are handled by the County of Mendocino Planning & Building Department.
Floodplain Administrator				
Fire Marshal				Mike Suddith of Redwood Coast Fire Protection District.
Dedicated Public Outreach Personnel				
GIS Specialist and Capability				Utilize County GIS expertise
Emergency Manager				The City Managers for Fort Bragg, Point Arena, Ukiah, and Willits are members of the Mendocino County Disaster Council.
Full-Time Building Official				
Grant Manager, Writer, or Specialist				
Other	N/A	N/A	N/A	
Warning Systems/Services				
General				The City uses MendoAlert for all general emergencies.
Flood				
Wildfire				
Geological Hazards				



3.5.1.3 Financial Capabilities

Table 3-9: Fiscal Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				
Utilities Fees				
Benefit assessments				
System Development Fee				
General Obligation Bonds to Incur Debt				
Special Tax Bonds to Incur Debt				
Withheld Spending in Hazard-Prone Areas				
Stormwater Service Fees				
Capital Improvement Project Funding				



3.5.1.4 Education and Outreach

Table 3-10: Education / Outreach Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				
Dedicated Social Media				use Facebook, Twitter and an email list for emergencies or impending issues.
Hazard Info. Avail. at Library/ Planning Desk				
Annual Public Safety Events				
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				
Fire Safe Councils				The Mendocino County Fire Safe Council assists local Councils a variety of needs, including the Caspar Community and Island Cove Estates (south of Point Arena).
Resource Conservation Districts				The Mendocino County Resource Conservation District has implemented a wide range of programs across the County.
Other	N/A	N/A	N/A	



3.5.2 Mitigation Actions

Mitigation actions were developed based upon the jurisdiction's priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Section 5.5.1 of Volume 1. Table 3-11 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon the Planning Committee consensus.

Each participating jurisdiction, including the City of Point Arena, considered ongoing relevancy of mitigation actions from the existing MJHMP and retained or removed such actions while adding new relevant actions as well. Mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the previous HMP effort were not included because they were an inherent part of the HMP update process or were not detailed enough for implementation at a local Jurisdiction level. City of Point Arena has made significant changes to other mitigation actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices. Volume 1, Section 5.5.2 provides a record of County-wide mitigation actions, the status, and additional notes for each action.

Table 3-11 lists each mitigation action for City of Point Arena. Each participating jurisdiction developed unique mitigation actions, targeted at their own unique priorities and vulnerabilities. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST. The detail in Table 3-11 meets the regulatory requirements of FEMA and DMA 2000.

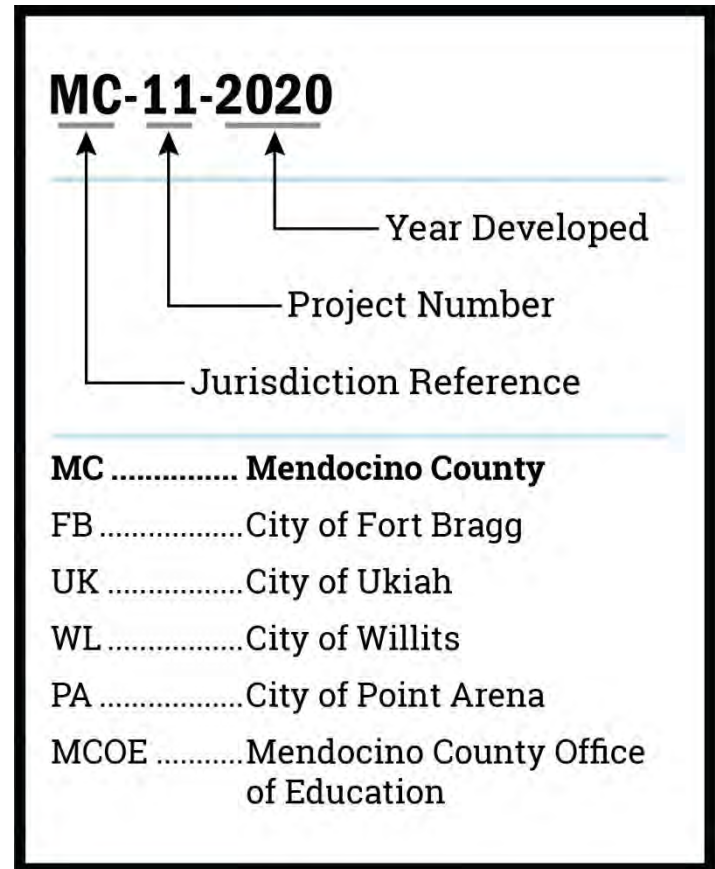


Figure 3-12: Mitigation Action Key



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Table 3-11: City of Point Arena Mitigation Actions

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-AH-PA-211	All Hazard	PPRO - Property Protection	Pending	2020	City of Point Arena	Assess and retrofit as needed wastewater treatment plan, including for berming that separates wastewater treatment facility from Arena Creek and could be subject to breach in earthquake or with extreme weather events and for other necessary seismic retrofits.	City Admin	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Planning	HMGP / BRIC CDBG DRI	High	ps-EQ-PA-109, ps-EW-PA-100, ps-EW-PA-101, ps-EQ-PA-111, ps-EW-PA-99, ps-FL-PA-92
ma-AH-PA-214	All Hazard	NRP - Natural Resource Protection	Pending	2020	City of Point Arena	Conduct rechannelization and habitat restoration for Arena Creek along Port Road, where the stream channel has been damaged from historic grazing causing flooding and blocking egress from Arena Cove	City staff, consultant support	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	5-10 Years	Planning	HMGP / BRIC	High	ps-EW-PA-103, ps-FL-PA-93
ma-AH-PA-286	All Hazard	ES - Emergency Services	Pending	2020	City of Point Arena	Construct backup generators at critical facilities (fire stations, hospital) and sheltering locations to respond to hazard events in loss of power.	City Admin	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-WF-PA-108, ps-WF-PA-107
ma-EQ-PA-41	Earthquake	PPRO - Property Protection	Pending	2014	City of Point Arena	Seismically retrofit or replace public works and/or emergency response facilities, in particular City Firehouse and City Hall/Law Enforcement/EOC, that are necessary during and/or immediately after a disaster or emergency	City staff, consultant support	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	Extreme	ps-EQ-PA-110, ps-EQ-PA-112
ma-EQ-PA-212	Earthquake	PPRO - Property Protection	Pending	2020	City of Point Arena	Assess need for and conduct as needed seismic retrofitting of large water tank upstream of town	City Staff, consultant support	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-PA-113



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EW-PA-213	Extreme Weather	PPRO - Property Protection	Pending	2020	City of Point Arena	Implement Mill Creek rain/ flooding projects identified in recent design study	City staff, consultant support	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	Extreme	ps-EW-PA-102
ma-FL-PA-39	Flood	SP - Structural Projects	Pending	2014	City of Point Arena	Retrofit wastewater and potable water facilities that subject to flooding. Retrofitting activities may include elevating vulnerable equipment, electrical controls, and other equipment, fastening and sealing manhole covers to prevent floodwater infiltration, and protecting wells and other potable water from infiltration and flood damage by raising controls and well pipes.	City Admin	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 years, ongoing	Project	HMGP / BRIC	High	
ma-PN-PA-217	Pandemic	ES - Emergency Services	Pending	2020	City of Point Arena	Install additional barriers and proper ventilation in Emergency Operations Center (EOC, City Hall) to allow for operation of EOC during pandemic and hazard event		High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-PA-94
ma-PN-PA-218	Pandemic	ES - Emergency Services	Ongoing	2020	City of Point Arena	Develop alternative sheltering/ evacuation locations for distancing required during pandemic and other hazard event	City admin, local NGO and County coord	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	High	ps-PN-PA-95
ma-PN-PA-219	Pandemic	SP - Structural Projects	Pending	2020	City of Point Arena	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic, including adequate ventilation and physical barriers	City staff	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-PA-96



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-PN-PA-220	Pandemic	ES - Emergency Services	Pending	2020	City of Point Arena	Institute necessary structural improvements to evacuation centers/ sheltering locations to allow for proper ventilation, space for staff, and structural barriers to be used during pandemic and hazard event.	City staff, local NGO and County coord	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-PA-97
ma-WF-PA-43	Wildfire	PRV - Prevention	Ongoing	2008	City of Point Arena	Develop a fire road access/roadside vegetation removal program or fuel break program in which live native vegetation should be thinned and/or moved and dead vegetation should be removed within a 50-foot distance of each side of a road. Roads to be included in this program include those located in high or very high areas of this MHMP or defined by Mendocino County Fire Safe Council.	City Admin, consultant support	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , AFG , FP&S	Medium	ps-WF-PA-104



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MENDOCINO COUNTY

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Willits

JURISDICTIONAL ANNEX

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Mendocino County

Multi-Jurisdiction Hazard Mitigation Plan

CITY OF WILLITS (WL)

Municipal Participating Jurisdiction Annex

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Section 4. City of Willits

4.1 Purpose

This Annex details the hazard mitigation planning elements specific to the City of Willits. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the City of Willits. This Annex provides additional information specific to the City of Willits, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Dusty Duley, Community Development Director
City of Willits
111 E. Commercial Street,
Willits, CA 95490
Telephone: (707) 459-7124
e-mail Address: dduley@cityofwillits.org

Alternate Point of Contact

Cathy Moorhead, Deputy City Manager/City Clerk
City of Willits
111 E. Commercial Street,
Willits, CA 95490
Telephone: 707-459-7121
e-mail Address: cmoorhead@cityofwillits.org

4.2 Planning Methodology

The City of Willits followed the planning process detailed in Volume 1, Section 3, including participating in the County Hazard Mitigation Planning Committee (HMPC) and Steering Committee and formulating their own internal planning team to support the broader planning process. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 4-1.

Table 4-1: Planning Committee Members

Planning Committee Members	Department
Dusty Duley	Community Development
Cathy Moorhead	City Clerk
Gregory Allen	City of Willits Police
Stephanie Garrabrant-Sierra	City Manager
Scott Herman	Water/Wastewater Utilities
Kenan O'Shea	Public Works
Chris Wilkes	Little Lake Fire
Davey Bowles	Community Development

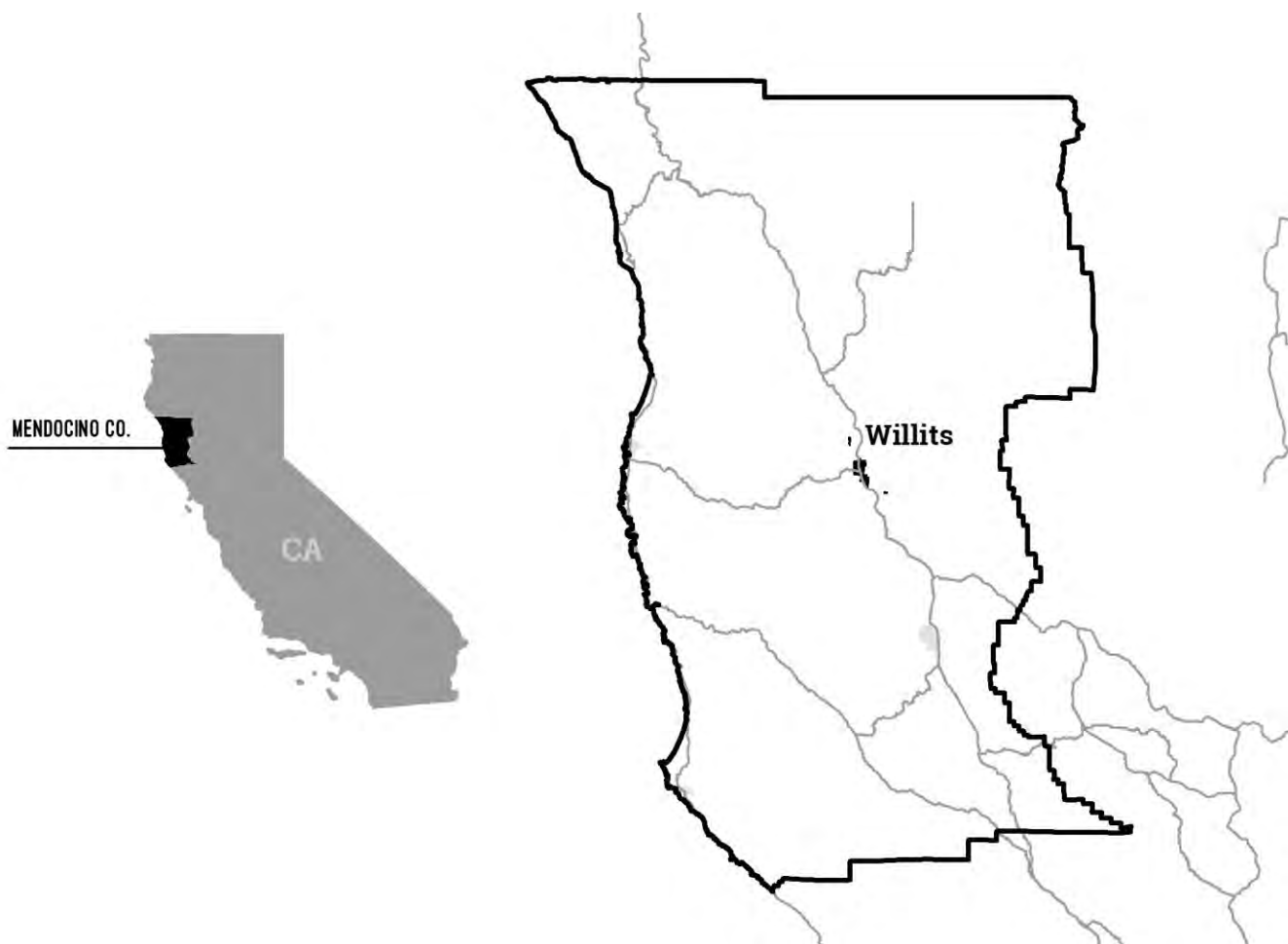


Figure 4-1: City of Willits Location

4.3 What's New

The City of Willits has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted.

The City reevaluated previous mitigation actions, including considerations of progress made on mitigation efforts, and retained them as pending or ongoing; no tables for completed or cancelled mitigation actions are included. Ongoing and pending mitigation actions are described in Table 4-11.

4.3.1 Mitigation Successes

The City of Willits has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted. The City has instituted several mitigation actions from the existing MJHMP. See Vol. 1 for a listing of historic mitigation actions. Listed below is a success story where the City of Willits successfully implemented a hazard mitigation project or planning process.

**SUCCESS STORY: *Little Lake Valley Groundwater Management Plan***

The City of Willits adopted the Little Lake Valley Groundwater Management Plan in August of 2020. The Little Lake Valley Groundwater Management Plan describes existing local groundwater management policies and recommends a range of actions that the City of Willits may take within the boundaries of its legal authority, to monitor, analyze, and interpret characteristics of the Little Lake Valley groundwater basin (Basin). The plan intended to identify and develop potential, effective management practices for utilizing and protecting valuable groundwater resources within the Basin. The plan is limited to the jurisdictional boundaries of the City of Willits and seeks to improve the understanding and sustainable management of groundwater resources in the Little Lake Valley.

This Little Lake Valley Groundwater Management Plan (GWMP) represents the initial effort on the part of the City of Willits (City) to develop a plan for sustainable management of groundwater in the Little Lake Valley. This GWMP seeks to provide a framework for advancing the level of understanding and coordinating the management of groundwater resources in the Little Lake Valley. This voluntary, non-regulatory GWMP identifies a range of local groundwater management actions to sustain groundwater resources into the future. This GWMP is intended to provide guidance for groundwater management throughout the Little Lake Valley; however, the City recognizes that City's authority to take any recommended actions is only valid within the jurisdictional boundaries of the City of Willits. The purpose of this GWMP is to provide a framework for monitoring, analyzing, and interpreting Basin characteristics and identifying for implementation effective management practices to utilize and protect valuable groundwater resources within the Basin. The GWMP serves to improve the understanding and management of the groundwater resources in the Little Lake Valley, providing preliminary guidelines and recommendations for the City of Willits and other water users to implement effective and sustainable groundwater management programs. The GWMP will provide guidance on managing the groundwater resources of the City of Willits and documenting objectives for proper management of the Basin, where mismanagement can impact residents and business owners within the City Limits along with those that live and/or work outside of the City Limits in the valley and surrounding hills. The GWMP documents groundwater conditions, management goals and objectives, and proposed implementation activities to achieve the GWMP purpose. In addition, the GWMP will allow for the City of Willits and some other stakeholders within the Basin to be eligible for grant funding administered through the Department of Water Resources (DWR) for projects related to groundwater.

SUCCESS STORY: *Willits Municipal Airport Tree Removal*

The Willits Municipal Airport serves as critical infrastructure during wildfire events and has been used in the past as a temporary base for Federal and State agencies charged with fighting wildfires. Further, the airport is identified as an evacuation meeting point for thousands of residents residing in the Brooktrails community and Sherwood Road area. The City worked with the California Conservation Corps and California Department of Corrections and Rehabilitation inmate crews to remove trees and brush to create defensible space around the Airport and reduce potential wildfire threats to our Airport facilities.



SUCCESS STORY: *Construction of Water Wells and Groundwater Treatment Plant*

In response to the severe drought conditions in 2013-2014, the City was forced to construct a groundwater treatment plant and develop two additional wells to offset surface water usage. The first well, Elias Replacement well, was put into service in late 2014 after being approved by the Division of Drinking Water as a public water source. The groundwater treatment plant was designed to take and treat raw water from three different wells with mixing to dilute constituents of concern and allow for treatment to meet California drinking water standards. The City is in the process of bringing the Long 20 Test well into service and expects that second well will likely be sufficient to meet current surface water offset goals. The City of Willits intends to increase their groundwater pumping capacity to improve water system resiliency and reliability during times of drought or other disaster.

4.4 Risk Assessment

The intent of this section is to profile the City of Willits's hazards and assess the City's vulnerabilities, distinct from that of the County-wide planning area. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. For more information on Risk Assessment Methodologies, see Vol. 1 and Appendix A.

4.4.1 Hazard Screening Criteria

Planning Team members from each participating jurisdiction collectively discussed which hazards should be profiled in the Plan and which should not. The results of that discussion can be found in Table 4-2. Detailed hazard profiles of the most significant County-wide hazards are described in Section 4 of Volume 1. The Planning Team reviewed previously-prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect City of Willits. Table 4-3 provides a crosswalk of hazards identified in Vol. 1 of this plan, City of Willits General Plan, and 2018 California State Hazard Mitigation Plan. The crosswalk was used to develop a preliminary hazards list, providing a framework for the Planning Team members to evaluate which hazards were truly relevant to City of Willits and which ones were not. Section 0 below describes the hazard risk ranking process that was performed by the planning team which prioritized hazards that are specifically relevant to City of Willits.



Table 4-2: County Hazard Prioritization (Vol. 1)

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	High priority county-wide, profiled hazard.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Severe Weather.
Insect Hazards	While hazardous insects exist in Mendocino County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	High priority county-wide, profiled hazard.
Severe Weather, including:	High priority county-wide for heavy wind and heavy rain.
Extreme Heat	Not a priority as extreme weather event, discussed as climate change impact.
Hail	Hail events are rare in Mendocino County and not profiled in this plan.
High Wind	Profiled as part of Severe Weather hazard.
Heavy Rain	Profiled as part of Severe Weather hazard.
Fog	While fog events do occur within Mendocino County, they are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.
Winter Storm / Extreme Cold/ Freeze Events	While winter storms are present in Mendocino County, they were not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	High priority county-wide, profiled hazard (includes erosion and naturally-occurring asbestos).
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.



Table 4-3: Document Review Crosswalk

Hazards	2014 Mendocino County MJHMP	1992 City of Willits General Plan	2009 Mendocino County General Plan	2018 California State HMP
Agricultural Pests	■			■
Climate Change			■	■
Dam Failure	■		■	■
Drought	■	■	■	■
Earthquake	■	■	■	■
Flood	■	■	■	■
Insect Hazards	■			
Landslide		■	■	■
Levee Failure	■*			■
Manmade Hazards			■	■
Pandemic Disease	■			■
Sea Level Rise				■
Severe Weather				■
Soil Hazards	■**	■		
Terrorism & Tech Hazards				■
Tsunami	■		■	■
Volcano				■
Wildfire	■***	■	■	■

* included as part of dam failure

** included naturally occurring asbestos

*** included urban conflagration

4.4.2 Hazard Risk Ranking

The City of Willits's Planning Team used the same hazard prioritization process as the Mendocino County Planning Committee. This process is described in detail in Section 4.3.1 of Vol. 1. Figure 4-4-2 displays the results of the hazard risk ranking exercise that was performed by the Planning Team. The Planning Team chose to assess City of Willits's vulnerability to following hazards:

- Climate Change
- Earthquake
- Pandemic
- Flood
- Extreme Weather
- Wildfire
- Drought

All of these hazards have been profiled in Vol. 1 of this document. The purpose of this annex to specifically address City of Willits's vulnerability to these specifically-identified hazards.



4.4.3 Vulnerability Assessment

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within City of Willits are vulnerable to specific hazard events. The vulnerability assessment considered unique local knowledge of hazards and impacts and a GIS overlaying method for examining such vulnerabilities more in depth. Using these methods, participating jurisdictions estimated vulnerable populations, infrastructure, and potential losses from hazards.

4.4.3.1 Risk Assessment

Each participating jurisdiction developed a risk matrix that assessed the probability and impact of various hazards within the jurisdiction. Figure 4-4-2 is the jurisdiction's risk assessment, which was completed in part using the web based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com. RAMP allows interactive discovery of robust risk, vulnerability, and exposure data developed especially for Mendocino County. RAMP is a mapping platform built specifically for mitigation planning. It displays County/jurisdiction facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. See Vol. 1 for a detailed description of RAMP. The Planning Team used RAMP in meetings and as needed to understand vulnerabilities to City of Willits. Users interactively filter facilities and buildings by natural hazard zones and/or construction characteristics.

4.4.3.2 Snapshot Exposure Maps

The included snapshot maps, displayed below in Figure 4-3 through Figure 4-11 illustrate the City of Willits's vulnerability to specific hazards. Figures include:

- Figure 4-3: City of Willits M7.4 Maacama Garberville Snapshot
- Figure 4-4: City of Willits M7.8 N. San Andreas -N. Coast – Peninsula -SC MTN Snapshot
- Figure 4-5: City of Willits FEMA Flood Risk Exposure Snapshot
- Figure 4-6: City of Willits Average Annual Precipitation (1981-2010. Inches)
- Figure 4-7: City of Willits Annual Average Wind Speed (Power Class)
- Figure 4-8: City of Willits Mean Fire Return Interval
- Figure 4-9: City of Willits Wildfire Risk Exposure Snapshot
- Figure 4-10: City of Willits Landslide Risk Exposure Snapshot. *Landslide is not a profiled hazard for the City of Willits; this figure has been included as a reference.*
- Figure 4-11: Drought Timeline for Upper Eel Watershed

Based on the above risk assessment, the snapshot maps focus on those hazards prioritized by the jurisdiction, other than Figure 4-10: City of Willits Landslide Risk Exposure Snapshot which is only included as a reference. These maps helped the Planning Team understand the exposure of population, parcels, and critical infrastructure to specific hazards. Each map contains an exposure summary that displays the percent of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed to each respective hazard.



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.	Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.	Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in **Vol. 1** of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



Climate Change impacts will be addressed at the end of each hazard section within the 2020 plan update and as a stand alone section for each jurisdiction...



For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above. Pandemic will be profiled for every jurisdiction.

City of Willits Risk Matrix

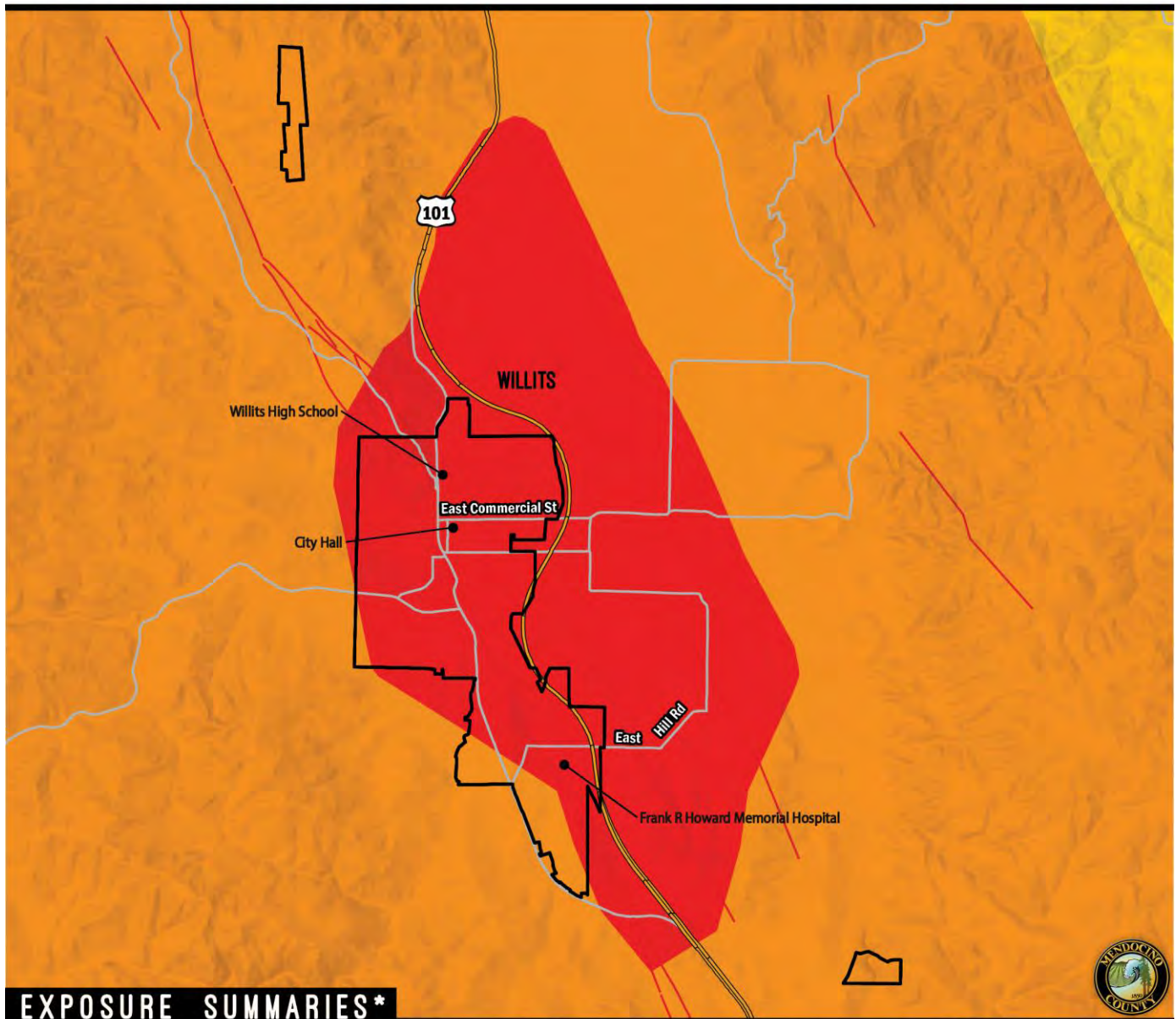
		IMPACT			
		Minor	Limited	Critical	Catastrophic
PROBABILITY	Highly Likely	Medium	DROUGHT	FLOOD EXTREME WEATHER	Extreme WILDFIRE EARTHQUAKE
	Likely	Medium	High	High	Extreme
	Possible	SLOPE FAILURE SOIL HAZARD	DAM FAILURE	High	High
	Unlikely	Low	Low	Medium	Medium

Figure 4-4-2: City of Willits Risk Assessment



M7.4 MAACAMA GARBERVILLE SNAPSHOT

WILLITS



EXPOSURE SUMMARIES*

**POPULATION COUNT
IN HAZARD AREA**

Count	Exp. Rate**
4,844	100%
Count Includes: S+++E	

**PARCEL COUNT
IN HAZARD AREA**

Count	Exp. Rate**
1,535	100%
Count Includes: S+++E	

**PARCEL VALUE
IN HAZARD AREA**

Sum of Improvement Value	Exp. Rate**
\$363,078,093	100%
Count Includes: S+++E	
Sum of Content Value	Exp. Rate**
\$235,484,387	100%
Count Includes: S+++E	

**CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA**

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	7	100%	S+++E
High Potential Loss	153	100%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	14	100%	
			70 100%



*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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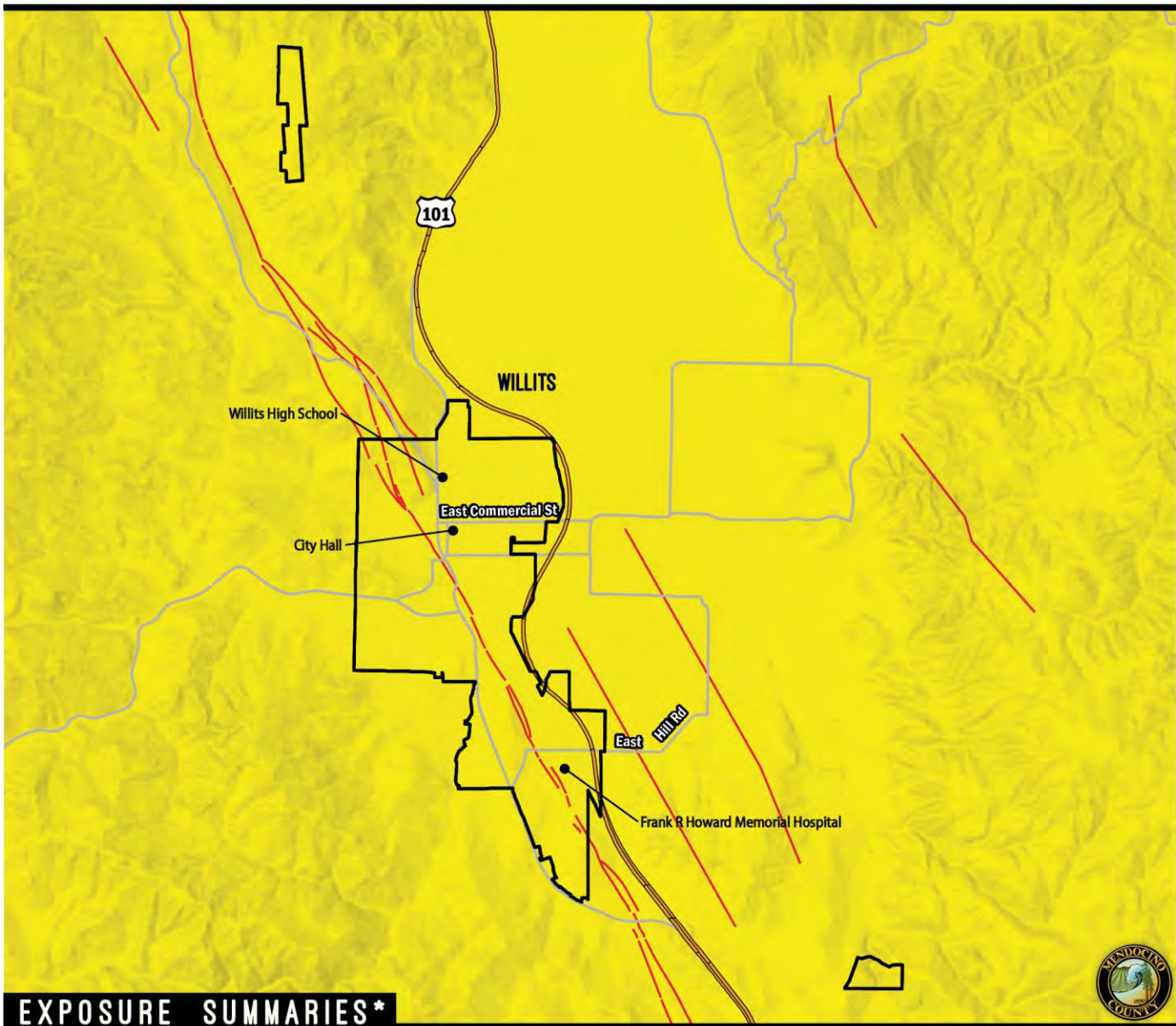


Figure 4-3: City of Willits M7.4 Maacama Garberville Snapshot



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN SNAPSHOT

WILLITS



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count	Exp. Rate**
4,844	100%
Count Includes: S+++E	

PARCEL COUNT
IN HAZARD AREA

Count	Exp. Rate**
1,535	100%
Count Includes: S+++E	

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$363,078,093	100%
Sum of Content Value	Exp. Rate**
\$235,484,387	100%
Count Includes: S+++E	

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	7	100%	S+++E
High Potential Loss	153	100%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	14	100%	70 100%

MAP LEGEND									
III	IV	V	VI	VII	VIII	IX	X		
WEAK	LIGHT	MODERATE	STRONG	VERY	SEVERE	VIOLENT	EXTREME		
MMI				STRONG					

*Exposure summaries include violent, severe, very strong and strong shake zones.
Hazard data source: USGS.

**Exposure Rate - Exposed summary or count as a percentage
of total summary or count within jurisdiction.

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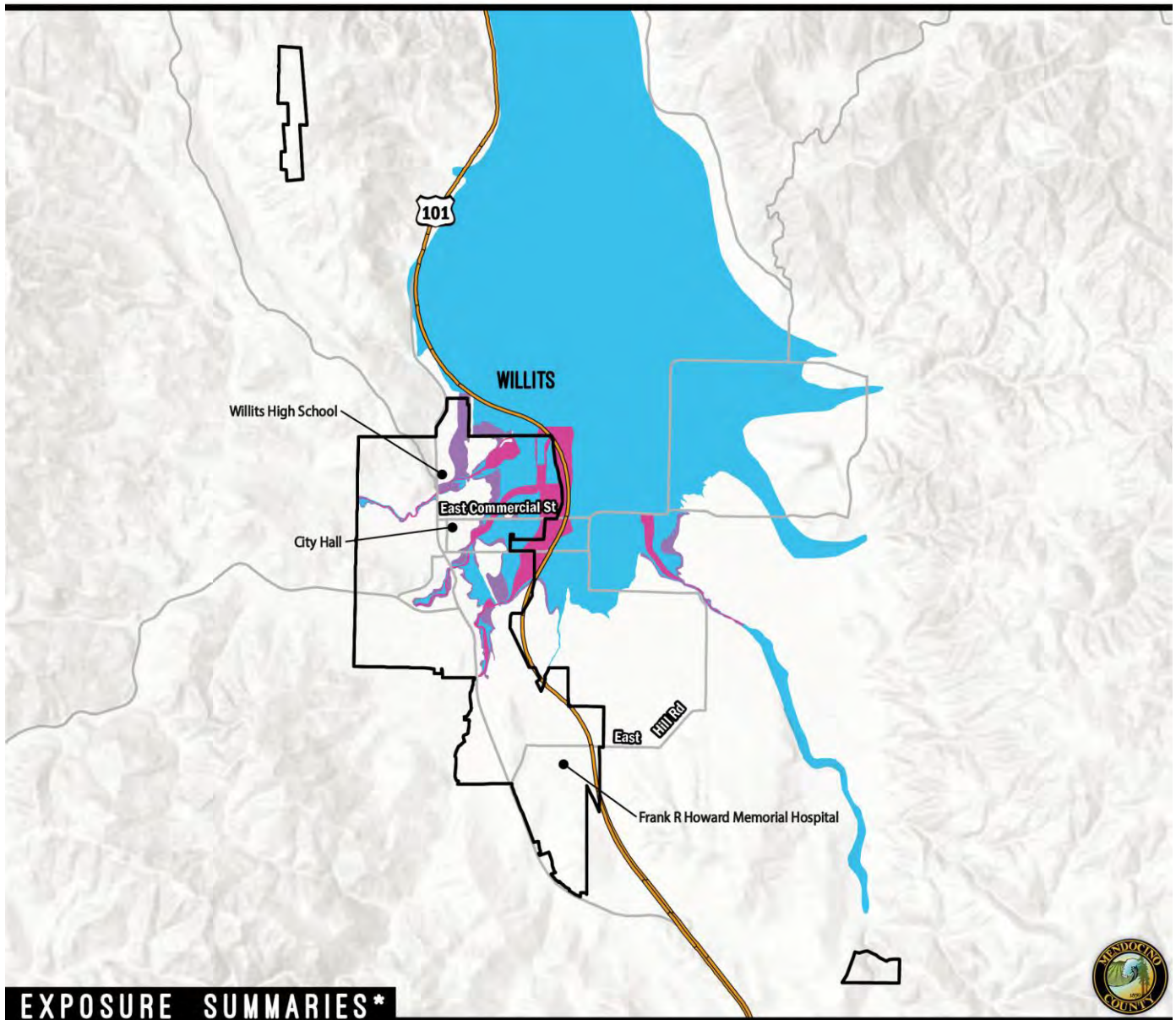


Figure 4-4: City of Willits M7.8 N. San Andreas -N. Coast – Peninsula -SC MTN Snapshot



FEMA FLOOD RISK EXPOSURE SNAPSHOT

WILLITS



EXPOSURE SUMMARIES*

**POPULATION COUNT
IN HAZARD AREA**

Count	Exp. Rate**
962	20%
Count Includes: 100 + + 500	

**PARCEL COUNT
IN HAZARD AREA**

Count	Exp. Rate**
180	12%
Count Includes: 100 + + 500	

**PARCEL VALUE
IN HAZARD AREA**

Sum of Improvement Value	Exp. Rate**
\$35,863,222	10%
Count Includes: 100 + + 500	
Sum of Content Value	Exp. Rate**
\$26,219,283	11%
Count Includes: 100 + + 500	

**CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA**

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	1	14%	100 + + 500
High Potential Loss	54	35%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	6	43%	
			9 13%

MAP LEGEND

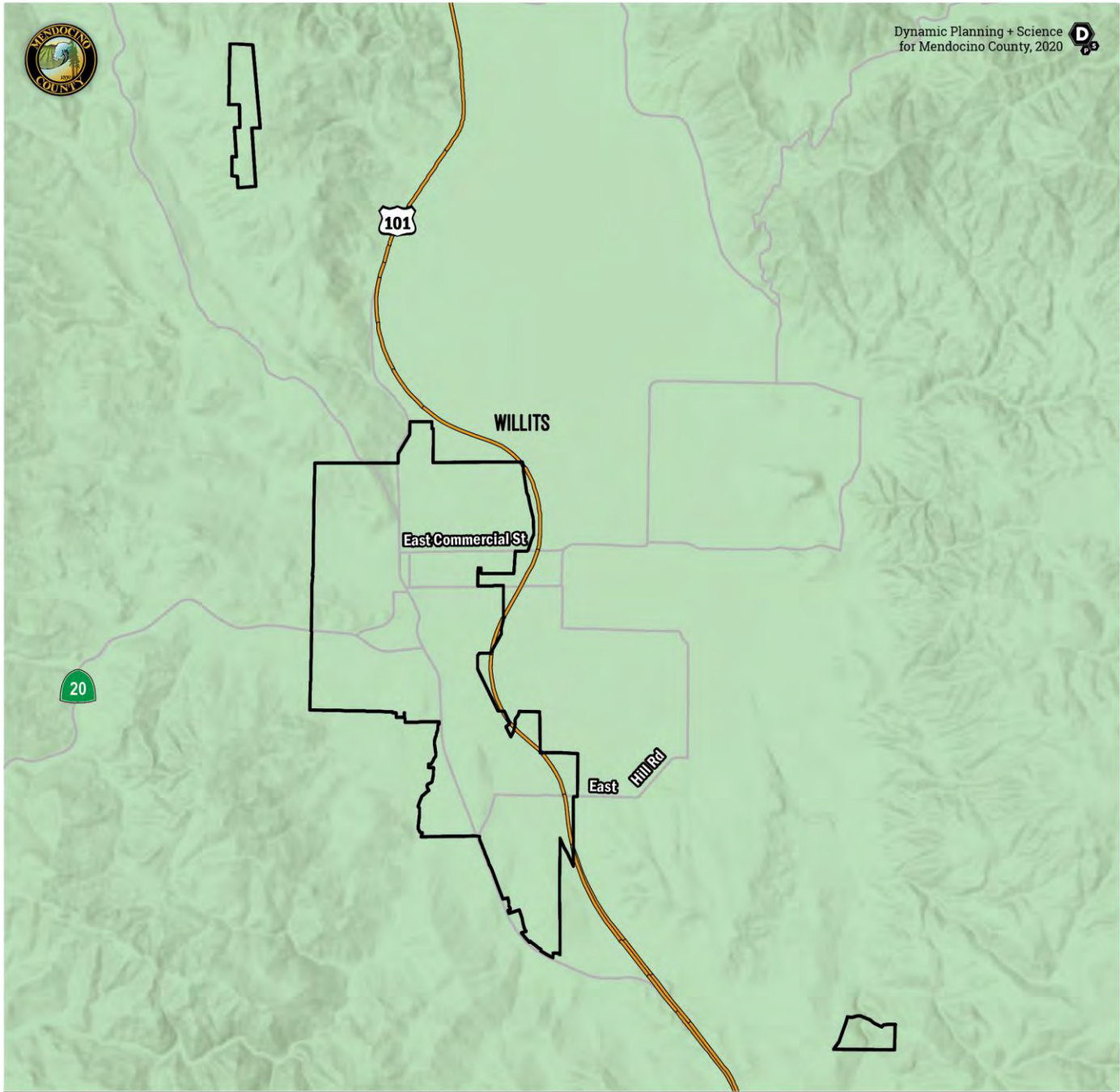
100-YR
100-YR COASTAL 100-YR FLOODWAY
500-YR

*Exposure summaries include 100YR, 500YR and 100YR Coastal Zones. Hazard data source: FEMA.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 4-5: City of Willits FEMA Flood Risk Exposure Snapshot

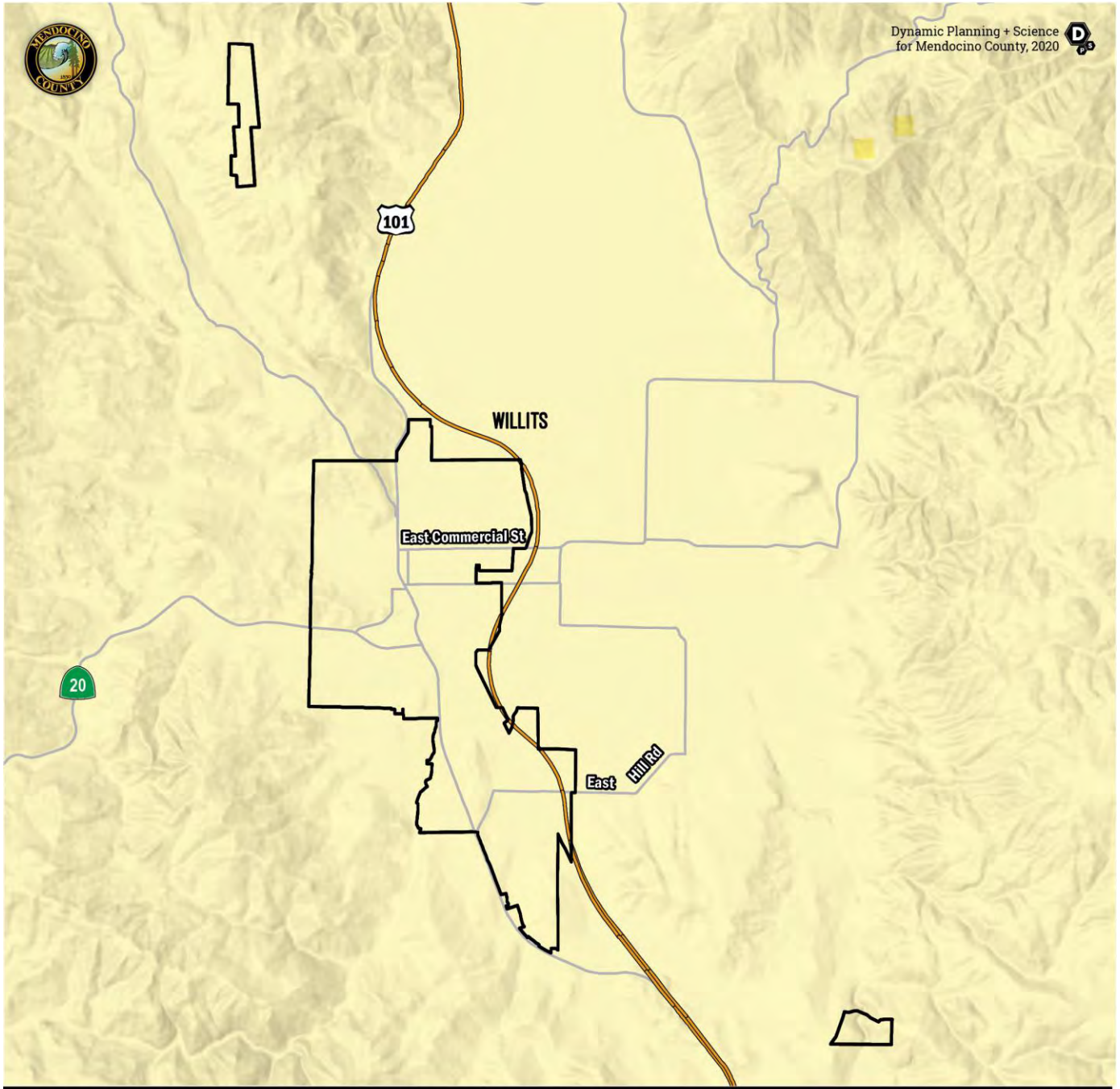


AVERAGE ANNUAL PRECIPITATION (1981-2010, INCHES) WILLITS

*Data sources: USDA - 1981-2010 Annual Average Precipitation by State.

MAP LEGEND				
34 — 44	45 — 59	60 — 69	70 — 84	85 — 97
INCHES				

Figure 4-6: City of Willits Average Annual Precipitation (1981-2010. Inches)



ANNUAL AVERAGE WIND SPEED (POWER CLASS) WILLITS

*Data sources: NREL.

MAP LEGEND



Figure 4-7: City of Willits Annual Average Wind Speed (Power Class)

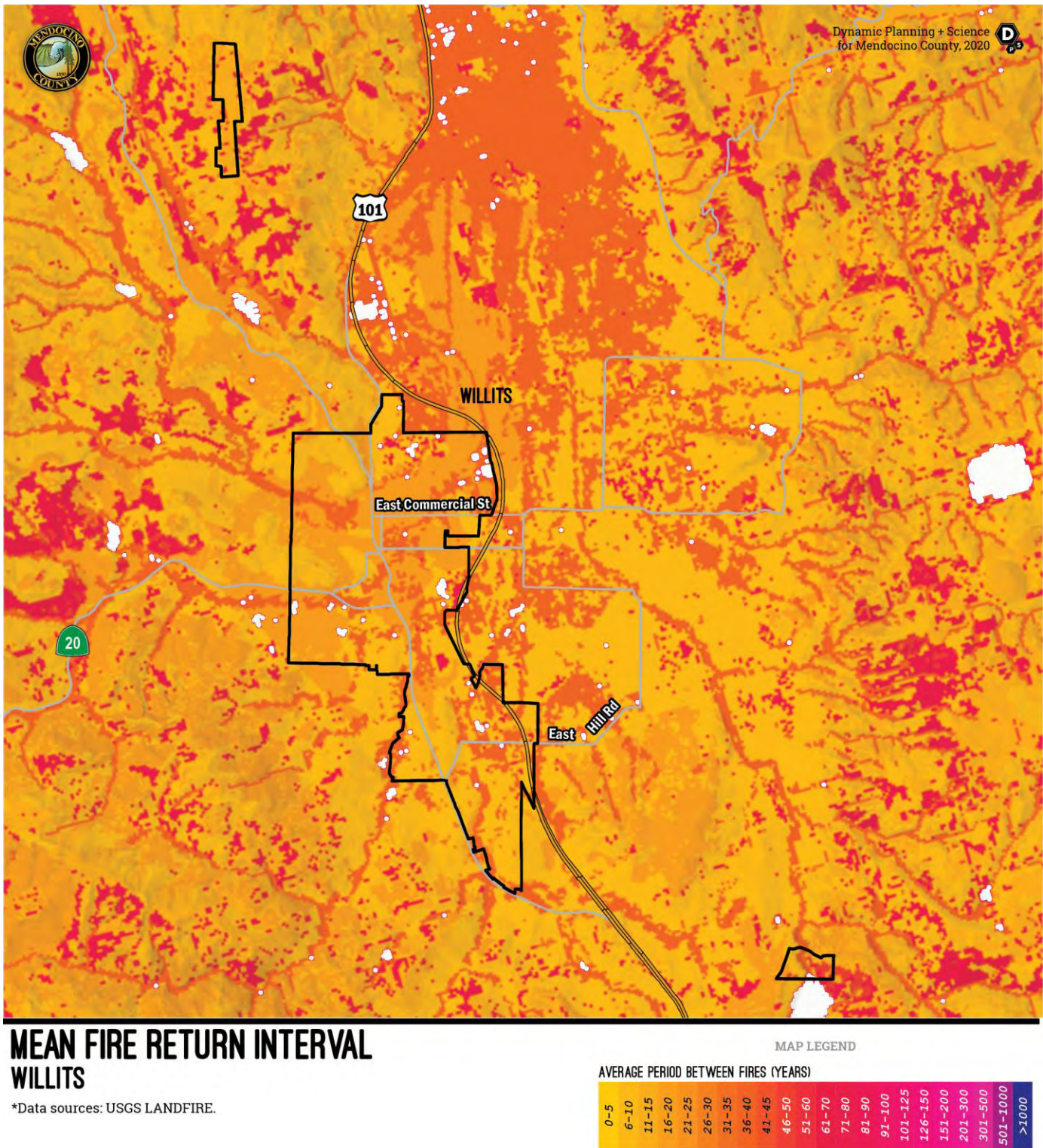
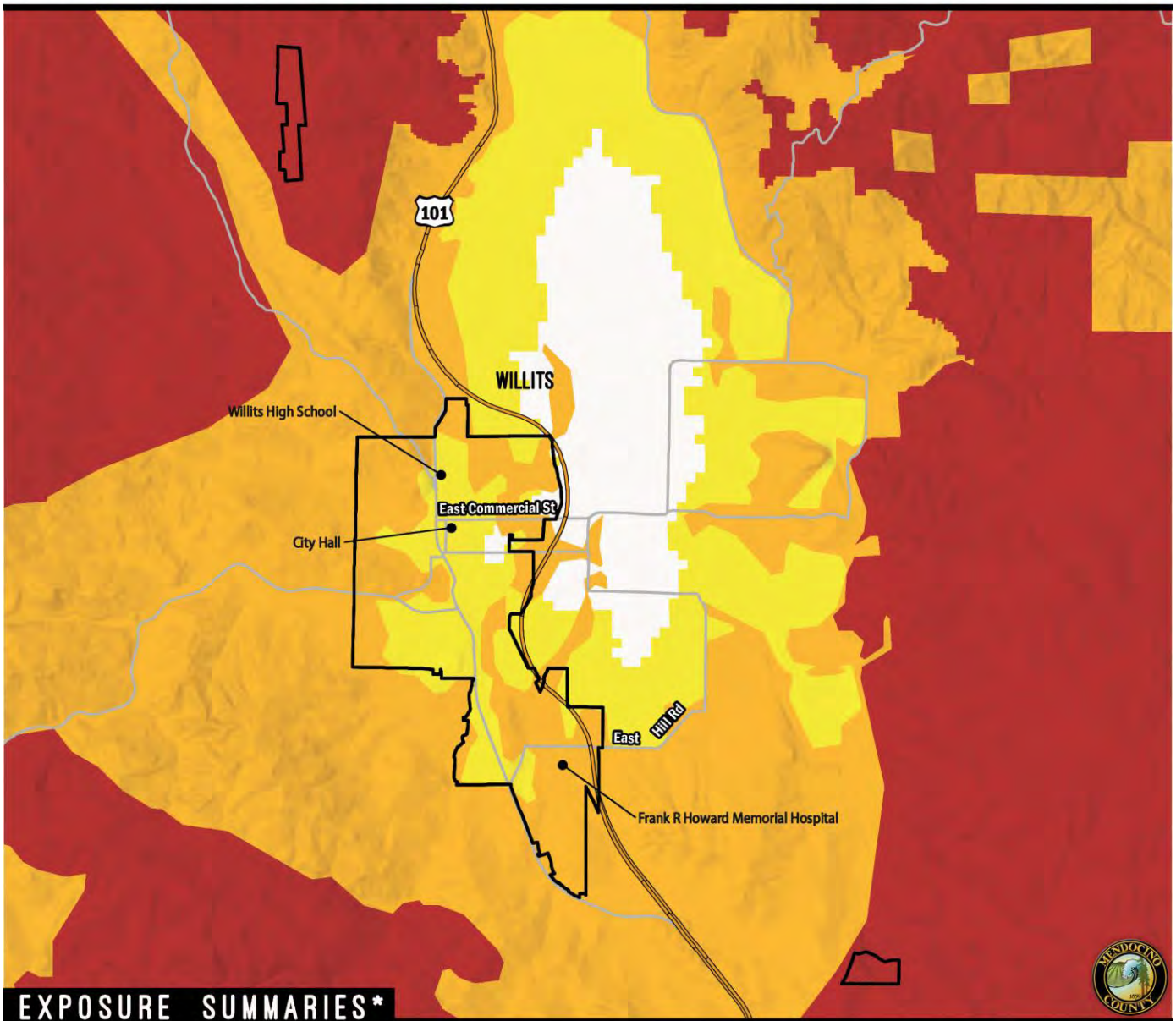


Figure 4-8: City of Willits Mean Fire Return Interval



WILDFIRE RISK EXPOSURE SNAPSHOT

WILLITS



EXPOSURE SUMMARIES*

POPULATION COUNT
IN HAZARD AREA

Count **2,845** Exp. Rate** **59%**
Count Includes: **H** **VH**

PARCEL COUNT
IN HAZARD AREA

Count **592** Exp. Rate** **39%**
Count Includes: **H** **VH**

PARCEL VALUE
IN HAZARD AREA

Sum of Improvement Value **\$180,993,409** Exp. Rate** **50%**
Sum of Content Value **\$106,817,943** **45%**
Count Includes: **H** **VH**

CRITICAL INFRASTRUCTURE COUNTS
IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	2	29%	H VH
High Potential Loss	71	46%	Sum of Transportation & Lifeline Linear Mileage 29 41%
Transportation & Lifeline	4	29%	

MAP LEGEND

MODERATE
HIGH (H)
VERY HIGH (VH)

*Exposure summaries include high and very high wildfire classes. Hazard data source: Cal Fire, CPUC.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 4-9: City of Willits Wildfire Risk Exposure Snapshot



LANDSLIDE RISK EXPOSURE SNAPSHOT

WILLITS

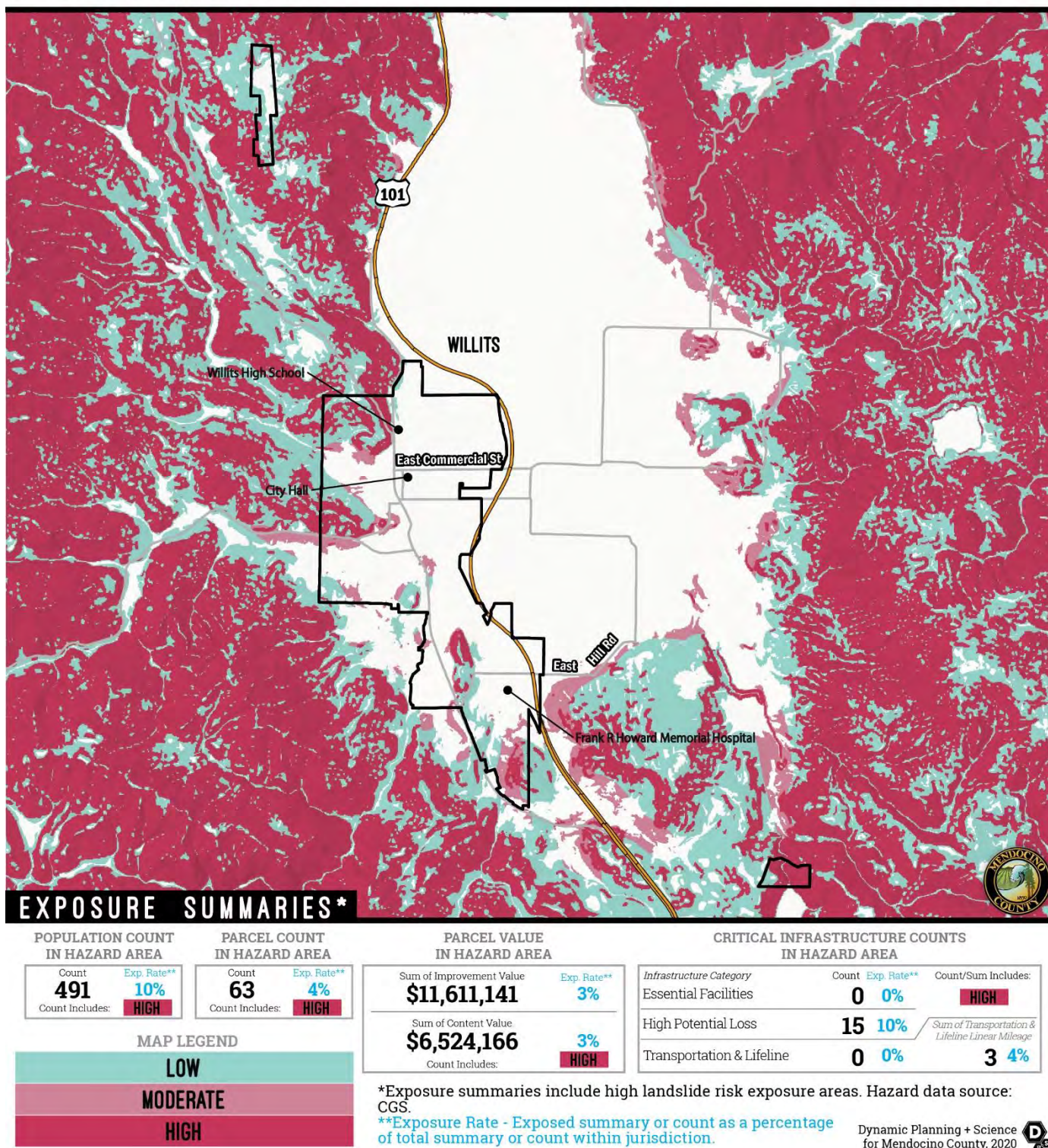


Figure 4-10: City of Willits Landslide Risk Exposure Snapshot



Table 4-4: Drought Classifications and Impacts

Category	Description	Possible Impacts
D0	Abnormally Dry	- Going into drought, short term dryness, slowing planting, growth of crops or pastures. - Coming out of drought, some lingering water deficits and pasture or crops not fully recovered.
D1	Moderate Drought	- Some damage to crops, pastures - Streams, reservoirs, or wells low, some water shortages developing or imminent - Voluntary water-use restrictions requested
D2	Severe Drought	- Crop or pasture losses likely - Water shortages common - Water restrictions imposed
D3	Extreme Drought	- Major crop/ pasture losses - Widespread water shortages or restrictions
D4	Exceptional Drought	- Exceptional and widespread crop/ pasture losses - Shortages of water in reservoirs, streams, and wells creating water

Adapted from U.S. Drought Monitor Drought Classifications and Impacts

DROUGHT SEVERITY TIMELINE

UPPER EEL

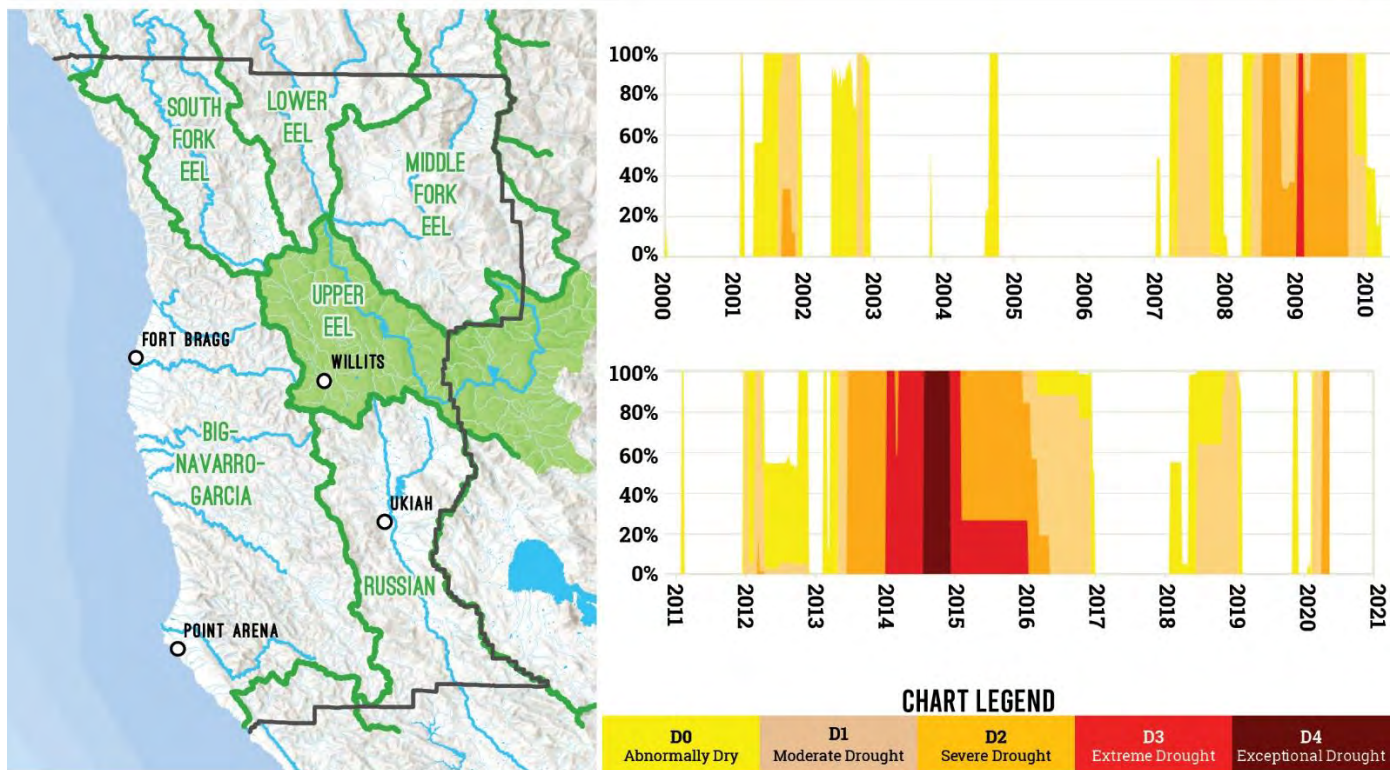


Figure 4-11: Drought Timeline for Upper Eel Watershed



4.4.3.3 Past and Future Development

The City of Willits is a general law city that crafts its own development regulations and is subject to State law. Future development is subject to compliance with State of California planning, zoning, subdivision, and architecture laws.

The GP is designed to help the City address issues related to land use, circulation (traffic), housing, open space, conservation, noise, and safety. The Land Use portion of the plan helps guide the City in determining the location of future development(s), including possible future annexation. In addition to the GP, the City has other plans that guide development in specific areas, including specific plans, policy plans, and master plans. These plans help to shape future development and dictate the City's Sphere of Influence (SOI). One of the central functions in these planning documents is to decrease risk of impact from natural hazards.

While growth has occurred in hazard areas in the past, increasing hazard risks to some degree, those risks are also decreased by development standards and plan requirements that serve to mitigate or avoid those risks. Problematic development generally occurred many decades ago, and thus much of this HMP focuses on retrofits or replacements from that older construction.

City of Willits is required to update building codes to meet the minimum standards to those required in the California Building Code last updated in 2019. California Building Codes provide some of the safest construction standards in the world and are meant to reduce risk to occupants from high wind, seismic activity, landslides, flood, wildfire, and other natural hazards. In addition to California minimum development standards, all jurisdictions belong to the NFIP, as such, all development must meet minimum flood protection standards set forth by FEMA. See Section 4.3.5 of Volume 1 for more information about past and future development in Mendocino County.

As the General Plan is updated and incorporates information from this HMP, City of Willits staff are continually improving hazard information through these hazard mitigation plan updates. With this 2020 update, improved online mapping about natural hazards available on RAMP will inform those responsible for future development to make better decisions where and how future development occurs.

City of Willits reviewed its general plans under the capability assessments undertaken for this hazard mitigation plan in Section 4.5.1. Deficiencies revealed by these reviews are identified as mitigation actions to decrease risks to move beyond past trends.

The City's municipal codes includes regulations to mitigate the impact of hazards on new and existing development, including:

- Drainage and stormwater retention requirements,
- Steep slope restrictions for new development,
- Waterbody buffer requirements,
- Floodplain management regulations,



- Zoning that prevents development in hazardous areas of the community such as floodplains, landslide areas, the wildland-urban interface (WUI), or other known hazard areas, and
- Building codes that include the most up-to-date California Fire Code, seismic standards, and many other provisions crafted to protect new construction from hazard events.

Even in the event that limited development did occur within a hazard area, the municipal code should ensure impacts from a hazard event are mitigated and losses are minimal. If development does occur in hazard areas, evacuation and emergency planning should take into consideration the anticipated local impacts of the hazard event, including potential interrupted services or the elimination of access.

The anticipated growth in the City will not cause significant change in vulnerability to the City for identified priority hazards.

4.4.3.3.1 National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. FEMA has prepared a detailed Flood Insurance Study (FIS) for Mendocino County and municipalities. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood and the 0.2-percent annual chance flood (the 500-YR flood). Base flood elevations and the boundaries of the 100- and 500-YR floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principle tool for identifying the extent and location of the flood hazard. FIRMs are the most detailed and consistent data source available, and for many communities they represent the minimum area of oversight under their floodplain management program. See Section 4 of Volume 1 for general information on the NFIP.

The City of Willits has participated in the NFIP since 1982. City of Willits is currently in good standing with the provisions of the NFIP. Compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA. Maintaining compliance under the NFIP is an important component of flood risk reduction. See Table 4-5 for more information on the City's policies and historic flood insurance claims.



Table 4-5: NFIP Status Table

NFIP Status	Participating since 07/19/1982
Policies in Force	66
Policies in SFHA	56
Policies in non-SFHA	10
Total Claims Paid	11
Paid Losses	\$40,298
Repetitive Loss Properties	2
Severe Repetitive Loss Properties	0
Repetitive Loss Payment by NFIP on Building	\$35,315.59
Repetitive Loss Payment by NFIP on Contents	N/D

See Volume 1, Section 4.5 for more information on the NFIP.

4.4.3.4 Identify Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping and static snapshot maps. Problem statements focused on the impact, victim, or threat that the hazard could create in the jurisdiction, as described in Figure 4-12. Identifying common issues and weaknesses through these problem statements assisted the Planning Committee in understanding the realm of resources needed for mitigation. Jurisdiction problem statements are listed in Table 4-6.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 4-11 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 4-6 and Table 4-11.



IMPACT

Casualties
Property Damage
Business Interruption
Financial Loss
Environmental Contamination



VICTIM

School Children in Hazard High
Hazard Areas
Care Facilities in High Hazard
Area
Vulnerable Population Exposed to
hazards



THREAT

Increased Fuels due to drought
Hotter, drier climates
More Intense Storms
Impervious surfaces = greater
runoff
Increases of Invasive Species

Figure 4-12: Guidance for Problem Statements

Table 4-6: Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-AH-WL-137	All Hazard	Impact	PE&A - Public Education & Awareness, ES - Emergency Services	City of Willits	Many cell towers lack backup power generation, which is deemed a critical life/safety threat for people without landlines.	ma-AH-WL-258
ps-AH-WL-138	All Hazard	Impact	PE&A - Public Education & Awareness, ES - Emergency Services	City of Willits	The City of Willits does not have a functioning redundant communications system.	ma-AH-WL-263
ps-AH-WL-139	All Hazard	Impact	PE&A - Public Education & Awareness, SP - Structural Projects	City of Willits	Many critical local businesses (grocery stores, gas stations) lack backup power generation.	ma-AH-WL-258



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Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-AH-WL-140	All Hazard	Impact	PRV - Prevention , PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	City of Willits	Many property owners lack funding to retrofit their homes and businesses to be more resilient to natural disasters.	ma-AH-WL-259
ps-AH-WL-141	All Hazard	Victim	PE&A - Public Education & Awareness , ES - Emergency Services	City of Willits	The City does not know where vulnerable populations live, making hazard related outreach difficult.	ma-AH-WL-260
ps-AH-WL-142	All Hazard	Impact	PRV - Prevention , PE&A - Public Education & Awareness , ES - Emergency Services	City of Willits	The City lacks an alternative north/south evacuation route through the City should Main St. be compromised during an emergency.	ma-AH-WL-261
ps-DR-WL-115	Drought	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	City of Willits	Drought can lead to water supply issues for the City.	ma-DR-WL-262
ps-DR-WL-116	Drought	Impact	NRP - Natural Resource Protection , SP - Structural Projects	City of Willits	The City lacks a backup water supply should the primary surface water supply be impacted by a natural disaster.	ma-DR-WL-262
ps-DR-WL-117	Drought	Threat	PRV - Prevention , PE&A - Public Education & Awareness , NRP - Natural Resource Protection	City of Willits	Public facilities may use more water than needed for basic function such as parks and landscaping.	ma-DR-WL-265



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-DR-WL-118	Drought	Threat	PRV - Prevention , PE&A - Public Education & Awareness , NRP - Natural Resource Protection	City of Willits	There is an opportunity for City land use code to include more requirements for developers to install drought tolerant landscaping.	ma-DR-WL-266
ps-EQ-WL-131	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	City of Willits	City facilities lack seismic shut-off valves to prevent gas leaking in a seismic event .	ma-EQ-WL-267
ps-EQ-WL-132	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	City of Willits	Older construction and particularly un-reinforced masonry (URM) are at a higher risk of experiencing damage during earthquakes.	ma-EQ-WL-268
ps-WF-WL-133	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	City of Willits	Historic buildings can be more susceptible to ground shaking since many of these buildings have weakened with age and were built before the use of building codes.	ma-AH-WL-259
ps-EQ-WL-134	Earthquake	Victim	PPRO - Property Protection , ES - Emergency Services	City of Willits	The City lacks staff to handle the volume life/safety building inspections after major disasters.	ma-EQ--269
ps-WF-WL-135	Earthquake	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	City of Willits	There are approximately 4,047 people living in a violent shake zone for the Maacama Garberville EQ scenario.	ma-AH-WL-259
ps-EQ-WL-136	Earthquake	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	City of Willits	The following facilities are located in a violent shake zone for the Maacama Garberville EQ scenario: 11 child care centers, 4 residential elder care facilities, 2 family child care homes, 1 community center, and 3 medical facilities.	ma-EQ-WL-270



MENDOCINO COUNTY
MULTI-HAZARD MITIGATION PLAN

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-WL-178	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	City of Willits	City facilities have not been inspected for seismic safety in many years.	ma-EQ-WL-294
ps-EW-WL-121	Extreme Weather	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	City of Willits	The City's wastewater treatment facility is susceptible to flooding during heavy rain events.	ma-FL-WL-96
ps-EW-WL-122	Extreme Weather	Impact	PPRO - Property Protection , SP - Structural Projects	City of Willits	City buildings and roads are impacted by localized flooding including pooling of water after heavy rain events.	ma-EW-WL-271
ps-EW-WL-123	Extreme Weather	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	City of Willits	Heavy rain events lead to natural drainage channels becoming choked with debris and gravel which reduces their ability to convey stormwater downstream and leads to localized flooding on City roads and private property.	ma-EW-WL-272
ps-EW-WL-124	Extreme Weather	Threat	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	City of Willits	Strong winds can blow over trees and utility lines, posing a threat to traffic and pedestrians and leading to power outages.	ma-EW-WL-273
ps-FL-WL-119	Flood	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	City of Willits	The following City assets are in the 100-YR flood plain: 6 bridges (including bridges at E. Commercial/Lenore; E. Valley St./Railroad Ave.), City of Willits Library, and City Wastewater Treatment Plant.	ma-FL-WL-96, ma-FL-MCOE-274, ma-FL-WL-93



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-FL-WL-120	Flood	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	City of Willits	Approximately 714 people live in the 100-YR flood plain.	ma-FL-WL-103
ps-PN-WL-176	Pandemic	Victim	PRV - Prevention , SP - Structural Projects	City of Willits	EOC is not designed for possible social distancing guidelines to be in place during a hazard event (flood, wildfire, earthquake), nor does it have adequate fresh air ventilation	ma-PN-WL-292
ps-PN-WL-177	Pandemic	Impact	ES - Emergency Services	City of Willits	Need for additional sheltering locations in event of pandemic social distancing needs paired with another hazard event (flood, wildfire, earthquake)	ma-PN-WL-293
ps-WF-WL-125	Wildfire	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection	City of Willits	The City's wastewater treatment facility, 3 City bridges, and the airport are located in a high or very high wildfire severity zone.	ma-WF-WL-275
ps-WF-WL-126	Wildfire	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	City of Willits	Many City buildings are of older construction and require retrofitting to better withstand impacts of wildfire.	ma-WF-WL-275
ps-WF-WL-127	Wildfire	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	City of Willits	Approximately 2,845 people live in a high or very high wildfire severity zone.	ma-AH-WL-259, ma-WF-WL-92, ma-WF-WL-288
ps-WF-WL-128	Wildfire	Victim	PPRO - Property Protection , PE&A - Public Education & Awareness	City of Willits	The following critical infrastructure is located in a high or very high wildfire severity zone: 4 residential elder care facilities, Frank Howard Memorial Hospital, and 1 child care center.	ma-AH-WL-259, ma-WF-WL-288



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-WF-WL-129	Wildfire	Threat	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection	City of Willits	Excessive fuels may exist around City facilities and roads.	ma-WF-WL-284, ma-WF-WL-288
ps-WF-WL-130	Wildfire	Threat	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection	City of Willits	Excessive fuels exist around the airport, which serves as an emergency evacuation area.	ma-WF-WL-284
ps-WF-WL-175	Wildfire	Impact	PPRO - Property Protection , SP - Structural Projects	City of Willits	Inadequate water pressure exists in the City's water system which impacts the effectiveness of emergency fire response and fire suppression systems in buildings throughout the City.	ma-WF-WL-291
ps-WF-WL-179	Wildfire	Victim	PPRO - Property Protection , SP - Structural Projects	City of Willits	Sparks from wildfire can enter city center with many older wooden construction, creating urban conflagration.	ma-WF-WL-275

4.4.3.5 Mitigation Action Support Tool (MAST)

As a living document, hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for participating jurisdictions. The Mitigation Action Support Tool (MAST) is accessible through <https://mitigatehazards.com/mendocino-county/>.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdictions and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Participating jurisdictions can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction's ability to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.



4.5 Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section (a.k.a. problem statements) with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success.

4.5.1 Capabilities Assessment

This section examines the planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards.

Capabilities assessments include considerations of a community's adaptive capacity for climate change, as outlined in Cal OES' 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region's existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity. (Cal. Adaptation Planning Guide, 2020, p. 94)

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (Column 1, Status)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (Column 2, Current Mitigation Use)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (Column 3, Future Opportunity)

The capabilities assessment is easily-digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.

For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Volume 1. Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities as well.



4.5.1.1 Planning and Regulatory Capabilities

Table 4-7: Planning and Regulatory Mitigation Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Construction and Future Development Regulations				
Building Codes				2019 California Building Code.
BCEGS Rating				
Public Protection (ISO Class)				Class 4. (Mendocino County Community Wildfire Protection Plan, 2005).
Hazard Related Development Standards				Earthquake Hazard Reduction in Existing Buildings. (Ch. 15.36) Floodplain Combining (Ch. 17.40); Subdivision Standards. (§ 17.40.110)
Zoning Ordinance				
Hazard-Specific Ordinance				Natural Hazard Combining. (Ch. 17.46)
Growth Management Ordinance				
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				Adopted Budget Fiscal Year 2019-2020.
Erosion/Sediment Control Program				Erosion and sediment procedures designated in Deisgn and Construction Standards, 2009.
Hazard-Related Public Outreach Program				
Stormwater Management Program (Annual Inspections)				
Seismic Safety Program (Non-structural)				Updated seismic safety procedures identified in General Plan Safety Element update.
Earthquake Modernization Plan (Building Safety)				
Hazard Plans				
General Plan Safety Element				2019 update.



Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Community Wildfire Protection Plan (CWPP)				2016 County-wide CWPP in existence.
Floodplain Management Plan				
Stormwater Management Plan				Coastal Mendocino Co Storm Water Resource Plan, 2019 Update, applies to the County Unincorp. and Fort Bragg.
Emergency Operations Plan				Mendocino County Operational Area Emergency Operations Plan (2016)
Climate Action Plan				
Ground Water Management Planning / Plans				Ukiah Valley is the only groundwater basin required to have a groundwater sustainability plan in the County.
National Flood Protection Program (NFIP)				
Floodplain Management Regulations				Floodway Combining (-FW) Zone. (Ch. 17.38)
Flood Insurance Education and Technical Assist.				
Flood Hazard Mapping / Re-Mapping				
Community Rating System (CRS)				



4.5.1.2 Administrative and Technical Capabilities

Table 4-8: Administrative and Technical Capabilities

CAPABILITY ASSESSMENT LEGEND				
Status	Current Mitigation Use		Future Opportunity	
Currently in use or present.	Used widely for mitigation.		Opportunity to expand and integrate.	
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.		Limited opportunity to expand and integrate.	
(No) Not present or available.	Not used in mitigation planning.		No opportunity to expand or integrate.	

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Community Planning and Development Services				
Community Planner				Community Development Department.
Civil Engineer				A licensed engineer is contracted by the City.
Building Code Official (Full time or Augmented)				Building Division of the Community Development Department.
Floodplain Administrator				Building Department: the building official is designated as the floodplain administer. (Ch. 17.40.070)
Fire Marshal				Little Lake Fire Protection District.
Dedicated Public Outreach Personnel				Human Resources Department.
GIS Specialist and Capability				
Emergency Manager				City Manager.
Full-Time Building Official				Building Division of the Community Development Department.
Grant Manager, Writer, or Specialist				Jim Robbins- Community Development Department
Other	N/A	N/A	N/A	
Warning Systems/Services				
General				Nixle and Reverse 911.
Flood				Nixle and Reverse 911.
Wildfire				Nixle and Reverse 911.
Geological Hazards				Nixle and Reverse 911.



4.5.1.3 Financial Capabilities

Table 4-9: Fiscal Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				
Utilities Fees				
Benefit assessments				
System Development Fee				
General Obligation Bonds to Incur Debt				
Special Tax Bonds to Incur Debt				
Withheld Spending in Hazard-Prone Areas				
Stormwater Service Fees				City of Willits Rates and Fees Schedule Fiscal Year 2019/20.
Capital Improvement Project Funding				City of Willits Adopted Budget Fiscal Year 2019/2020.



4.5.1.4 Education and Outreach

Table 4-10: Education / Outreach Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				Both the City and the Community Development Department have Facebook pages.
Dedicated Social Media				
Hazard Info. Avail. at Library/ Planning Desk				
Annual Public Safety Events				
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				
Fire Safe Councils				The Mendocino County Fire Safe Council assists local Councils a variety of needs. These Councils include: the Caspar Community and Island Cove Estates (south of Point Arena) on the coast; Pine Mountain, Ridgewood Park, and Willowbrook/Sherwood Forest Hills (past Brooktrails) in the Willits area; and Deerwood, Oak Knoll Road, Upper Parducci Road, Black Bart Trail and Robinson Creek Road in the Ukiah area.
Resource Conservation Districts				The Mendocino County Resource Conservation District has implemented a wide range of programs across the County
Other	N/A	N/A	N/A	



4.5.2 Mitigation Actions

Mitigation actions were developed based upon the jurisdiction's priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Section 5.5.1 of Volume 1. Table 4-11 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon the Planning Committee consensus.

Each participating jurisdiction, including the City of Willits, considered ongoing relevancy of mitigation actions from the existing MJHMP and retained or removed such actions while adding new relevant actions as well. Mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the previous HMP effort were not included because they were an inherent part of the HMP update process or were not detailed enough for implementation at a local Jurisdiction level. City of Willits has made significant changes to other mitigation actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices. Volume 1, Section 5.5.2 provides a record of County-wide mitigation actions, the status, and additional notes for each action.

Table 4-11 lists each mitigation action for City of Willits. Each participating jurisdiction developed unique mitigation actions, targeted at their own unique priorities and vulnerabilities. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST. The detail in Table 4-11 meets the regulatory requirements of FEMA and DMA 2000.

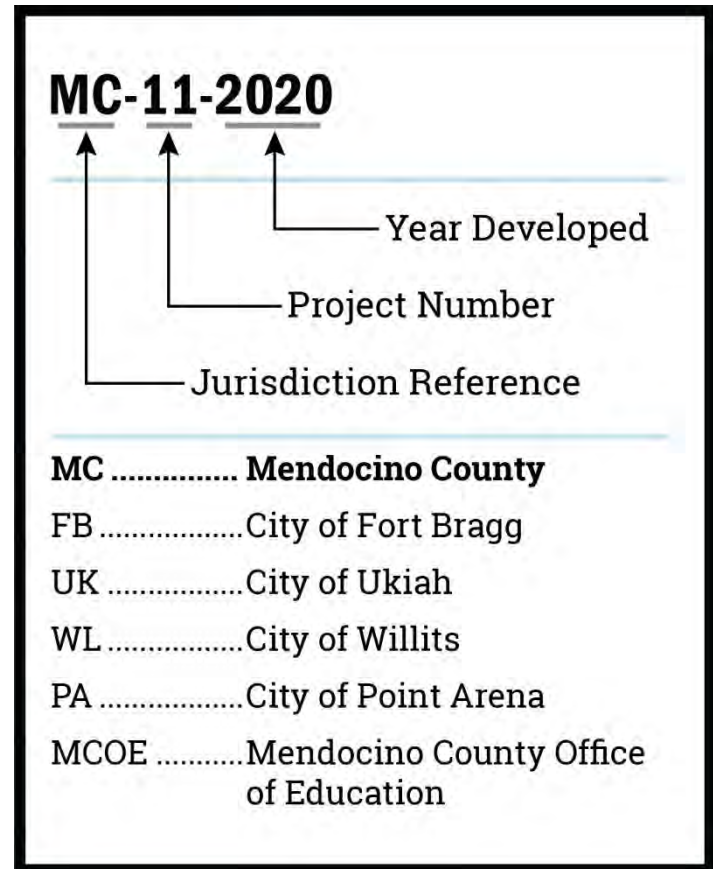


Figure 4-13: Mitigation Action Key



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Table 4-11. City of Willits Mitigation Actions

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-AH-WL-258	All Hazard	PRV - Prevention	Pending	2020	City of Willits	Develop a program that allows for expedited permitting and review process for backup power generation at facilities that are considered critical during a natural disaster (grocery stores, gas stations, cell/communication towers).	Community Development and Building	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.		Planning	HMGP / BRIC	Medium	ps-AH-WL-137, ps-AH-WL-139
ma-AH-WL-259	All Hazard	PRV - Prevention	Pending	2020	City of Willits	Develop a program that creates incentives, through expedited permitting/review and reduced/waived permit fees, for homeowners and business owners to retrofit their homes and businesses to be more resilient to natural disasters.	Community Development and Building	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-AH-WL-140, ps-WF-WL-127, ps-WF-WL-128, ps-WF-WL-135, ps-WF-WL-133
ma-AH-WL-260	All Hazard	PE&A - Public Education & Awareness	Pending	2020	City of Willits	Conduct outreach to the general public to better understand where vulnerable populations live within the City of Willits so that they can be better served by the City with hazard-related outreach.	Community Development	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Project	HMGP / BRIC	Low	ps-AH-WL-141
ma-AH-WL-261	All Hazard	PRV - Prevention	Pending	2020	City of Willits	Develop a City-wide evacuation plan that identifies alternative evacuation routes in the event of a natural disaster.	City of Willits	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-AH-WL-142
ma-AH-WL-263	All Hazard	PE&A - Public Education & Awareness	Pending	2020	City of Willits	Install redundant communication systems, beyond existing landline, internet, and cell tower infrastructure, to allow for emergency notification in the event of primary systems becoming compromised during a natural disaster.	City of Willits	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-AH-WL-138



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-DR-WL-264	Drought	NRP - Natural Resource Protection	Pending	2020	City of Willits	Implement water supply contingency projects, explore and acquire alternative water supplies, and retrofit water supply systems in order to improve water supply and delivery and conserve water.	City of Willits	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	Medium	ps-DR-WL-116
ma-DR-WL-265	Drought	NRP - Natural Resource Protection	Pending	2020	City of Willits	Replace existing water intensive landscaping with drought resistant landscaping.	City of Willits	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Project	HMGP / BRIC	High	ps-DR-WL-117
ma-DR-WL-266	Drought	PRV - Prevention	Pending	2020	City of Willits	Amend land use codes to incorporate regulations that encourage and require water savings for development.	Community Development	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-DR-WL-118
ma-EQ-WL-101	Earthquake	SP - Structural Projects	Pending	2014	City of Willits	Seismically retrofit or replace public works and/or emergency response facilities that are necessary during and/or immediately after a disaster or emergency.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps=DR-WL-178
ma-EQ-WL-267	Earthquake	SP - Structural Projects	Pending	2020	City of Willits	Install seismic gas shut-off valves on County buildings to prevent the flow of gas into buildings during a seismic event.	City of Willits	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EQ-WL-131
ma-EQ-WL-268	Earthquake	SP - Structural Projects	Pending	2020	City of Willits	Retrofit / Harden City-owned critical facilities and buildings and their ability to withstand earthquakes.	Public Works and Building Department	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-WL-132



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EQ--269	Earthquake	PRV - Prevention	Pending	2020	City of Willits	Develop a memorandum of agreement/understanding with neighboring cities to share building inspection services in the event of a natural disaster.	Community Development and Building	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-EQ-WL-134
ma-EQ-WL-270	Earthquake	PE&A - Public Education & Awareness	Pending	2020	City of Willits	Encourage privately owned critical facilities to evaluate the ability of the buildings to withstand earthquakes and to address any deficiencies identified.	Community Development	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	Ongoing	Planning	HMGP / BRIC	High	ps-EQ-WL-136
ma-EQ-WL-294	Earthquake	SP - Structural Projects	Pending	2020	City of Willits	Conduct seismic inspections of City facilities to determine what retrofits are needed to make facilities more resilient to seismic events.	City of Willits	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EQ-WL-178
ma-EW-WL-271	Extreme Weather	PPRO - Property Protection	Pending	2020	City of Willits	Perform a feasibility study for flood proofing options and analyze the drainage systems City-wide.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA	High	ps-EW-WL-122
ma-EW-WL-272	Extreme Weather	PPRO - Property Protection	Pending	2020	City of Willits	Routinely inspect storm water channels for vegetation build up or encroachment, trash and debris, silt and gravel build up, and erosion or bank failure.	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC , FMA	High	ps-EW-WL-123
ma-EW-WL-273	Extreme Weather	PPRO - Property Protection	Pending	2020	City of Willits	Implement a tree removal program for trees that are at a high risk to snapping in wind events around City facilities and infrastructure.	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Project	HMGP / BRIC	Medium	ps-EW-WL-124



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-FL-WL-93	Flood	PPRO - Property Protection	Pending	2014	City of Willits	Acquire, relocate, or elevate residential structures, in particular those that have been identified as Repetitive Loss (RL) properties that are located within the 100-year floodplain.	Community Development and Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA	Medium	ps-FL-WL-119
ma-FL-WL-96	Flood	PPRO - Property Protection	Pending	2014	City of Willits	Retrofit wastewater and potable water facilities that subject to flooding. Retrofitting activities may include elevating vulnerable equipment, electrical controls, and other equipment, fastening and sealing manhole covers to prevent floodwater infiltration, and protecting wells and other potable water from infiltration and flood damage by raising controls and well pipes.	Community Development and Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 years, ongoing	Project	HMGP / BRIC , FMA	High	ps-EW-WL-121, ps-FL-WL-119
ma-FL-WL-103	Flood	PRV - Prevention	Ongoing	2008	City of Willits	Continue to participate in the NFIP program by enforcing the floodplain management ordinance to reduce future flood damage. In addition, join the Community Rating System (CRS) program. A community that participates in additional floodplain management activities, such as those outlined in the CRS program, will reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance.	Community Development	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	Ongoing	Planning	HMGP / BRIC , FMA	High	ps-FL-WL-120
ma-FL-MCOE-274	Flood	PPRO - Property Protection	Pending	2020	City of Willits	Elevate and retrofit bridges and culverts to allow proper stormwater / 100-YR flows.	Public Works	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA	High	ps-FL-WL-119
ma-PN-WL-292	Pandemic	SP - Structural Projects	Pending	2020	City of Willits	Install additional barriers and proper ventilation in Emergency Operations Center (EOC, City Hall) to allow for operation of EOC during pandemic and hazard event.	City of Willits	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-WL-176



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-PN-WL-293	Pandemic	ES - Emergency Services	Pending	2020	City of Willits	Develop alternative sheltering/evacuation locations for distancing required during pandemic and other hazard event.	City of Willits	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-WL-177
ma-WF-WL-92	Wildfire	PPRO - Property Protection	Pending	2014	City of Willits	Create a vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Community Development	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-WL-127
ma-WF-WL-275	Wildfire	SP - Structural Projects	Pending	2020	City of Willits	Retrofit City facilities with fireproof building materials to better withstand potential impacts of wildfire.	City of Willits	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-WL-126, ps-WF-WL-125, ps-WF-WL-179
ma-WF-WL-284	Wildfire	PPRO - Property Protection	Pending	2020	City of Willits	Develop vegetation management program to remove under story brush and excessive fuels around City roads, evacuation routes, and buildings.	Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	Ongoing	Project	HMGP / BRIC , FP&S	High	ps-WF-WL-129, ps-WF-WL-130
ma-WF-WL-288	Wildfire	PPRO - Property Protection	Pending	2020	City of Willits	Implement Mendocino County CWPP Mitigation Projects (Battalion 2: Willits) Including shaded fuel break to protect Willits water system, construct replacement fire station, and replace 1 aging fire apparatus.	Mendocino Unit at Howard Forest Station	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , AFG , FP&S	High	ps-WF-WL-127, ps-WF-WL-128, ps-WF-WL-129
ma-WF-WL-291	Wildfire	SP - Structural Projects	Pending	2020	City of Willits	Increase City water supply storage to achieve adequate water pressure throughout the City's system for emergency fire response and so fire sprinkler systems in buildings can function properly.	City of Willits	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-WL-175



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MENDOCINO COUNTY
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN

Mendocino
County Office
of Education
JURISDICTIONAL ANNEX

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Mendocino County

Multi-Jurisdiction Hazard Mitigation Plan

OFFICE OF EDUCATION (MCOE)

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Section 5. Office of Education

5.1 Purpose

This Annex details the hazard mitigation planning elements specific to the Mendocino County Office of Education (MCOE). This Annex is not intended to be a standalone document but appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Office of Education. This Annex provides additional information specific to the Office of Education, with a focus on providing additional details on the planning process, risk assessment, and mitigation. Figure 5-1 displays the boundaries of the Office of Education.

Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Rebecca Jeffries, Assistant Superintendent of
Business and Administrative Services
Mendocino County Office of Education
2240 Old River Rd,
Ukiah, CA 95482
Telephone: (707) 467-5030
e-mail Address: bjeffries@mcoe.us

Alternate Point of Contact

Gabriel Sherman, Director of Facilities
Ukiah Unified School District
511 South Orchard Avenue,
Ukiah, CA 95482
Telephone: (707) 472-5080
e-mail Address: gsherman@uusd.net

5.2 Planning Methodology

The Office of Education followed the planning process detailed in Volume 1, Section 3, including participating in the County Hazard Mitigation Planning Committee (HMPC) and Steering Committee and formulating their own internal planning team to support the broader planning process. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 5-1.

Table 5-1: Planning Committee Members

Planning Committee Members	Department
Steve Turner	Maintenance and Operations
Gabriel Sherman	Ukiah Unified School District
Barry Silva	Fort Bragg Unified School District
Terry McEntee	Willits Unified School District
Ottopascal Rice	Mendocino Unified School District
Mac Adam Lojowsky	Mendocino -Lake Community College District
Cindy Gonzalez	Manchester Elementary School
Scott Ritchie	Point Arena Elementary and High School

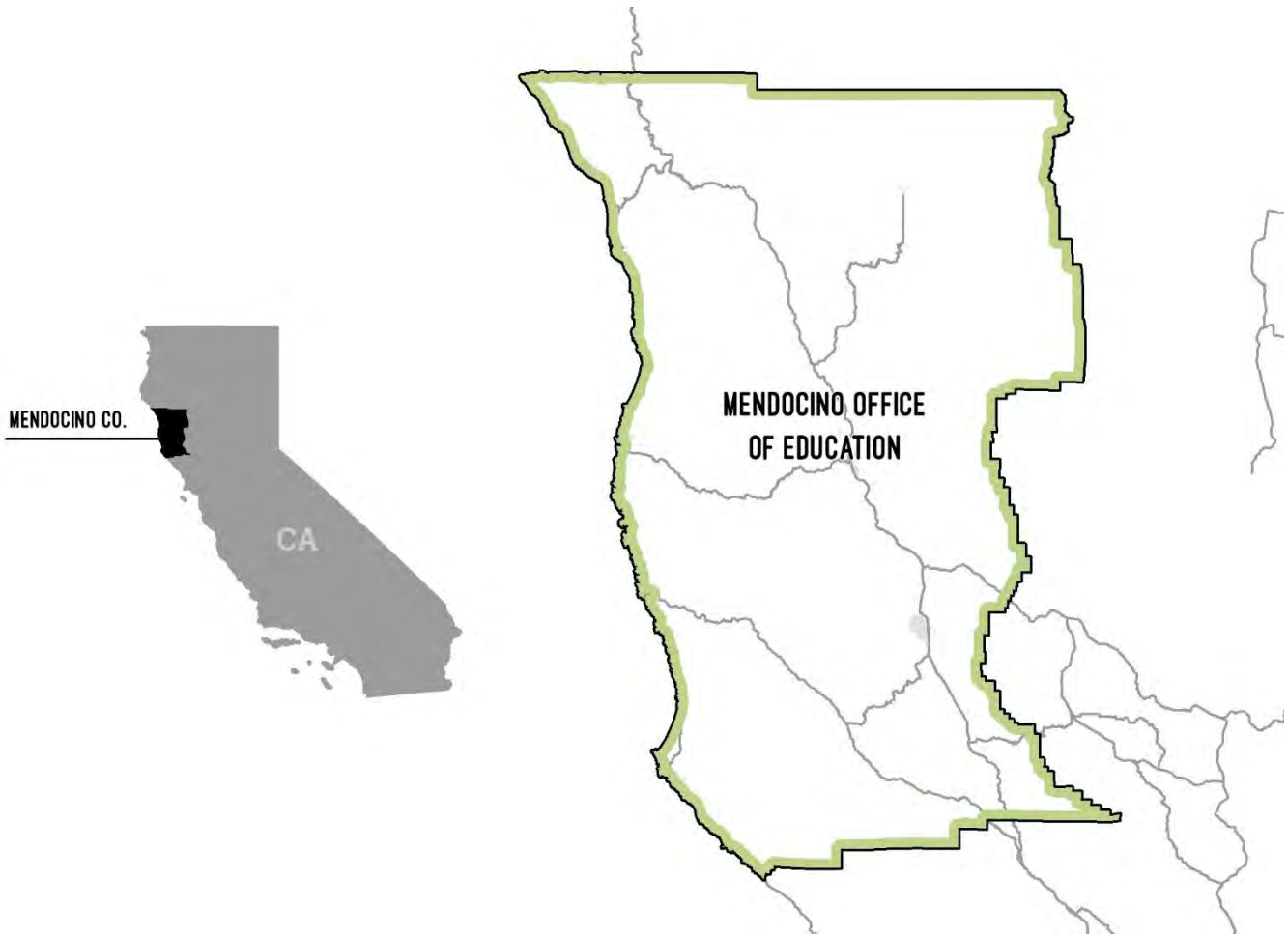


Figure 5-1: Mendocino County Office of Education Location

5.3 What's New

The Office of Education has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted.

The Office reevaluated previous mitigation actions, including considerations of progress made on mitigation efforts, and retained them as pending or ongoing; no tables for completed or cancelled mitigation actions are included. Ongoing and pending mitigation actions are described in Table 5-11.

5.3.1 Mitigation Successes

The Office of Education has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted. The MCOE has instituted several mitigation actions from the existing MJHMP. See Vol. 1 for a listing of historic mitigation actions. Listed below is a success story where Office of Education successfully implemented hazard mitigation projects.

**STORY 1: *Office of Education Building Retrofits***

In 2015 MCOE was able to replace a collection of 40+ year old wood framed portable school buildings at our Community School site. This site is located in a zone with moderate wildfire risk and very strong to Severe earthquake risk. We complied with a siting and construction requirements of the California Division of State Architect, including conducting a Geotechnical Survey of the site. The Modular complex of two buildings, was constructed on a permanent foundation using fire resistant materials.

STORY 2: *Point Arena High School Fire Mitigation*

In 2016, Point Arena High School reduced the fire danger from trees on a seven acre area of their campus by removing dead trees and trimming healthy trees to eight feet above ground then chipping the slash.

STORY 3: *Office of Education Backup Power Generation*

MCOE is the Internet Service Provider for all school districts in Mendocino County and the payroll processor for all school employees in the county. To sustain this critical function, MCOE has installed three, propane powered, backup generators to sustain our internet connectivity and financial services during natural disasters and Public Safety Power Shutoffs (PSPS). The last generator was installed in 2018. The generators proved invaluable during the fire season of 2019 when three consecutive PSPS events, one lasting five days, plunged most of the county into darkness, potentially disrupting three separate payroll cycles. Even though some districts were unable to connect to MCOE due to their local power outage, by exercising the various options in our Business Continuity Plan, each payroll was completed on time.

STORY 4: *Leggett Unified School District Water Well and Water Treatment*

In 2016, Leggett Unified School district undertook a project to replace their water system because the water quality was so poor it was declared unfit and the district had to purchase bottled water for drinking, cooking, and sanitation. The poor water quality was partially due to the varying annual rainfall from the effects of climate change. The district drilled two new wells and constructed a new water treatment plant, eliminating the need to haul water.

5.4 Risk Assessment

The intent of this section is to profile the Office of Education's hazards and assess the Office of Education's vulnerabilities, distinct from that of the County-wide planning area. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. For more information on Risk Assessment Methodologies, see Vol. 1 and Appendix A.



5.4.1 Hazard Screening Criteria

Planning Team members from each participating jurisdiction collectively discussed which hazards should be profiled in the Plan and which should not. The results of that discussion can be found in Table 5-2. Detailed hazard profiles of the most significant County-wide hazards are described in Section 4 of Volume 1. The Planning Team reviewed previously-prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect Office of Education. Table 5-3 provides a crosswalk of relevant planning documents and the hazards discussed therein. The crosswalk was used to develop a preliminary hazards list, providing a framework for the Planning Team members to evaluate which hazards were truly relevant to Office of Education and which ones were not. Section 5.4.2 below describes the hazard risk ranking process that was performed by the planning team which prioritized hazards that are specifically relevant to Office of Education.

Table 5-2: Hazard Prioritization

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	High priority county-wide, profiled hazard.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Severe Weather.
Insect Hazards	While hazardous insects exist in Mendocino County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	High priority county-wide, profiled hazard.
Severe Weather, including:	High priority county-wide for heavy wind and heavy rain.
Extreme Heat	Not a priority as extreme weather event, discussed as climate change impact.
Hail	Hail events are rare in Mendocino County and not profiled in this plan.
High Wind	Profiled as part of Severe Weather hazard.
Heavy Rain	Profiled as part of Severe Weather hazard.
Fog	While fog events do occur within Mendocino County, they are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.



Hazard Type	Explanation
Winter Storm / Extreme Cold/ Freeze Events	While winter storms are present in Mendocino County, they were not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	High priority county-wide, profiled hazard (includes erosion and naturally-occurring asbestos).
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.

Table 5-3: Document Review Crosswalk

Hazards	2014 Mendocino County MJHMP	2009 Mendocino County General Plan	2018 California State HMP
Agricultural Pests	■		■
Climate Change		■	■
Dam Failure	■	■	■
Drought	■	■	■
Earthquake	■	■	■
Flood	■	■	■
Insect Hazards	■		
Landslide		■	■
Levee Failure	■*		■
Manmade Hazards		■	■
Pandemic Disease	■		■
Sea Level Rise			■
Severe Weather			■
Soil Hazards	■**		
Terrorism & Tech Hazards			■
Tsunami	■	■	■
Volcano			■
Wildfire	■***	■	■

* included as part of dam failure

** included naturally occurring asbestos

*** included urban conflagration



5.4.2 Hazard Risk Ranking

The Office of Education's Planning Team used the same hazard prioritization process as the Mendocino County Planning Committee. This process is described in detail in Section 4.3.1 of Vol. 1. Figure 5-2 displays the results of the hazard risk ranking exercise that was performed by the Planning Team. The Planning Team chose to assess Office of Education's vulnerability to following hazards:

- Dam Failure
- Earthquake
- Flood
- Wildfire
- Climate Change
- Pandemic
- Extreme Weather
- Drought

All of these hazards have been profiled in Vol. 1 of this document. The purpose of this annex to specifically address Office of Education's vulnerability to these specifically-identified hazards.

5.4.3 Vulnerability Assessment

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within Office of Education are vulnerable to specific hazard events. The vulnerability assessment included field visits and a GIS overlaying method for examining such vulnerabilities more in depth. Using these methods, participating jurisdictions estimated vulnerable populations, infrastructure, and potential losses from hazards.

5.4.3.1 Risk Assessment

Each participating jurisdiction developed a risk matrix that assessed the probability and impact of various hazards within the jurisdiction. Figure 5-2 is the jurisdiction's risk assessment, which was completed in part using the web based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com. RAMP allows interactive discovery of robust risk, vulnerability, and exposure data developed especially for Mendocino County. RAMP is a mapping platform built specifically for mitigation planning. It displays County/jurisdiction facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. See Vol. 1 for a detailed description of RAMP. The Planning Team used RAMP in meetings and as needed to understand vulnerabilities to Office of Education. Users interactively filter facilities and buildings by natural hazard zones and/or construction characteristics.



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.	Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.	Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in Vol. 1 of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



Climate Change impacts will be addressed at the end of each hazard section within the 2020 plan update and as a stand alone section for each jurisdiction...

For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above. Pandemic will be profiled for every jurisdiction.



Office of Education Risk Matrix

		IMPACT			
		Minor	Limited	Critical	Catastrophic
PROBABILITY	Highly Likely	Medium	High 	Extreme	Extreme
	Likely	Medium	DROUGHT 	EXTREME WEATHER 	Extreme
	Possible	SOIL HAZARD 	SLOPE FAILURE 	High 	High
	Unlikely	Low	Low	Medium	Medium

Figure 5-2: Mendocino County Office of Education Risk Assessment



5.4.3.2 Snapshot Exposure Maps

The included snapshot maps, displayed below in Figure 5-3 through Figure 5-10, illustrate Office of Education's vulnerability to specific hazards. These maps overlay hazard areas with property owned by the Office of Education and school districts represented by the Office of Education. Individual property vulnerability is described in Section 5.4.3.2 and is further available on the Risk Assessment Mapping Tool at MitigateHazards.com.

Figures include:

- Figure 5-3: Mendocino County Office of Education Dam Inundation
- Figure 5-4: Mendocino County Office of Education M7.4 Maacama Garberville
- Figure 5-5: Mendocino CTY Off. of Education M7.8 N. San Andreas -N. Coast -Peninsula – SC MTN
- Figure 5-6: Mendocino County Office of Education FEMA Flood Risk Exposure
- Figure 5-7: Mendocino County Off. of Education Av. Annual Precipitation (1981-2010. Inches)
- Figure 5-8: Mendocino County Office of Education Annual Average Wind Speed (Power Class)
- Figure 5-9: Mendocino County Office of Education Wildfire Risk Exposure
- Figure 5-10: Mendocino County Drought Severity Timeline 2000-2021

Based on the above risk assessment, the snapshot maps focus on those hazards prioritized by the jurisdiction. These maps helped the Planning Team understand the exposure of population, parcels, and critical infrastructure to specific hazards. Each map contains an exposure summary that displays the percent of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed to each respective hazard.

5.4.3.3 Facility Exposure Table

The Office of Education is participating in this MJHMP on behalf of school districts within Mendocino County. Mapping is shown for all District facilities throughout the County. Table 5-4 reflects which properties owned by the Office of Education or one of the school districts it represents are particularly vulnerable to prioritized hazards.

This table is unique to the Office of Education because of the County-wide geographic extent of the Office of Education and the individual school districts who are responsible for mitigation within their own facilities in partnership with the Office of Education.



Table 5-4: Office of Education Facility Exposure to Hazards Table

Mendocino Office of Education Facility Exposure to Hazards						
Facility	Wildfire	Flood	M7.4 EQ Scenario	M7.8 EQ Scenario	Dam Inundation	Asbestos
Anderson Valley Unified						
Anderson Valley District Office	Moderate		Very Strong	Very Strong		
Anderson Valley Elementary School	Moderate		Very Strong	Very Strong		
Anderson Valley Junior High School	Moderate		Very Strong	Very Strong		
Bus Barn	Moderate		Very Strong	Very Strong		
Arena Union Elementary						
Arena Union Elementary	Moderate		Strong	Severe		
District Office	Moderate		Strong	Severe		
Fort Bragg Unified						
Bus Garage W Fuels	Moderate		Strong	Very Strong		
Coast Center	Moderate		Strong	Very Strong		
Dana Gray Elementary	Moderate		Strong	Very Strong		
District Office	Moderate		Strong	Severe		
Fort Bragg High School	Moderate		Strong	Very Strong		
Fort Bragg Middle School	Moderate		Strong	Very Strong		
Noyo High School	Moderate		Strong	Very Strong		
Redwood Elementary School	Moderate		Strong	Very Strong		
Shelter Cove	Moderate		Strong	Very Strong		
Laytonville Unified						
District Office	Moderate		Strong	Severe		
Laytonville Elementary School	Moderate		Severe	Strong		Yes
Laytonville High School (New And Old)	High		Severe	Strong		Yes
Spy Rock School	Moderate		Severe	Moderate		
Leggett Valley Unified						
Bus Garage	High		Severe	Moderate		
Leggett Elementary / High School	High		Severe	Moderate		
Whale Gulch Elementary / High School	High		Very Strong	Moderate		
Manchester Union Elementary						



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Manchester Elementary School	Moderate		Strong	Violent	
Mendocino College					
Mendocino College	Moderate		Severe	Strong	Yes
Mendocino College-Coast Campus Offsite	Moderate		Strong	Very Strong	
Mendocino College-Coast Center	Moderate		Strong	Very Strong	
Mendocino College-North County Center	Moderate	100yr	Violent	Strong	
Mendocino College-Point Arena Field Station	Moderate		Moderate	Severe	
Mendocino County Office					
CA Conservation Corps Site Leased			Violent	Strong	Yes
Calpella School	Moderate		Severe	Strong	Yes
Coast Center	Moderate		Strong	Very Strong	
Data Center For All County Schools			Violent	Strong	Yes
Low Gap Center	Moderate		Severe	Strong	
New Beginnings Community School	Moderate		Severe	Very Strong	
River Center			Violent	Strong	Yes
Mendocino Unified					
Albion School	Very High		Strong	Very Strong	
Bus Barn W Fuel	Moderate		Strong	Severe	
Community Center & Friendship Park Leased	Moderate		Strong	Very Strong	
Community High School	Moderate		Strong	Very Strong	
Comptche School	High		Strong	Very Strong	
District Office	Moderate		Strong	Severe	
Greenwood Preschool	High		Strong	Severe	
Maintenance Shop W 30K Water Tanks	High		Strong	Very Strong	
Mendocino Community Network Isp	Moderate		Strong	Very Strong	
Mendocino High School	Moderate		Strong	Very Strong	
Mendocino K-8 School	High		Strong	Very Strong	
Point Arena Joint Union High					
Bus Barn W Fuel	Moderate		Strong	Severe	
Point Arena High School	Moderate		Strong	Severe	
South Coast Continuation High School	Moderate		Strong	Severe	
Potter Valley Community Unified					
Bus Barn	Moderate		Very Strong	Very Strong	
District Office	Moderate		Strong	Severe	

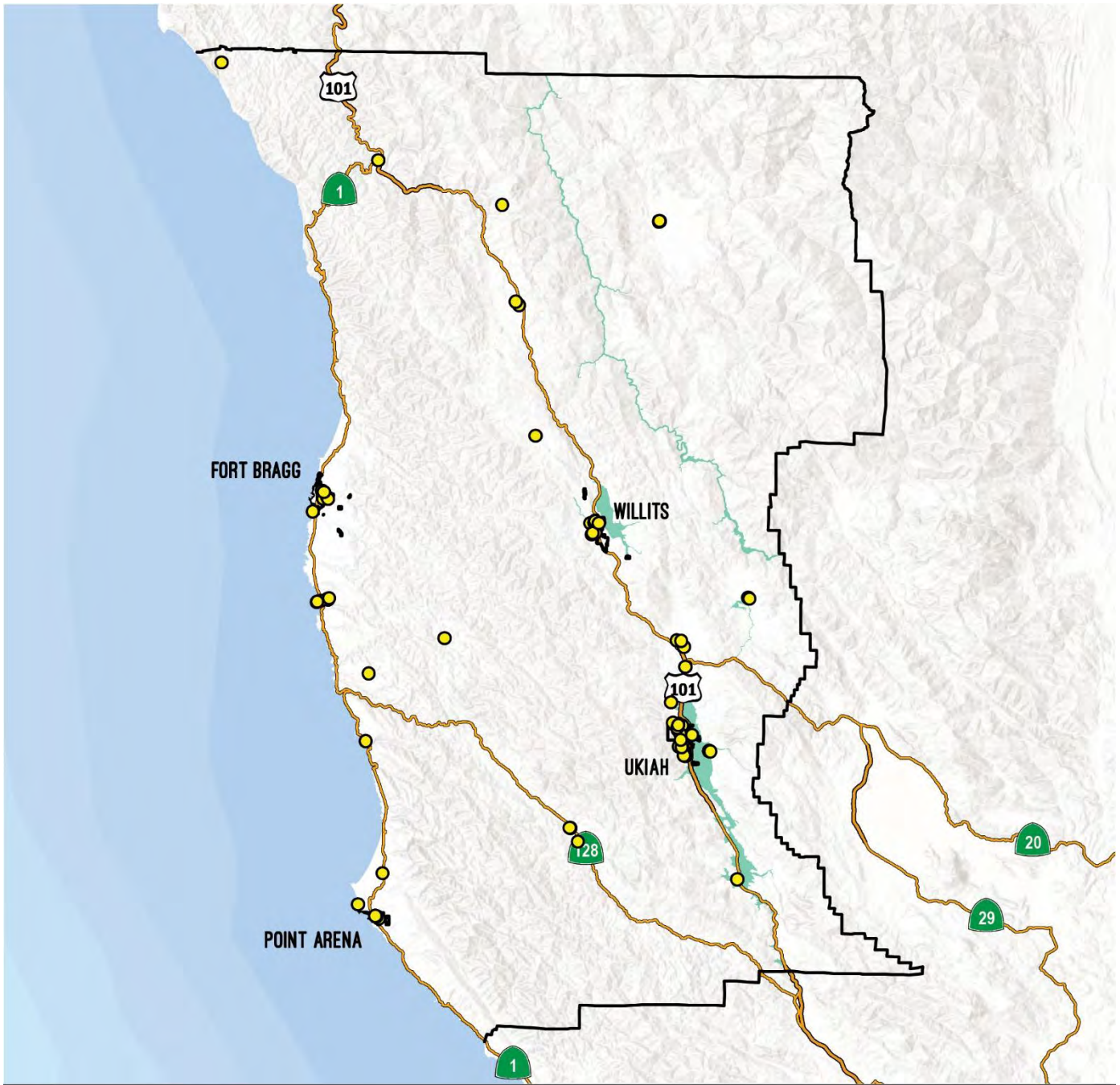


Potter Valley Elementry	Moderate		Very Strong	Strong		Yes
Potter Valley High School	Moderate		Very Strong	Strong		Yes
Round Valley Unified						
Bus Barn W Fuel	Moderate		Strong	Severe		
District Office	Moderate		Strong	Severe		
Parent Center Counseling Office	Moderate		Very Strong	Moderate		
Round Valley Elementary School	Moderate		Very Strong	Moderate		
Round Valley High School	Moderate		Very Strong	Moderate		
Ukiah Unified						
Adult School Facility	Moderate		Severe	Very Strong		
Calpella Elementary School	Moderate		Severe	Strong		Yes
Community Transition Program	Moderate		Severe	Strong		
District Service Center	Moderate		Violent	Very Strong	Yes	
District Warehouse	Moderate		Severe	Very Strong		
Eagle Peak Middle School	Moderate		Severe	Strong		
Frank Zeek Elementary School	Moderate		Severe	Very Strong		
Grace Hudson Elementary School	Moderate		Severe	Strong		
Hopland Elementary School-Vacant	Moderate	100yr	Severe	Very Strong	Yes	Yes
Maintenance Transportation Yard W Fuels	Moderate	100yr	Severe	Very Strong	Yes	
Nokomis Elementary School	High		Severe	Strong		
Oak Manor Elementary School	Moderate	500yr	Violent	Very Strong	Yes	Yes
Pomolita Middle School	Moderate		Severe	Very Strong		
Preschool Village	Moderate		Severe	Very Strong		
Redwood Valley Elementary School-Vacant	High		Severe	Strong		
Redwood Valley Outdoor Ed Project	High		Severe	Strong		Yes
South Valley Continuation High School	Moderate	500yr	Severe	Strong		
Technology Office			Severe	Very Strong	Yes	
Ukiah High School	Moderate		Severe	Strong		
Yokayo Elementary School	Moderate		Severe	Strong		
Willits Unified						
Adolescent Program	Moderate		Violent	Strong		
Baechtel Grove Middle School	Moderate		Violent	Strong		Yes



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Blosser Lane Middle School And District Office	Moderate	Violent	Strong	Yes
Brookside Elementary School	High	Violent	Strong	Yes
Bus Barn W Fuel	Moderate	Strong	Severe	
District Office	Moderate	Strong	Severe	
San Hedrin Continuation High School	High	Violent	Strong	Yes
Sherwood Elementary School	Very High	Severe	Strong	Yes
Willits High School	Moderate	Violent	Strong	
Willits Kids Club - Leased	Moderate	Violent	Strong	Yes



DAM INUNDATION MENDOCINO COUNTY OFFICE OF EDUCATION

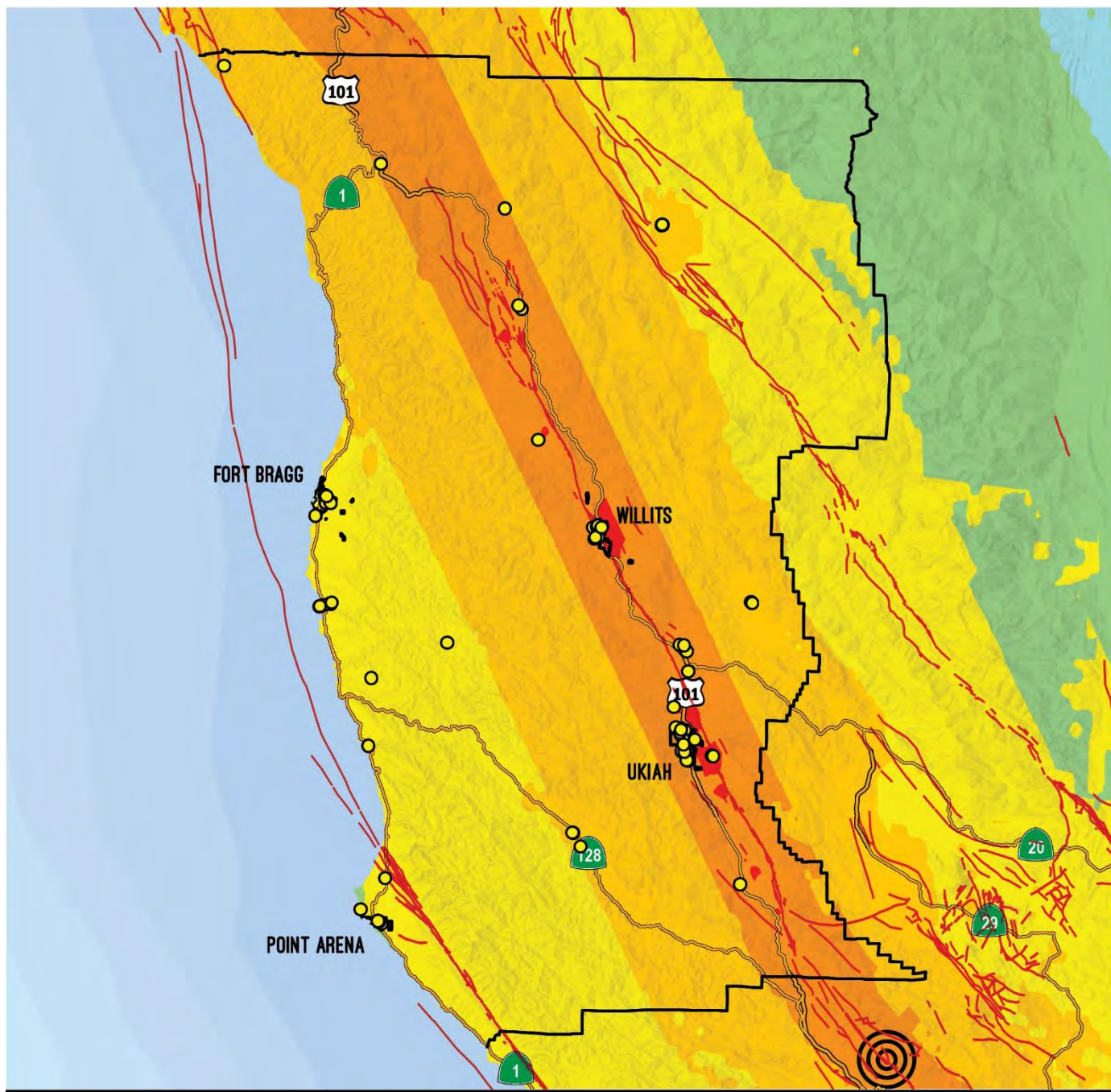
*Data sources: Cal OES.

● MCOE PROPERTY

MAP LEGEND

INUNDATION ZONE

Figure 5-3: Mendocino County Office of Education Dam Inundation



M7.4 MAACAMA GARBERVILLE
MENDOCINO COUNTY OFFICE OF EDUCATION

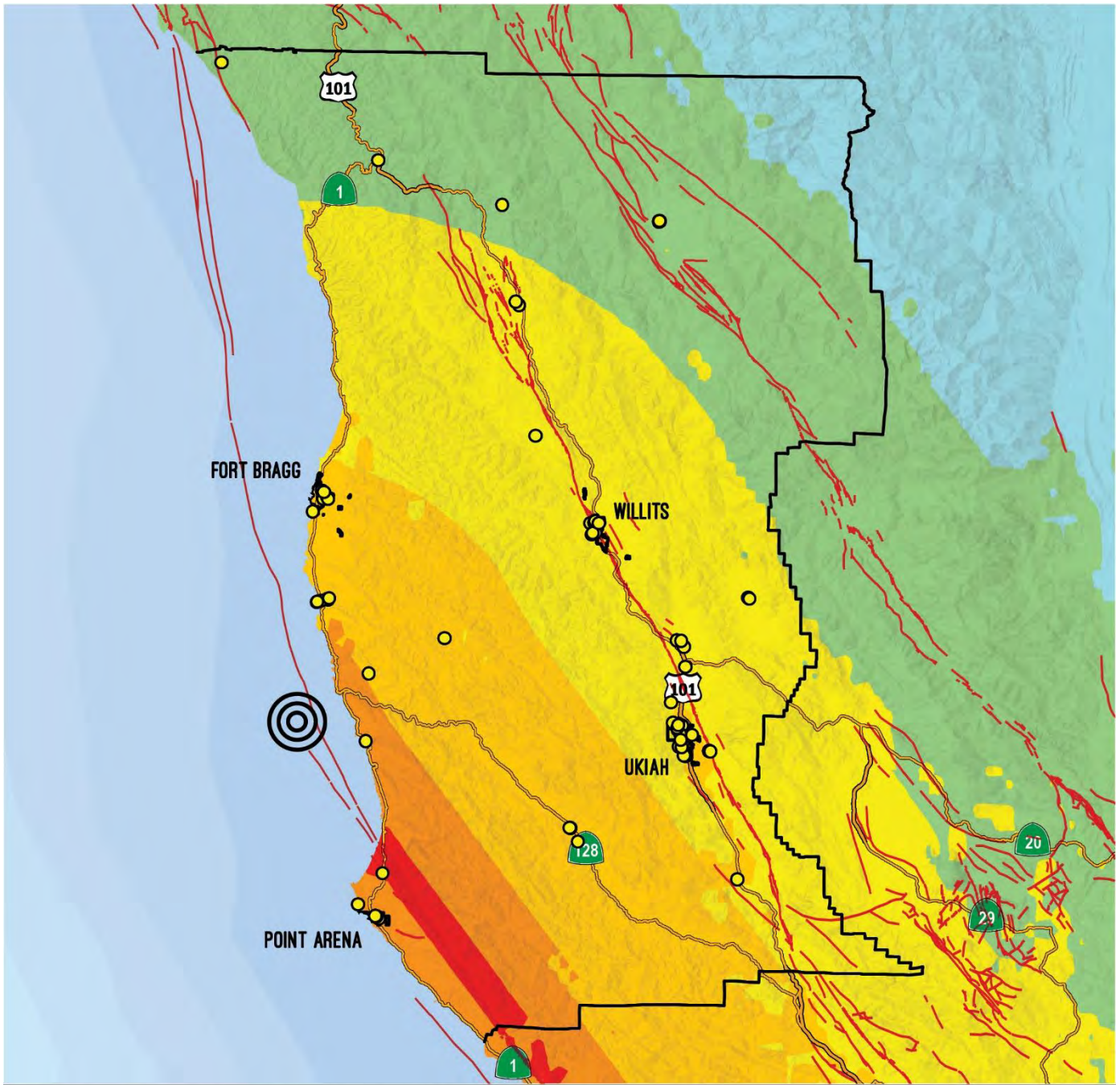
*Data sources: USGS.

● MC OE PROPERTY

MAP LEGEND



Figure 5-4: Mendocino County Office of Education M7.4 Maacama Garberville



M7.8 N. SAN ANDREAS - N. COAST - PENINSULA - SC MTN **MENDOCINO COUNTY OFFICE OF EDUCATION**

*Data sources: USGS.

● MCOE PROPERTY

MAP LEGEND



Figure 5-5: Mendocino CTY Off. of Education M7.8 N. San Andreas -N. Coast -Peninsula – SC MTN

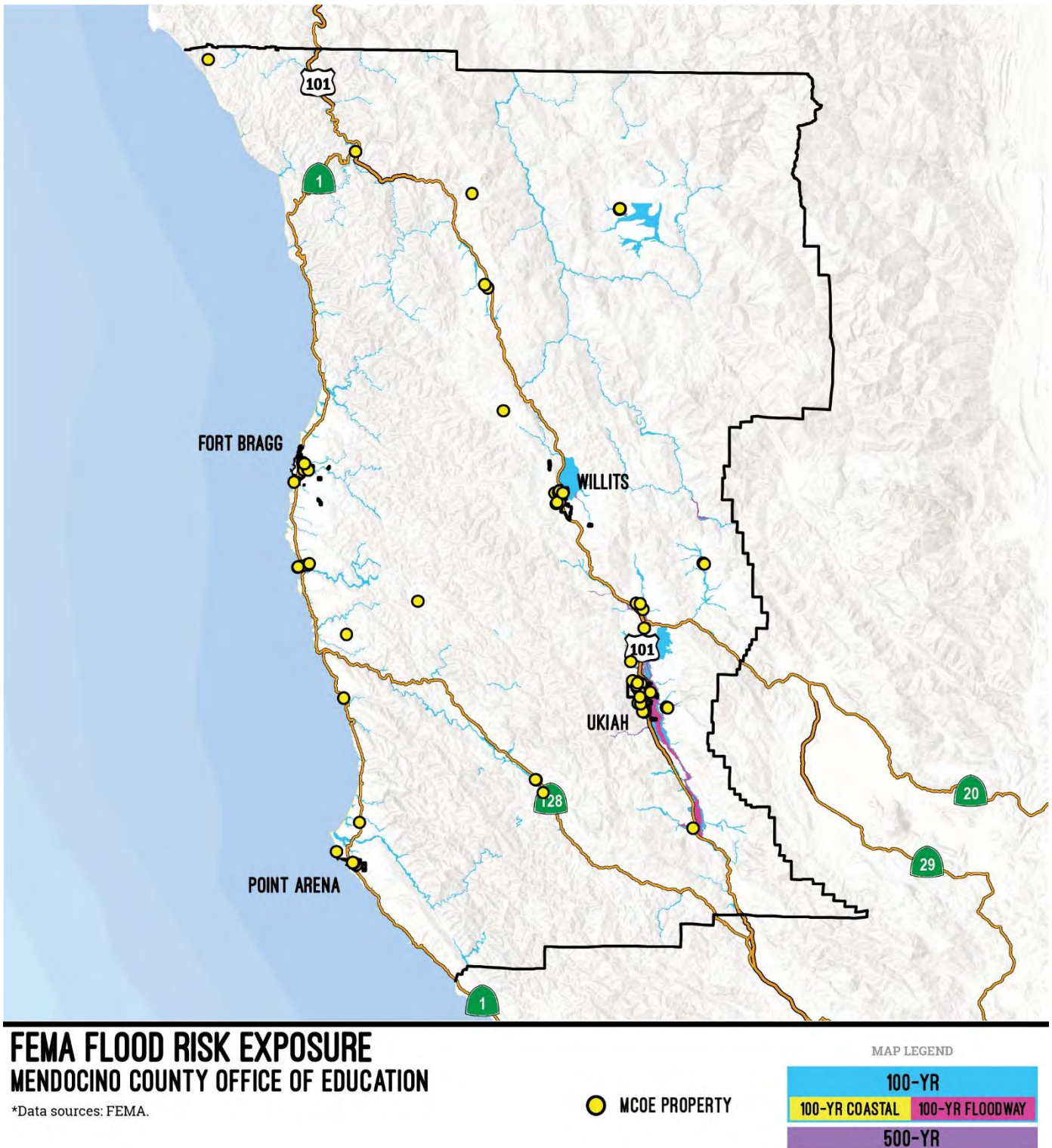
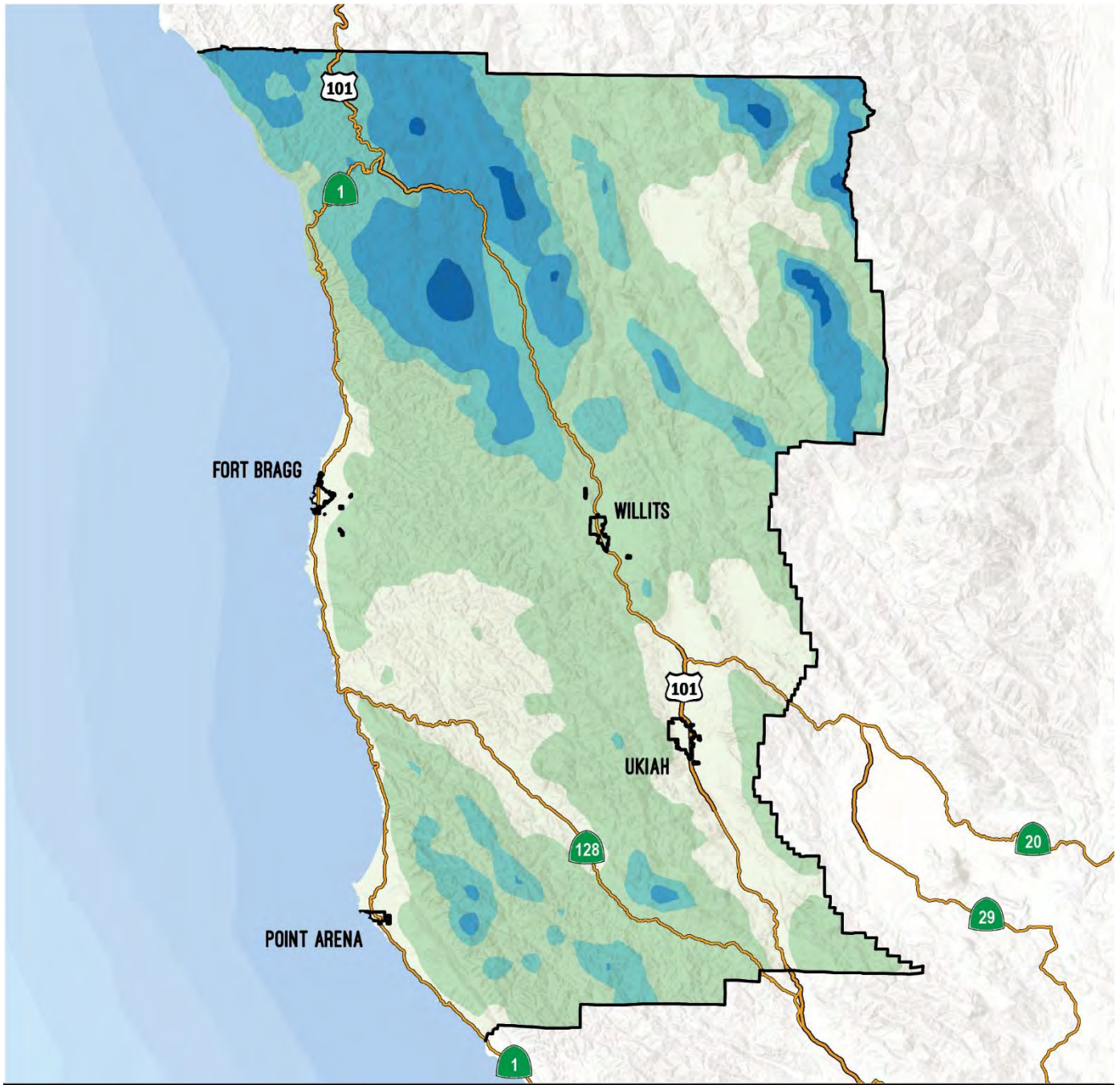


Figure 5-6: Mendocino County Office of Education FEMA Flood Risk Exposure



AVERAGE ANNUAL PRECIPITATION (1981-2010, INCHES)

MENDOCINO COUNTY OFFICE OF EDUCATION

*Data sources: USDA - 1981-2010 Annual Average Precipitation by State.

● MC OE PROPERTY

MAP LEGEND

34	45	60	70	85
44	59	69	84	97
INCHES				

Figure 5-7: Mendocino County Off. of Education Av. Annual Precipitation (1981-2010. Inches)

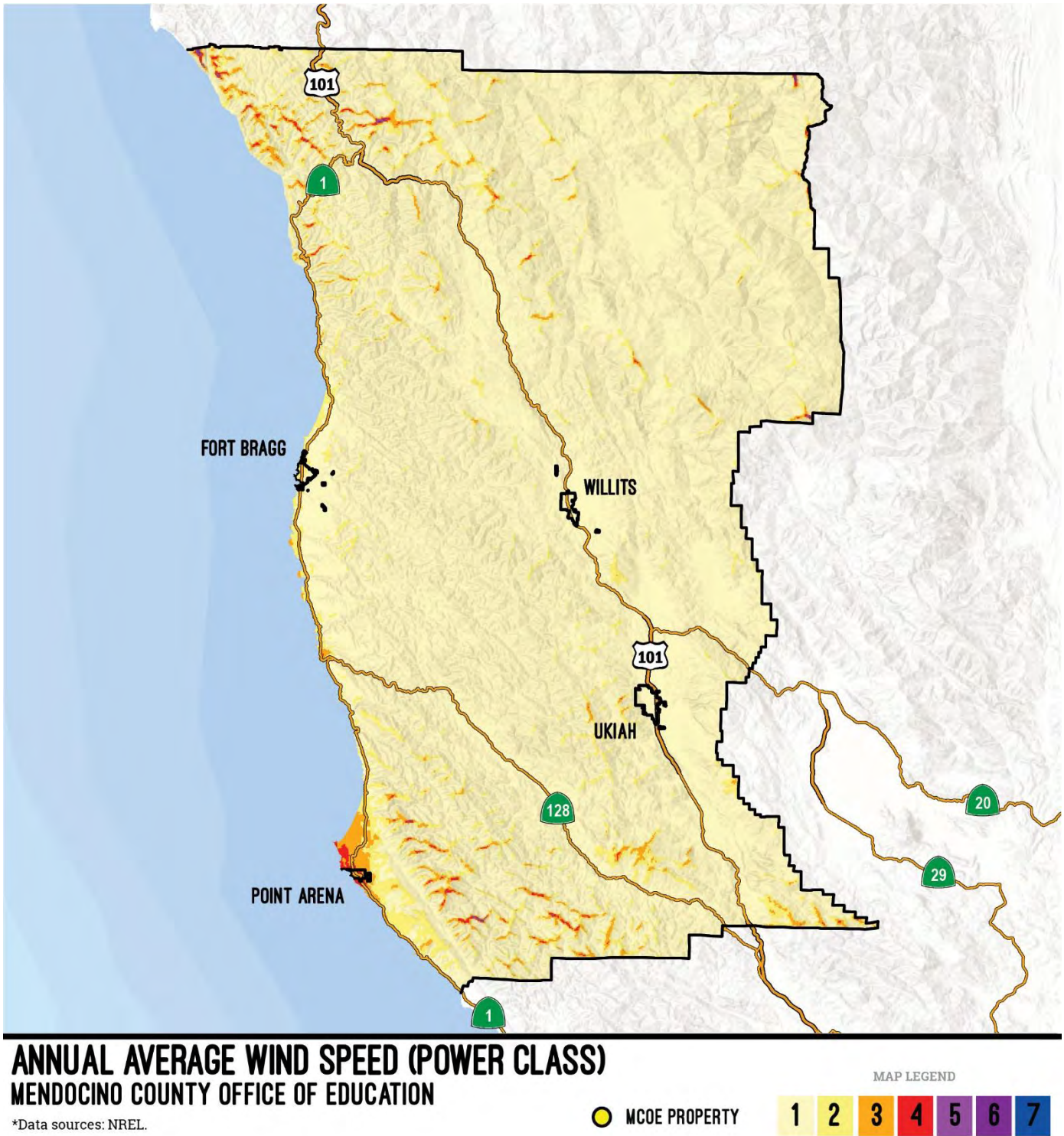
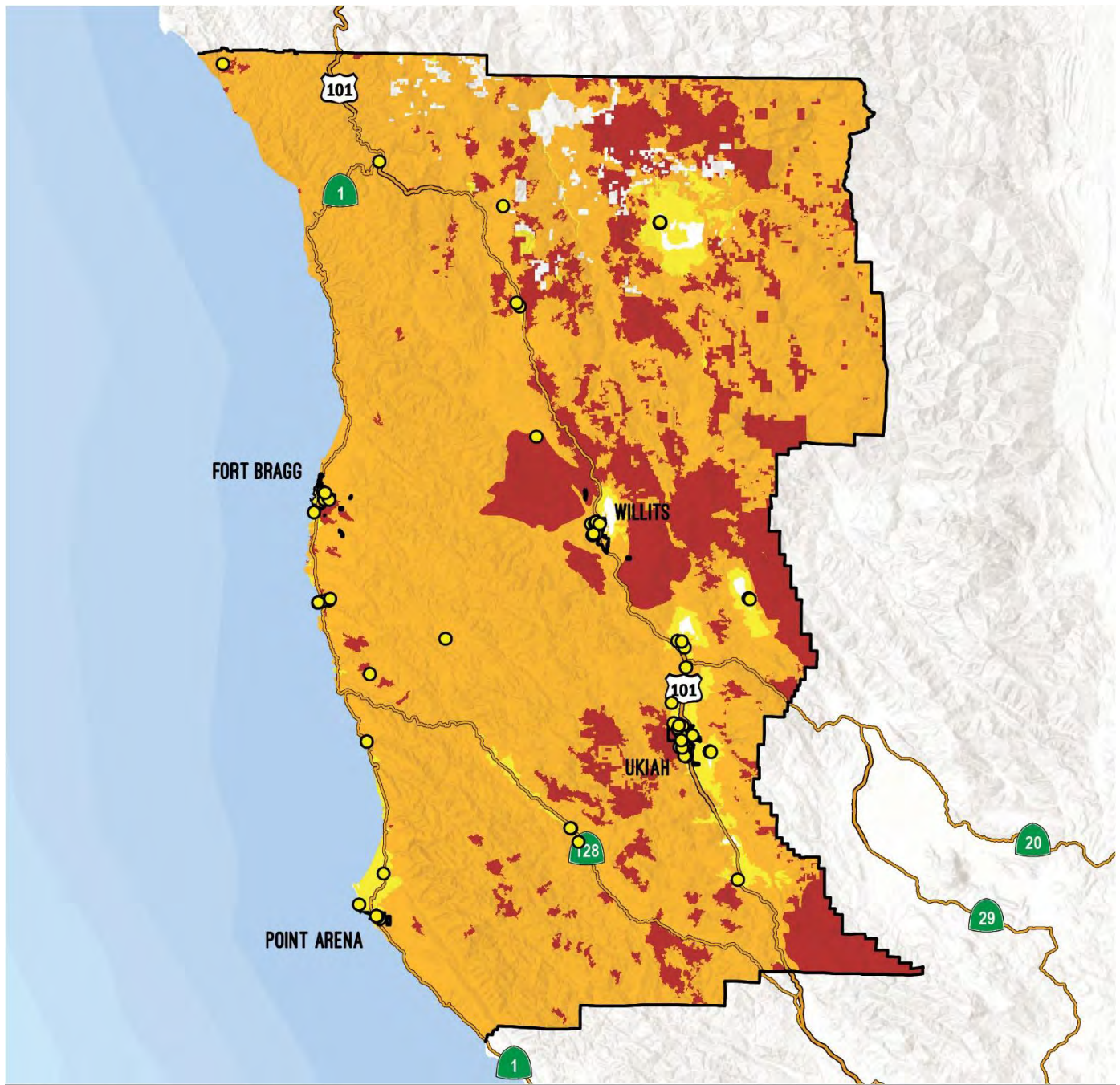


Figure 5-8: Mendocino County Office of Education Annual Average Wind Speed (Power Class)



WILDFIRE RISK EXPOSURE MENDOCINO COUNTY OFFICE OF EDUCATION

*Data sources: Cal Fire, CPUC.

● MCOE PROPERTY

MAP LEGEND



Figure 5-9: Mendocino County Office of Education Wildfire Risk Exposure



Table 5-5: Office of Education Drought Classifications and Impacts

Category	Description	Possible Impacts
D0	Abnormally Dry	- Going into drought, short term dryness, slowing planting, growth of crops or pastures. - Coming out of drought, some lingering water deficits and pasture or crops not fully recovered.
D1	Moderate Drought	- Some damage to crops, pastures - Streams, reservoirs, or wells low, some water shortages developing or imminent - Voluntary water-use restrictions requested
D2	Severe Drought	- Crop or pasture losses likely - Water shortages common - Water restrictions imposed
D3	Extreme Drought	- Major crop/ pasture losses - Widespread water shortages or restrictions
D4	Exceptional Drought	- Exceptional and widespread crop/ pasture losses - Shortages of water in reservoirs, streams, and wells creating water

Adapted from U.S. Drought Monitor Drought Classifications and Impacts

DROUGHT SEVERITY TIMELINE

MENDOCINO COUNTY

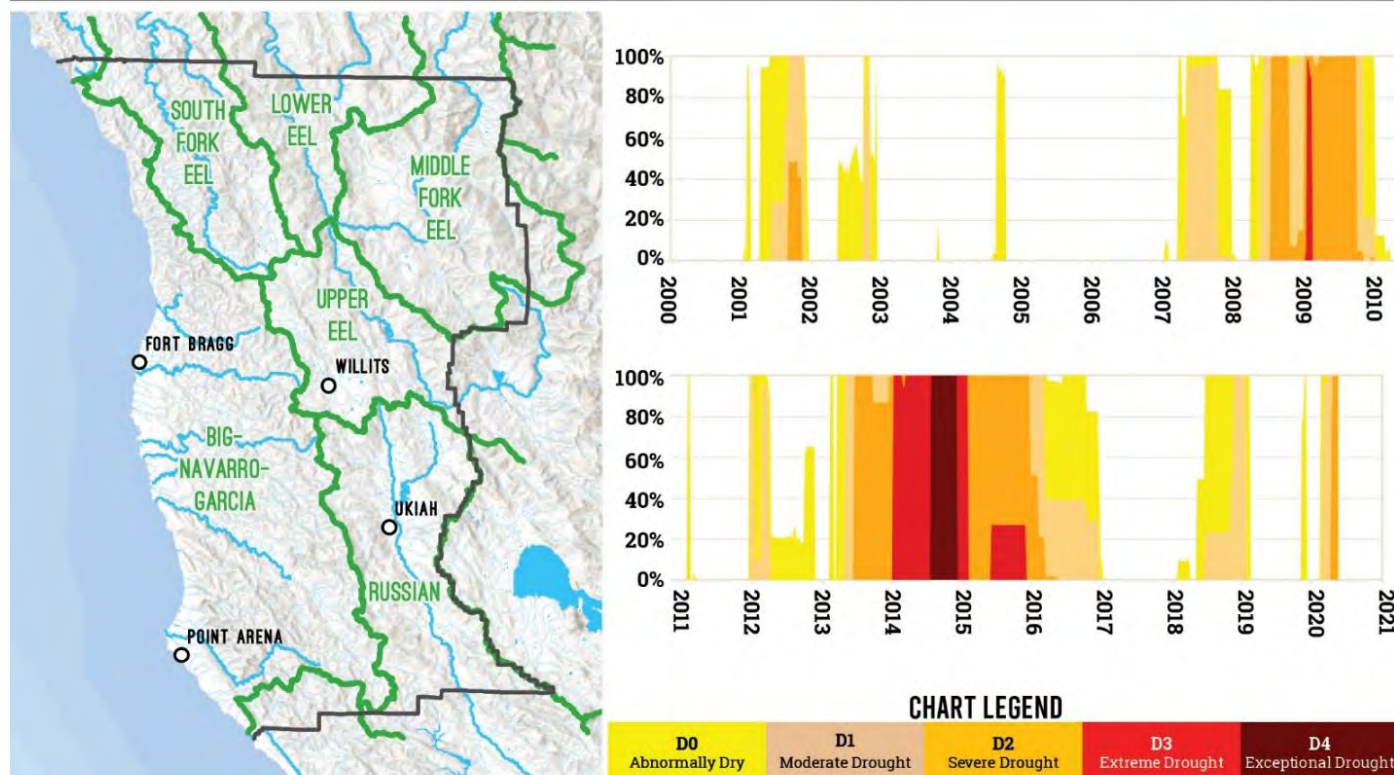


Figure 5-10: Mendocino County Drought Severity Timeline 2000-2021



5.4.3.4 Future Development

School districts, including Office of Education, are guided by numerous state regulations to avoid school sites being located within hazard areas. According to Title 5 of the California Code of Regulations, site selection for future school district facilities must 1) consider the public interest, 2) not be located on an active earthquake fault or fault trace, and 3) be based on geologic and soil engineering studies if the future site is located within any special study zones or an area designated as geologically hazardous in the safety element of the local general plan. State funded school districts are required to coordinate with the local planning agency while siting future school sites, including providing written notice to the relevant planning agency and receive a written report on the site's conformity with the adopted General Plan. (Cal. Code Regs tit. 5 § 14011(f)) The General Plan includes descriptions of areas most appropriate for development, including considerations for hazard safety among many factors.

Numerous building and zoning codes at the state and local level apply to the construction of future school district facilities, and are focused on mitigating the impact from hazards to the facilities. For example, the California Field Act of 1933, which is enforced by the Division of the State Architect (DSA), creates a higher standard for the construction of school facilities to make them resilient to earthquake events. (Cal. Education Code § 17280 et seq.) Buildings constructed under the Field Act are among the safest and most resilient buildings to experience an earthquake. Plans for construction of any future MCOE facilities will be submitted to the DSA to ensure they comply with all the provisions of the Field Act.

Three school districts in Mendocino county, Mendocino, Fort Bragg, and Ukiah, received voter approval in June 2020 to issue General Obligation Bonds for facility construction, re-construction, renovation, and upgrades. Many of the projects listed in the bond language could contribute to mitigating hazards in the respective districts but due to the current cost of schools construction it is not enough to address all the issues that have been identified in each district's facility master plan.

5.4.3.5 Identify Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping and static snapshot maps. Problem statements focused on the impact, victim, or threat that the hazard could create in the jurisdiction, as described in Figure 5-11. Identifying common issues and weaknesses through these problem statements assisted the Planning Committee in understanding the realm of resources needed for mitigation. Jurisdiction problem statements are listed in Table 5-6.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 5-11 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 5-6 and Table 5-11.



IMPACT

Casualties
Property Damage
Business Interruption
Financial Loss
Environmental Contamination



VICTIM

School Children in Hazard High Hazard Areas
Care Facilities in High Hazard Area
Vulnerable Population Exposed to hazards



THREAT

Increased Fuels due to drought
Hotter, drier climates
More Intense Storms
Impervious surfaces = greater runoff
Increases of Invasive Species

Figure 5-11: Guidance for Problem Statements

Table 5-6: Office of Education Problem Statements

Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-AH-MCOE-180	All Hazard	Impact	PE&A - Public Education & Awareness, ES - Emergency Services	Mendocino County Office of Education	MCOOE lacks a formal warning system framework for disseminating information School Districts, faculty, students, and families during and after natural hazard events.	ma-AH-MCOE-169, ma-AH-MCOE-255
ps-CC-MCOE-90	Climate Change	Threat	SP - Structural Projects	Mendocino County Office of Education	Climate Change will increase the frequency and intensity of wildfires, droughts and extreme weather events such as high winds, extreme heat, and flooding. This will impact the schools in various ways, such as unhealthy air quality requiring more filtration of ventilation systems, lack of adequate water to meet domestic and landscape needs, preventative power shutoffs disrupting water sources, classroom ventilation, loss of refrigeration and thus stored food.	ma-WF-MCOE-243
ps-DF-MCOE-88	Dam Failure	Impact	PE&A - Public Education & Awareness	Mendocino County Office of Education	The following facilities are located in a dam inundation zone: Ukiah maintenance yard, Ukiah unified technology office, Willits High School, Ukiah Unified District Service Center, Oak Manor Elementary School, Hopland Elementary School, and Mendocino College Main Campus	ma-DF-MCOE-256



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-DR-MCOE-62	Drought	Impact	NRP - Natural Resource Protection	Mendocino County Office of Education	Drought could impact water supply of schools that rely on well water including Mendocino, Laytonville, Leggett, Manchester, Round Valley, Potter Valley, and Anderson Valley	ma-DR-MCOE-232
ps-DR-MCOE-63	Drought	Impact	NRP - Natural Resource Protection	Mendocino County Office of Education	Impacts of drought could lead to killing of grass on sport's fields, affecting school's ability to host sporting events and could lead to more injuries due to playing on harder surfaces	ma-DR-MCOE-229
ps-DR-MCOE-64	Drought	Threat	NRP - Natural Resource Protection	Mendocino County Office of Education	School facilities have irrigated turf grass and landscaping	ma-DR-MCOE-230
ps-DR-MCOE-65	Drought	Threat	NRP - Natural Resource Protection	Mendocino County Office of Education	Drought could lead to dead plants near buildings which will raise the fire danger around school facilities including Laytonville USD; Round Valley USD; Anderson Va USD; Mendocino, especially Albion and Comptche schools	ma-WF-MCOE-240
ps-DR-MCOE-66	Drought	Threat	NRP - Natural Resource Protection	Mendocino County Office of Education	Prolonged drought weakens large unirrigated oak trees, making them more susceptible to breaking	ma-EW-MCOE-209
ps-EQ-MCOE-82	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County Office of Education	The following school facilities are located in a "violent" shake zone for the Maacama Garberville EQ scenario: Brookside Elementary School, San Hedrin continuation high school, Willits Kids Club, Willits Unified Bus Barn, Willits High School, Baechtel Grove Middle School, Willits Unified District Office, Blosser Lane Middle School and District Office, Ukiah Unified District Service Center, Oak Manor Elementary School, MCOE Data Center, MCOE Conservation Corps Site, all Mendocino College sites	ma-EQ-MCOE-253, ma-EQ-MCOE-252, ma-EQ-MCOE-254, ma-EQ-MCOE-251
ps-EQ-MCOE-83	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County Office of Education	The following school facilities are located in a "violent" shake zone for the 7.8 N. San Andreas EQ scenario: Manchester Elementary School	ma-EQ-MCOE-252, ma-EQ-MCOE-253, ma-EQ-MCOE-254, ma-EQ-MCOE-251



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Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-MCOE-84	Earthquake	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , SP - Structural Projects	Mendocino County Office of Education	Transportation routes that schools rely on could be damaged or destroyed due to earthquake	ma-EQ-MCOE-254
ps-EQ-MCOE-85	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County Office of Education	School facilities lack seismic shut-off valves on gas meters	ma-EQ-MCOE-252
ps-EQ-MCOE-86	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County Office of Education	A list of school facilities on the DSA AB 300 list can be found at the following link: https://www.dropbox.com/s/4uyevu108c3a3mw/Mendocino%20COE%20AB-300%20list.pdf?dl=1	ma-EQ-MCOE-249, ma-EQ-MCOE-250
ps-EQ-MCOE-87	Earthquake	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County Office of Education	Non-Structural Problem - Unknown vulnerabilities within buildings related to unsecured contents in buildings. Pre -1978 buildings may have older suspension systems of suspended ceilings. EQ hazards exist due to failure of non -structural elements such as ceilings, lights, ducts and plumbing (underpinning only).	ma-EQ-MCOE-249, ma-EQ-MCOE-251
ps-EW-MCOE-71	Extreme Weather	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County Office of Education	Heavy rain events create localized flooding issues including pooling of water around the foundations of school facilities.	ma-FL-MCOE-245
ps-EW-MCOE-72	Extreme Weather	Impact	PPRO - Property Protection , NRP - Natural Resource Protection	Mendocino County Office of Education	High winds along the coast of Mendocino County create a risk of loss of power which would affect school's ability to access well water and prevent food from spoiling. Schools at risk include Ft. Bragg USD, Manchester Elementary, Arena Elementary, Point Arena High School Mendocino USD, and Anderson Va USD.	ma-WF-MCOE-243
ps-EW-MCOE-73	Extreme Weather	Impact	SP - Structural Projects	Mendocino County Office of Education	Extreme heat will stress HVAC and electrical systems	ma-EW-MCOE-257
ps-EW-MCOE-74	Extreme Weather	Impact	PPRO - Property Protection , NRP - Natural Resource Protection	Mendocino County Office of Education	High winds can break trees and pose a threat to school facilities, students, and faculty	ma-EW-MCOE-209



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EW-MCOE-75	Extreme Weather	Threat	PPRO - Property Protection , NRP - Natural Resource Protection	Mendocino County Office of Education	Big Cypress trees pose a threat to Mendocino Unified School District. Big cypress trees are a hollow tree that wind events can break and create hazards for buildings, students, and faculty.	ma-EW-MCOE-209
ps-EW-MCOE-76	Extreme Weather	Threat	PPRO - Property Protection , NRP - Natural Resource Protection	Mendocino County Office of Education	High winds can lead to drying out vegetation and increasing fire risk around school facilities	ma-WF-MCOE-240
ps-FL-MCOE-67	Flood	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County Office of Education	Laytonville High School routinely experiences flooding, threatening buildings and equipment	ma-FL-MCOE-245, ma-FL-MCOE-247
ps-FL-MCOE-68	Flood	Impact	PPRO - Property Protection , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County Office of Education	Hopland Elementary and Ukiah Unified are located in the 100-YR flood plain	ma-FL-MCOE-247, ma-FL-MCOE-248
ps-FL-MCOE-69	Flood	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County Office of Education	Flooding on State HWY 1 cuts off access between Pt Arena schools and Manchester Elementary, potentially stranding students and cutting off school food service to Manchester	ma-EQ-MCOE-254
ps-FL-MCOE-70	Flood	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County Office of Education	Russian River flooding creates access issues for students on east side of Ukiah Valley	ma-EQ-MCOE-254
ps-PN-MCOE-143	Pandemic	Victim	SP - Structural Projects	Mendocino County Office of Education	School facilities may not have adequate fresh air/ventilation to safely host school functions (students and faculty).	ma-PN-MCOE-244
ps-WF-MCOE-79	Wildfire	Impact	SP - Structural Projects	Mendocino County Office of Education	School facilities lack backup power generation in the event of power shutoffs due to wildfire	ma-WF-MCOE-243
ps-WF-MCOE-80	Wildfire	Impact	SP - Structural Projects	Mendocino County Office of Education	Outdated ventilation systems worsen the impacts of wildfire for students and faculty. Poor air quality can impact students/faculty ability to exit/enter school facilities	ma-WF-MCOE-241



Problem No.	Hazard	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-WF-MCOE-81	Wildfire	Impact	PPRO - Property Protection , SP - Structural Projects	Mendocino County Office of Education	Some school facilities may lack fire proofed building materials such as fire proof roofing.	ma-WF-MCOE-242
ps-WF-MC-116	Wildfire	Impact	PPRO - Property Protection , PE&A - Public Education & Awareness , NRP - Natural Resource Protection , SP - Structural Projects	Mendocino County Office of Education	Wildfire and the effects of wildfire present a threat to all school facilities in Mendocino County	ma-WF-MCOE-240

5.4.3.6 Mitigation Action Support Tool (MAST)

As a living document, hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for participating jurisdictions. The Mitigation Action Support Tool (MAST) is accessible through <https://mitigatehazards.com/mendocino-county/>.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdictions and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Participating jurisdictions can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction's ability to apply for FEMA's Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.



5.5 Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section (a.k.a. problem statements) with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success.

5.5.1 Capabilities Assessment

This section examines the planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards.

Capabilities assessments include considerations of a community's adaptive capacity for climate change, as outlined in Cal OES' 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region's existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity. (Cal. Adaptation Planning Guide, 2020, p. 94)

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (*Column 1, Status*)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (*Column 2, Current Mitigation Use*)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (*Column 3, Future Opportunity*)

The capabilities assessment is easily-digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.

For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Volume 1. Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities as well.



5.5.1.1 Planning and Regulatory Capabilities

Table 5-7: Planning and Regulatory Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				Larger agencies have formal capital plans, smaller is more responsive than planned. The HMP will provide focus
Annual Fire Prevention Plan				Landscape maintenance, Fire suppression equipment at all sites
Seismic Safety Program (Non-structural)				Annual participation in Great Shakeout
Earthquake Modernization Plan (Building Safety)				Routine safety inspection include earthquake damage resistance/mitigation
Stormwater Management Program (Annual Inspections)				
Hazard Plans and Programs				
Floodplain Response Plan				
Community Wildfire Protection Plan (CWPP)				Participated in County funded Fire Vulnerability Assessment and Evacuation Plan listing schools sites and also school transportation resources
Ground Water Management Planning / Plans				
Climate Action Plan				
Drought Mgmt/ Contingency Plan				
FireWise Communities within District				County-wide and well as community councils
Hazard-Related Public Outreach Program				Public outreach activities for both the Wildfire vulnerability and Hazard Mitigation plans



5.5.1.2 Administrative and Technical Capabilities

Table 5-8: Administrative and Technical Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Staff Capacity				
Emergency Manager				Yes but with other duties as well
Civil Engineer				
Dedicated Public Outreach Personnel				
GIS Specialist and Capability				
Grant Manager, Writer, or Specialist				Both grant writer and manager on staff
Other	N/A	N/A	N/A	
Warning Systems/Services				
General				MendoAlert and Nixle.
Flood				Flood, wildfire, and geological hazard warning systems have no specific designated warning systems, but are covered under the general warning services listed above.
Wildfire				Flood, wildfire, and geological hazard warning systems have no specific designated warning systems, but are covered under the general warning services listed above.
Geological Hazards				Flood, wildfire, and geological hazard warning systems have no specific designated warning systems, but are covered under the general warning services listed above.



5.5.1.3 Financial Capabilities

Table 5-9: Financial Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval	N/A	N/A	N/A	
Utilities Fees			N/A	
System Development Fee	N/A	N/A		
General Obligation Bonds to Incur Debt	N/A	N/A		Large districts have active bond programs
Special Tax Bonds to Incur Debt	N/A	N/A		
Withheld Spending in Hazard-Prone Areas	N/A	N/A		
Stormwater Service Fees			N/A	
Capital Improvement Project Funding	N/A	N/A		Large districts have active bond programs



5.5.1.4 Education and Outreach

Table 5-10: Education and Outreach Capabilities Summary

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				Updates to hazardous incidents are posted as banner on website
Dedicated Social Media				
Hazard Info. Avail. at Library/ Planning Desk				
Annual Public Safety Events				Great Shakeout participation
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				Web site includes news outlet.
Fire Safe Councils				Active in both the Wildfire Vulnerability and Evacuation Plan and Multi-Jurisdictional Hazard Mitigation Plan. Engaged with the county FireSafe Council
Resource Conservation Districts				
Other	N/A	N/A	N/A	



5.5.2 Mitigation Actions

Mitigation actions were developed based upon the jurisdiction's priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Section 5.5.1 of Volume 1. Table 5-11 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon the Planning Committee consensus.

Each participating jurisdiction, including the Office of Education, considered ongoing relevancy of mitigation actions from the existing MJHMP and retained or removed such actions while adding new relevant actions as well. Mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the previous HMP effort were not included because they were an inherent part of the HMP update process or were not detailed enough for implementation at a local Jurisdiction level. Office of Education has made significant changes to other mitigation actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices. Volume 1, Section 5.5.2 provides a record of County-wide mitigation actions, the status, and additional notes for each action.

Table 5-11 lists each mitigation action for Office of Education. Each participating jurisdiction developed unique mitigation actions, targeted at their own unique priorities and vulnerabilities. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST. The detail in Table 5-11 meets the regulatory requirements of FEMA and DMA 2000.

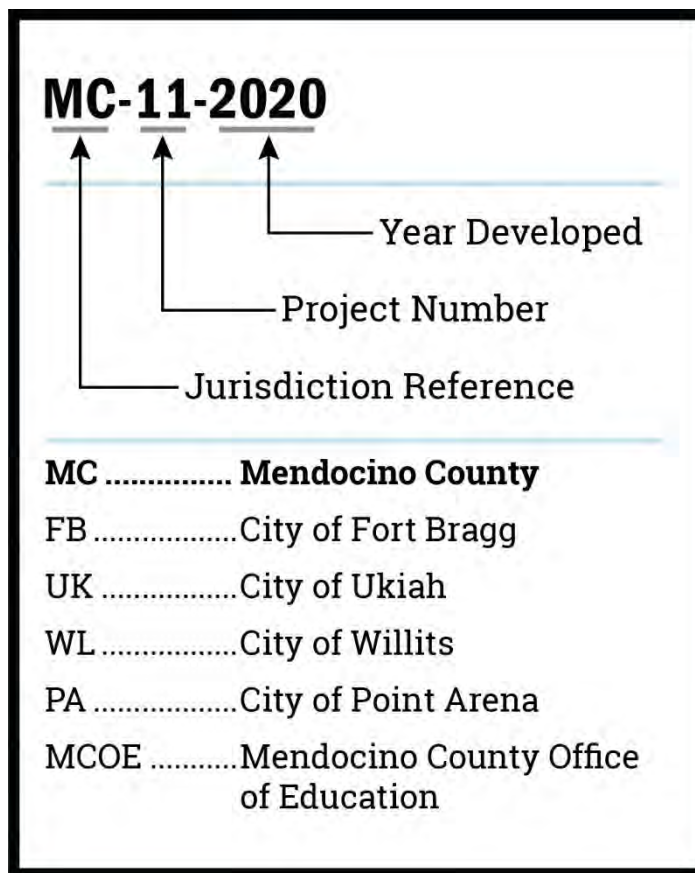


Figure 5-12: Mitigation Action Key



Table 5-11. Office of Education Mitigation Actions

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-AH-MCOE-169	All Hazard	PE&A - Public Education & Awareness	Ongoing	2014	Mendocino County Office of Education	Integrate annual communications lists, which include amateur radio operators, into Emergency Operations Plan to mitigate communications failures during regional disasters.	County Office of Education and School Districts	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	Ongoing	Project	HMGP / BRIC	Medium	ps-AH-MCOE-180
ma-WF-MCOE-243	All Hazard	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Install back-up generators at essential district facilities that currently lack back up power generation.	Facilities Planning and Development	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	5%	HMGP / BRIC	High	ps-WF-MCOE-79, ps-CC-MCOE-90, ps-EW-MCOE-72
ma-AH-MCOE-255	All Hazard	PE&A - Public Education & Awareness	Pending	2020	Mendocino County Office of Education	Develop disaster warning system framework to disseminate information to districts, faculty, students, and families before, during, and after natural hazard events.	Office of Education	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	5%	HMGP / BRIC	High	ps-AH-MCOE-180
ma-DF-MCOE-256	Dam Failure	PE&A - Public Education & Awareness	Pending	2020	Mendocino County Office of Education	Participate in County-wide warning system program, detailed in MC-199 of Vol. 1 of this HMP, led by the County as a participating jurisdiction.	Mendocino County and Office of Education	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , FMA	High	ps-DF-MCOE-88
ma-DR-MCOE-229	Drought	NRP - Natural Resource Protection	Pending	2020	Mendocino County Office of Education	Replace sports fields with irrigated turf grass with artificial turf that doesn't require watering	Office of Education	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	Medium	ps-DR-MCOE-63
ma-DR-MCOE-230	Drought	NRP - Natural Resource Protection	Pending	2020	Mendocino County Office of Education	Retrofit landscape with drought-tolerant plant species and ground cover to minimize water use.	Facilities Planning and Operations	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Project	HMGP / BRIC	Medium	ps-DR-MCOE-64
ma-DR-MCOE-232	Drought	NRP - Natural Resource Protection	Pending	2020	Mendocino County Office of Education	Develop a drought management/contingency plan to minimize the adverse impacts of drought on faculty, students, and facilities.	Office of Education	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	High	ps-DR-MCOE-62



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EQ-MCOE-249	Earthquake	PPRO - Property Protection	Pending	2020	Mendocino County Office of Education	Conduct seismic evaluations for buildings on AB300 List and buildings acquired by the district built prior to 1978 that have not been addressed.	Facilities Planning and Operations	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EQ-MCOE-86, ps-EQ-MCOE-87
ma-EQ-MCOE-250	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Complete DSA Retrofits for non-wood frame structures built before July 1, 1978 (Category 2 Buildings) on AB300 list that require detailed seismic evaluation.	Facilities Planning and Development	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-MCOE-86
ma-EQ-MCOE-251	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Repair and Seismically Upgrade, or remove from inventory, and Replace with permanent buildings, Portable Classrooms AND other essential facilities in portable structures. Structurally reinforce (by securing to the ground) certain portable classrooms for seismic conditions, where adequate per Code and cost-effective. Support additional portable classroom requirements in more cost-effective than permanent construction.	Facilities Planning and Development	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-MCOE-87, ps-EQ-MCOE-83, ps-EQ-MCOE-82
ma-EQ-MCOE-252	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Install seismic shut-off valves on gas fixtures on all school facilities.	Facilities Planning and Development	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EQ-MCOE-85, ps-EQ-MCOE-82, ps-EQ-MCOE-83
ma-EQ-MCOE-253	Earthquake	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Retrofit non-compliant suspended ceilings in district buildings. This includes Non-Structural Suspended Gypsum Dry-Wall & Cement Plaster Ceilings built 1950-1974.	Facilities Planning and Development	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-EQ-MCOE-82, ps-EQ-MCOE-83



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-EQ-MCOE-254	Earthquake	ES - Emergency Services	Pending	2020	Mendocino County Office of Education	Draft and adopt an emergency operations plan that Identifies and plans for alternative transportation routes in case of natural disaster during school operating hours.	Transportation and Planning	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Planning	HMGP / BRIC	Medium	ps-EQ-MCOE-84, ps-EQ-MCOE-82, ps-EQ-MCOE-83, ps-FL-MCOE-69, ps-FL-MCOE-70
ma-EW-MCOE-209	Extreme Weather	PPRO - Property Protection	Pending	2020	Mendocino County Office of Education	Implement a tree removal program for trees that are at a high risk to snapping in wind events (i.e. big cypress trees) around OoE facilities and infrastructure.	Mendocino County	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-EW-MCOE-74, ps-DR-MCOE-66, ps-EW-MCOE-75
ma-FL-MCOE-245	Extreme Weather	PPRO - Property Protection	Pending	2020	Mendocino County Office of Education	Rehabilitate school site drainage systems.	Maintenance and Operations	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , FMA	High	ps-FL-MCOE-67, ps-EW-MCOE-71
ma-EW-MCOE-257	Extreme Weather	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Upgrade HVAC systems that are adequate to handle projected future temperature increases and heat waves.	Facilities and Maintenance	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	Medium	ps-EW-MCOE-73
ma-FL-MCOE-247	Flood	PPRO - Property Protection	Pending	2020	Mendocino County Office of Education	Regrade selected sites to facilitate better drainage.	Facilities and Maintenance	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-FL-MCOE-67, ps-FL-MCOE-68
ma-FL-MCOE-248	Flood	PPRO - Property Protection	Pending	2020	Mendocino County Office of Education	Repair and maintain erosion on retention and detention basins for school sites.	Maintenance and Operations	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC	High	ps-FL-MCOE-68
ma-PN-MCOE-244	Pandemic	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic, including adequately filtered ventilation, fresh air options and physical barriers.	Facilities and Operations	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC	High	ps-PN-MCOE-143



Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Problem Statements
ma-WF-MCOE-240	Wildfire	NRP - Natural Resource Protection	Pending	2020	Mendocino County Office of Education	Implement a defensible space program to include clearing of excessive fuels (trees, shrubs, brush) around school facilities and installation of landscaping materials that create defensible space.	Facilities and Maintenance	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-MC-116, ps-DR-MCOE-65, ps-EW-MCOE-76
ma-WF-MCOE-241	Wildfire	PPRO - Property Protection	Pending	2020	Mendocino County Office of Education	Enhance building ventilation systems for wildfire smoke by improving air filtration options.	Maintenance and Operations	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-MCOE-80
ma-WF-MCOE-242	Wildfire	SP - Structural Projects	Pending	2020	Mendocino County Office of Education	Retrofit school facilities with fireproof building materials to better withstand potential impacts of wildfire.	Facilities and Operations	High - Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FP&S	High	ps-WF-MCOE-81

RESOLUTION NO. 2020-**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF UKIAH ADOPTING THE 2020 MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN FOR MENDOCINO COUNTY****WHEREAS:**

1. The City of Ukiah is a political subdivision of the State of California and an official participating jurisdiction in the "2020 Mendocino County Multi-Jurisdictional Hazard Mitigation Plan" (MJHMP); and
2. The MJHMP is set forth in Exhibit A, attached hereto and by reference incorporated herein; and
3. The City of Ukiah recognizes the MJHMP as the official hazard mitigation plan for the County and participating jurisdictions; and
4. The City of Ukiah, with the assistance from the County, has gathered information and prepared the MJHMP in accordance with Federal Emergency Management Agency (FEMA) requirements pursuant to 44 C.F.R. § 201.6; and
5. The City of Ukiah Jurisdictional Annex set forth in Volume 2 of the MJHMP recognizes the threat that natural hazards pose to people and property within our community; and
6. The City of Ukiah has reviewed the MJHMP and affirms that the hazard mitigation plan actions in the City of Ukiah's Jurisdictional Annex will reduce the potential for harm to people and property from future hazard occurrences with our community; and
7. Congress passed the Disaster Mitigation Act of 2000 (Disaster Mitigation Act) emphasizing the need for pre-disaster mitigation of potential hazards; and
8. The Disaster Mitigation Act made available mitigation grants to state and local governments; and
9. An adopted multi-hazard mitigation plan is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and
10. The City Council fully participated in the FEMA-prescribed mitigation planning process to prepare this MJHMP; and
11. Citizens residing within the City's jurisdiction were afforded opportunities to comment and provide input in the MJHMP and the actions in the Plan; and
12. The City of Ukiah, as a fully participating jurisdiction of the MJHMP, is an eligible sub-applicant to the State of California under FEMA's hazard mitigation grant program guidance; and
13. The California Office of Emergency Services (Cal OES), and the FEMA Region IX officials have reviewed the MJHMP, and approved it contingent upon this official adoption by the participating governing body; and

14. The City Council desires to comply with the requirements of the Disaster Mitigation Act and to augment its emergency planning efforts by formally adopting the MJHMP; and
15. Adoption by the City Council for the City of Ukiah demonstrates the jurisdiction's commitment to fulfilling the mitigation goals and objectives outlined in this MJHMP; and
16. Adoption of this Plan helps to coordinate the responsible agencies to carry out their responsibilities under the MJHMP.

NOW, THEREFORE, BE IT RESOLVED that:

1. That the City of Ukiah adopts the 2020 Multi-Jurisdictional Hazard Mitigation Plan Vol. 1 for Mendocino County and the City of Ukiah Jurisdictional Annex in Vol. 2, as approved by FEMA and Cal OES, as the hazard mitigation plan for the City of Ukiah.
2. That the City Council orders the City Manager to submit an approved and signed copy of this resolution to the Cal OES and FEMA Region IX officials to enable the plan's final approval.

PASSED AND ADOPTED this 18th day of November, 2020, by the following roll call vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Douglas F. Crane, Mayor

ATTEST:

Kristine Lawler, City Clerk



AGENDA SUMMARY REPORT

SUBJECT: Receive Updates on City Council Committee and Ad Hoc Assignments, and, if Necessary, Consider Modifications to Assignments and/or the Creation/Elimination of Ad Hoc(s).

DEPARTMENT: City Clerk

PREPARED BY: Kristine Lawler, City Clerk

PRESENTER: Mayor Crane and Various Councilmembers

ATTACHMENTS:

1. 2020 City Council Special Assignments

Summary: City Council members will provide reports and updates on their committee and ad hoc assignments. If necessary, the Council may consider modifications.

Background: City Council members are assigned to a number of committees and ad hoc activities. These assignments are included as Attachment 1.

Discussion: Previously, the City Council discussed having more time allocated to reporting on committee and ad hoc activities. Often, the Council Reports section of the regular agenda is rushed due to impending business (i.e., public hearings), and not enough time is afforded for reports beyond community activities.

In an effort to foster regular updates on committee and ad hoc assignments, this item is being placed on the agenda to provide the City Council members an expanded opportunity to report on assignments and modify assignments as necessary.

Recommended Action: Receive report(s). The Council will consider modifications to committee and ad hoc assignments along with the creation/elimination ad hoc(s).

BUDGET AMENDMENT REQUIRED: No

CURRENT BUDGET AMOUNT: N/A

PROPOSED BUDGET AMOUNT: N/A

FINANCING SOURCE: N/A

PREVIOUS CONTRACT/PURCHASE ORDER NO.: N/A

COORDINATED WITH: N/A

Approved: 
Sage Sangiacomo, City Manager

2020 CITY COUNCIL SPECIAL ASSIGNMENTS

COUNTY/REGIONAL OnGoing One + Alternate	MTG DATE/TIME	MEETING LOCATION		MAILING ADDRESS/CONTACT	COMMITTEE FUNCTION	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Disaster Council	Shall meet a minimum of twice a year at a time and place designated upon call of the chair	Place designated upon call of the chair or, if she/he is unavailable or unable to call such meeting, the first vice chair and then the City Manager or her/his designee.		Emergency Management Coordinator 300 Seminary Ave. Ukiah, CA 95482 467-5765 - Tami Bartolomei	Develop any necessary emergency and mutual aid plans, agreements, ordinances, resolutions, rules, and regulations.	Mulheren Orozco- Alternate	Tami Bartolomei, Community Services Administrator; 467-5765 tbartolomei@cityofukiah.com
Greater Ukiah Business & Tourism Alliance	3rd Tuesday of month, 11:30 a.m.	200 S School St. Ukiah, CA 95482		200 S School St. Ukiah, CA 95482	Promotes tourism and works to strengthen and promote the historic downtown and businesses within the greater Ukiah area	Mulheren	Shannon Riley, Deputy City Manager; 467-5793 sriley@cityofukiah.com
Mendocino Council of Governments (MCOG)	1st Monday of month, 1:30 p.m.	Board of Supervisors Chambers 501 Low Gap Road Ukiah, CA		Executive Director 367 N. State Street, Ste. 206 Ukiah, CA 95482 463-1859	Plan and allocate State funding, transportation, infrastructure and project County wide	Brown Mulheren- Alternate	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
Mendocino County Inland Water and Power Commission (IWPC)	2nd Thursday of month, 6:00 p.m.	Civic Center 300 Seminary Avenue conference room 5		IWPC Staff P.O. Box 1247 Ukiah, CA 95482 391-7574 - Candace Horsley	Develops coordination for water resources and current water rights: Potter Valley project - Eel River Diversion	Orozco Brown- Alternate	Sean White, Director of Water Resources; 463-5712 swwhite@cityofukiah.com
Mendocino Solid Waste Management Authority (MSWMA)	3rd Thursday of every other month (varies), 10:00 a.m.	Willits Council Chambers		Solid Waste Director 3200 Taylor Drive Ukiah, CA 95482 468-9710	County-wide Solid Waste JPA	Brown Scalmanini- Alternate	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
Mendocino Transit Authority (MTA) Board of Directors	Last Wednesday of month, 1:30 p.m.	Alternating locations - Ukiah Conference Center or Fort Bragg, or Point Arena		Executive Director 241 Plant Road Ukiah, CA 95482 462-1422	County-wide bus transportation issues and funding	Mulheren Brown- Alternate	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
North Coast Opportunities (NCO)	4th Wednesday of month, 2 p.m.	Alternating locations - Ukiah and Lakeport		Ross Walker, Governing Board Chair North Coast Opportunities 413 North State Street Ukiah, CA 95482	Assist low income and disadvantaged people to become self reliant	Bartolomei (appointed 12/19/18)	Tami Bartolomei, Community Services Administrator; 467-5765 tbartolomei@cityofukiah.com
North Coast Rail Authority (NCRA)	2nd Wednesday of month, 10:30 a.m.	Various Locations - announced		419 Talmage Road, Suite M Ukiah, CA 95482 463-3280	Provides a unified and revitalized rail infrastructure meeting the freight and passenger needs of the region	Shannon Riley, Deputy City Manager	Shannon Riley, Deputy City Manager; 467-5793 sriley@cityofukiah.com
Russian River Watershed Association (RRWA)	4th Thursday of month, 9:00 a.m. (only 5 times a year)	Windsor Town Hall		Russian River Watershed Association Attn: Daria Isupov 425 South Main St., Sebastopol, CA 95472 666-4857	Consider issues related to Russian river - plans projects and funding requests	Mulheren Brown- Alternate	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
Ukiah Valley Basin Groundwater Sustainability Agency (GSA)	2nd Thursday of month, 1:30 p.m.	Board of Supervisors Chambers; 501 Low Gap Road Ukiah, CA		County Executive Office Nicole French 501 Low Gap Rd., Rm. 1010 Ukiah, CA 95482 463-4441	GSA serves as the Groundwater Sustainability Agency in the Ukiah Valley basin	Crane Mulheren- Alternate	Sean White, Director of Water Resources; 463-5712 swwhite@cityofukiah.com
COUNTY/REGIONAL One + Staff Alternate	MTG DATE/TIME	MEETING	LOCATION	MAILING ADDRESS/CONTACT	COMMITTEE FUNCTION	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Economic Development & Financing Corporation (EDFC)	2nd Thursday of month, 2:00 p.m.	Primarily 631 S. Orchard Street (location varies)		Executive Director 631 South Orchard Avenue Ukiah, CA 95482 467-5953	Multi-agency co-op for economic development and business loan program	Riley (appointed 12/19/18)	Shannon Riley, Deputy City Manager; 467-5793 sriley@cityofukiah.com
Sun House Guild ex officio	2nd Tuesday of month, 4:30 p.m.	Sun House 431 S. Main St. Ukiah, CA		431 S. Main Street Ukiah, CA 95482 467-2836	Support and expand Grace Hudson Museum	Bartolomei (appointed 12/19/18)	David Burton, Museum Director; 467-2836 dburton@cityofukiah.com
Continued - COUNTY/REGIONAL One + Staff Alternate	MTG DATE/TIME	MEETING	LOCATION	MAILING ADDRESS/CONTACT	COMMITTEE FUNCTION	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Mendocino Youth Project JPA Board of Directors	3rd Wednesday of month, 7:45 a.m.	776 S. State Street Conference Room		Mendocino Co. Youth Project 776 S. State Street, Ste. 107 Ukiah, CA 95482 707-463-4915	Targets all youth with a focus on drug and alcohol prevention, healthy alternatives and empowering youth to make healthy choices	Noble Waidelich, Police Lieutenant	Noble Waidelich, Police Lieutenant; 463-6249; nwaidelich@cityofukiah.com
Northern California Power Agency (NCPA)	4th Thursday of month, 9:00 a.m. (see NCPA calendar)	Roseville, CA and other locations		651 Commerce Drive Roseville, CA 95678 916-781-4202	Pool of public utilities for electric generation and dispatch	Crane Grandi - Alternate	Mel Grandi, Electric Utility Director; 463-6295 mgrandi@cityofukiah.com

2020 CITY COUNCIL SPECIAL ASSIGNMENTS

LOCAL/COUNTY/REGIONAL/LIANS OnGoing One or Two Council and/or Staff	MTG DATE/TIME	LOCATION	MAILING ADDRESS/CONTACT	COMMITTEE FUNCTION	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Adventist Health Community Advisory Council	Quarterly: Aug. 27, 6:45 a.m. Nov 5, 6:45 a.m.	275 Hospital Drive Ukiah, CA 95482	275 Hospital Drive Ukiah, CA 95482 707-463-7623 Allyne Brown - Allyne.Brown@ah.org	Provides the Adventist Health Ukiah Valley (AHUV) Governing Board and Administration with advice, support, and suggestions on matter of importance to Mendocino, Lake and Sonoma Counties.	Brown	Kristine Lawler , City Clerk; 463-6217 klawler@cityofukiah.com
League of California Cities Redwood Empire Legislative Committee	Prior to Division Meetings, meets 3x in person and then via conference call	Various locations that are announced	Redwood Empire League President; Public Affairs Program Manager (916) 658-8243	Elected city officials and professional city staff attend division meetings throughout the year to share what they are doing and advocate for their interests in Sacramento	Mulheren Brown- Alternate	Sage Sangiacomo , City Manager; 463-6221 ssangiacomo@cityofukiah.com
City Selection Committee	Called as required by the Clerk of the Board	BOS Conference Room 501 Low Gap Rd. Rm. 1090 Ukiah, CA	C/O: BOS 501 Low Gap Rd., Rm 1090 Ukiah, CA 95482 463-4441	Makes appointments to LAFCO and Airport Land Use Commission	Mayor	Kristine Lawler , City Clerk; 463-6217 klawler@cityofukiah.com
Investment Oversight Committee	Varies	Civic Center 300 Seminary Ave. Ukiah, CA 95482	Civic Center 300 Seminary Ave. Ukiah, CA 95482	Reviews City investments, policies, and strategies	Crane Orozco, Alternate Alan Carter, Treasurer	Dan Buffalo , Director of Finance; 463-6220 dbuffalo@cityofukiah.com
Library Advisory Board	3rd Wednesdays of alternate months; 1:00 p.m.	Various Mendocino County Libraries	Ukiah County Library 463-4491	Review library policy and activities	Mulheren	Kristine Lawler , City Clerk; 463-6217; klawler@cityofukiah.com
Ukiah Players Theater Board of Directors	3rd Tuesday of month, 6:00 p.m	1041 Low Gap Rd Ukiah, CA 95482 462-1210	1041 Low Gap Rd Ukiah, CA 95482 462-1210	To oversee the activities, organization and purpose of the Ukiah Players Theater	Greg Owen , Airport Manager (appointed 12/19/18)	Kristine Lawler , City Clerk; 463-6217 klawler@cityofukiah.com
Ukiah Unified School District (UUSD) Committee	Quarterly	511 S. Orchard, Ste. D Ukiah, CA 95482	511 S. Orchard Ukiah, CA 95482	Information exchange with UUSD Board Chair, Mayor, Superintendent, and City Manager	Mayor, City Manager and Police Chief	Sage Sangiacomo , City Manager; 463-6221 ssangiacomo@cityofukiah.com
Russian River Flood Control District (RRFCD) Liaison	1st Monday of month, 5:30 p.m.	151 Laws Ave., Suite D Ukiah, CA	151 Laws Ave., Ukiah, CA 95482; rrfc@pacific.net; 462-5278	Proactively manage the water resources of the upper Russian River for the benefit of the people and environment of Mendocino County	Mulheren/Orozco White (appointed 12/19/18)	Sean White , Director of Water Resources; 463-5712 swhite@cityofukiah.com
HHS Advisory Board	2nd Wednesday of month; 9:00 a.m.	Big Sur Room County Department of Social Services	Executive Director Jackie Williams - 462-1934 c/o Ford St. Project 139 Ford St. Ukiah CA 95482	Discussions and possible work on health and human service issues	Brown - Liaison	Shannon Riley , Deputy City Manager; 467-5793 sriley@cityofukiah.com
Mendocino County Local Area Formation Commission (LAFCO)	1st Monday of month, 9:00 a.m.	Board of Supervisors Chambers	Executive Director 200 S. School Street, Ste. 2 Ukiah, CA 95482 463-4470	Required by legislation - planning spheres of influence, annexation, service areas, and special districts	(positions not active) Crane Mulheren- Alternate	Craig Schlatter , Director of Community Development; 463-6219; cshlatter@cityofukiah.com
Mendocino County Airport Land Use Commission	As needed	BOS Conference Room 501 Low Gap Rd., Rm. 1090, Ukiah, CA	Mendocino County Executive Office 501 Low Gap Rd. Rm. 1010 Ukiah, CA 95482	To formulate a land use compatibility plan, provide for the orderly growth of the airport and the surrounding area, and safeguard the general welfare of the inhabitants within the vicinity	Owen/Schlatter	Greg Owen , Airport Manager; 467-2855; gowen@cityofukiah.com Craig Schlatter , Director of Community Development; 463-6219; cshlatter@cityofukiah.com
Mendocino County 2nd District Liaison	1st Wednesdays of month, 8:00 a.m.	Civic Center Annex conference room #5 411 West Clay St. Ukiah, CA 95482	Civic Center 300 Seminary Ave. Ukiah, CA 95482	To coordinate activities and policy development with the City's 2nd District Supervisor	Brown Crane- Alternate	Sage Sangiacomo , City Manager; 463-6221; ssangiacomo@cityofukiah.com
LOCAL/COUNTY/REGIONAL/LIANS OnGoing One or Two Council and/or Staff	MTG DATE/TIME	LOCATION	MAILING ADDRESS/CONTACT	COMMITTEE FUNCTION	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Fire Executive Committee	2nd Wednesdays of month, 3:45 p.m.	Ukiah Valley Conference Center, 200 S. School Street Ukiah, CA	Stephanie Abba Civic Center 300 Seminary Ave. Ukiah, CA 95482 sabba@cityofukiah.com	Per the recently adopted agreement between the City of Ukiah and the Ukiah Valley Fire Protection District	Orozco/Brown	Doug Hutchison , Fire Chief; 463-6263; dhutchison@cityofukiah.com
Mendocino County 5th District Liaison	Monthly; TBD	Civic Center Annex conference room #5 411 West Clay St. Ukiah, CA 95482	Civic Center 300 Seminary Ave. Ukiah, CA 95482	To coordinate activities and policy development with the County's 5th District Supervisor	Brown	Sage Sangiacomo , City Manager; 463-6221; ssangiacomo@cityofukiah.com
STANDING COMMITTEES	MTG DATE/TIME	LOCATION	MAILING ADDRESS/CONTACT	COMMITTEE FUNCTION	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Equity and Diversity	TBD	Virtual Meeting Room (link to be created)	Civic Center 300 Seminary Ave. Ukiah, CA 95482	Improve diversity and equity in the City's workforce and municipal services	Orozco/Mulheren	Traci Boyl , City Manager's Office Management Analyst; 467-5720 tboyl@cityofukiah.com

2020 AD HOC COMMITTEES		
COMMITTEE	ASSIGNED TO	PRINCIPAL STAFF SUPPORT
Electric Grid Operational Improvements	Crane/Scalmanini	Mel Grandi, Electric Utility Director; 463-6295 mgrandi@cityofukiah.com
Downtown Parking Management	Mulheren/Brown	Shannon Riley, Deputy City Manager; 467-5793 sriley@cityofukiah.com
Public Works Project Specification Development	Crane/Mulheren	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
Uniform Cost Accounting	Crane/Mulheren	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
Marbut Study Ad Hoc	Brown/Scalmanini	Justin Wyatt, Police Operations Captain, 463-6760 jwyatt@cityofukiah.com
Cannabis Events	Mulheren/Brown	Tami Bartolomei, Community Services Administrator; 467-5765 tbartolomei@cityofukiah.com
Public Right of Way Related ADA Compliance	Scalmanini/Orozco	Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com
Budget Development Best Practices and Financial Policy For FY 20/21 Budget	Crane/Brown	Dan Buffalo, Director of Finance; 463-6220 dbuffalo@cityofukiah.com Sheri Mannion, Human Resource Director/Risk Manager; 463-6272, smannion@cityofukiah.com
Advance Planning & Policy for Sphere of Influence (SOI), Municipal Service Review (MSR), Annexation, Tax Sharing, Detachment, and Out of Area Service Agreements	Crane/Scalmanini	Sage Sangiacomo, City Manager 463-6221 ssangiacomo@cityofukiah.com Shannon Riley, Deputy City Manager 467-5793 sriley@cityofukiah.com Craig Schlatter, Community Development Director 463-6219 cschlatter@cityofukiah.com Sean White, Director of Water Resources; 463-5712 swhite@cityofukiah.com Tim Eriksen, Public Works Director/City Engineer; 463-6280 teriksen@cityofukiah.com Mel Grandi, Electric Utility Director; 463-6295 mgrandi@cityofukiah.com Dan Buffalo, Director of Finance; 463-6220 dbuffalo@cityofukiah.com
2020 Electric Rate Study	Crane/Scalmanini	Mel Grandi, Electric Utility Director; 463-6295 mgrandi@cityofukiah.com
Diversity and Equity <i>SCOPE: With community engagement, develop an action plan to foster diversity and equity in the organization and our community. Review policies, practices, and procedures to promote and enhance equal participation and access to services, resources, and life opportunities and to ensure our organization accurately reflects the diversity of our community.</i>	Orozco/Mulheren	Traci Boyl, Management Analyst; 467-5720; tboyl@cityofukiah.com
Housing Element and Implementation Review	Mulheren/Orozco	Craig Schlatter, Community Development Director 463-6219 cschlatter@cityofukiah.com
Economic Development <i>SCOPE: to review economic tools to support development in line with the Council's Strategic Plan</i>	Orozco/Scalmanini	Shannon Riley, Deputy City Manager; 467-5793 sriley@cityofukiah.com