
Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix A. Public Involvement Materials

**STEERING COMMITTEE
MEETING SUMMARIES**



MEETING SUMMARY

| | |
|------------------------------|---|
| Date/Time of Meeting: | Thursday – July 23, 2020 |
| Location: | Online Meeting |
| Subject: | Steering Committee No. 1 |
| Project Name: | Sonoma County Hazard Mitigation Plan-Update |
| In Attendance | Attendees: 25 Phoned in: All Planning Team: Bart Spencer (Lead), Rob Flaner |
| Not Present: | N/A |
| Summary Prepared by: | Des Alexander |
| Quorum – Yes or No | Yes |

Item

Action

Welcome and Introductions

- Chair, Ms. Lisa Hullete greeted the committee and introduced Tetra Tech, the county's consultant for the MJHMP
- Rob Flaner and Bart Spencer introduced Tetra Tech and the Tetra Tech team
- As the lead planner, Bart walked through the agenda

Project Overview

- While discussing the work plan, Bart explained that the committee will keep any impacts from the ongoing COVID pandemic in mind as meetings and assignments are scheduled
- The planning team will work to keep everyone on-task as this process progresses over the next few months. The homework that will be given by Tetra Tech will be used to provide insight and guidance on where the steering committee wants the HMP to go.

MJHMP Steering Committee Role

- It was explained to the committee that Lisa, who is the Chair, will coordinate with Rob and Bart on all actions
- There was discussion around the role and necessity of a Vice-Chair, who would run meetings in the event of Lisa's absence





MEETING SUMMARY

| Item | Action |
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| <ul style="list-style-type: none">○ Later in the meeting Shari Meads from the City of Santa Rosa volunteers to be the Vice-Chair and is elected by consensus● Rob explained FEMA requirement that all meetings be advertised to the public once the charter is approved● Bart and Rob explained the attendance policy. All members are asked to email the program manager () if they are unable to attend the meeting; non-participating members will be asked to identify alternates if they miss multiple meetings; to reach quorum, 50% + 1 participation is required● Bart also explained the virtual meeting guidelines. All meetings must be interactive, but are not required to be in real time; the committee must interact with the public at least twice; and when public facing meetings occur, the committee must consider social distancing protocols● Bart and Rob explained that ground rules/charter must be adopted today and sent to FEMA in order to maintain compliance● Participating jurisdictions were asked to identify potential alternates and to send their contact information to Lisa | <p>Motion to adopt the ground rules was made by Shari Meads, seconded by Karen Gaffney and approved by the committee</p> <p>Shari Meads was elected Vice-Chair by committee consensus</p> |

MJHMP Plan Review

- Bart reminded committee members about the homework assignment mentioned in the agenda
- Assignment 1: Review the California State HMP, specifically the hazards of concern for Sonoma County. Committee members should think about if CA HMP goals and objectives are consistent with those identified in the 2016 Sonoma County LHMP. Members should also look for items and think about issues that would be specific to their jurisdictions or municipalities, and they should also think about what kind of projects could be done that would be specific to their respective organizations
- Rob asked that organizations/municipalities with their own separate plans also evaluate those to identify alignments between the plans of the county and state. He expressed that it is important that all plans maintain consistency.

Public Involvement Strategy

- Bart and Lisa discussed the press release sent out by Lisa that announced the commencement of the plan update process





MEETING SUMMARY

| Item | Action |
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- Bart and Rob discussed the importance of keeping the public informed, and state that the HMP website will be updated with the HMP's status (at start and end of process)
- The committee was asked to provide any suggestions on additional outreach capabilities that may be available

Phase 1 – Jurisdictional Annex Process

- Bart discussed the goals and the stages of phase 1 of the jurisdictional annex process. Phase 1 seeks to identify the most relevant hazards to the county and requires the participation of every organization in order to identify Sonoma County's most relevant hazards. Rob added that the annex process is very helpful to organizations that may seek grant funding for improvement projects.
- Bart and Lisa stated that phase 1 will be disseminated by July 31st and that Tetra Tech will assist organizations with completing this process. Once completed, committee members will submit their annexes to Bart and Lisa
- Annexes should be completed within 30 days. Bart and Rob express that the most likely hazards to be identified by all would be fire, flooding, and earthquake. It is mentioned that all critical (i.e. necessary for physical and/or economic function) facilities need to be identified. Rob suggests members look at FEMA's community lifeline definitions to help identify critical facilities

Action Items and Next Steps

- Bart asked the committee to budget about an hour and a half for meetings moving forward. Several committee members ask if meeting time can be adjusted and everyone votes on the new time agreement
- Bart, Rob, and Lisa reiterated the importance of completing homework assignments
- Committee members were asked to submit any questions to Lisa or the Tetra Tech team prior to the meeting. All actions that need to take place will be made clear in the next agenda

Future meeting day/time agreed upon by group: Last Thursday of the Month from 1 pm to 2:30 pm.

Next Meeting: Thursday, August 27, 2020 from 1 pm to 2:30 pm





MEETING SUMMARY



Date/Time of Meeting: Thursday, September 24, 2020

Location: Digital

Subject: Steering Committee Meeting No. 2

Project Name: Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update

In Attendance **Attendees: 25 (21 SoCo, 4 TT)**

Planning Team: Lisa Hulette, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander

Not Present: N/A

Summary Prepared by: Des Alexander

Quorum – Yes or No Yes

| Item | Action |
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Welcome and Introductions

- Lisa Hulette welcomed members of the steering committee to the 2nd meeting for Sonoma County’s MJHMP update
- Des Alexander did a roll call, where 21 committee members were in attendance, with 4 members of Tetra Tech also on the call.
- No members of the public were on the call.

Previous steering committee meeting notes were approved

Planning Process

- Motion to approve meeting summary for Steering Committee meeting 1 was made by Shari Meads, seconded by Kim Jordan, and approved
- All planning partners who wish to participate in process have been contacted
- Lisa and Bart discussed the draft mission/vision statement document that was sent to committee members. The document featured several sample mission and vision statements, as well as several goals and objectives



| Item | Action |
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- Although several members did not have a comment, most of the comments that were made were focused on using fewer and more general words; making sure equity was factored into mitigation process, actions, and outcome; placing more emphasis on disaster mitigation with green infrastructure; separate natural and man-made hazards in the goals section

Hazards of Concern

- The homework from the last meeting was briefly discussed. Considering the rescheduling of everything due to the wildfires, the county and Sonoma County-portion of the state HMPs will be discussed at the next meeting. Participating cities were also asked to review their individual HMPs if they had them.
- Bart discussed the differences between natural hazards and human-caused hazards, as well as how each will be covered in the HMP. For natural hazards, he discussed the importance of using historical data to track probabilities.
- It was proposed that severe weather, sea level rise, tsunami, dam failure, drought, and pandemic be added to the current countywide hazards of earthquake, flood, wildland fire, and landslide. Bart and Rob explained the justifications for each hazard, specifically pandemic. Rob stated it would be very difficult for the plan to get public and political support right now without any mention of pandemic mitigation. Pandemic would not get its own section like the other hazards, but would be looped into the “other hazards of concern” section
- Discussion included information that failure of Warm Springs Dam was analyzed and modeled as part of the NEPA process for constructing the dam; Lisa and TT will connect with Sonoma Water separately to get needed information; most supported listed and suggested hazards
- Motion to include all listed and suggested hazards made by Lisa Hulette, seconded by Kim Jordan
- Approved by committee

All listed and suggested hazards approved by consensus

Phase 1 Annexes

- The instructions and phase 1 annex forms went to all participating partners. Tetra Tech is still in the process of receiving them, but they are due soon.
- Bart explains the three phased approach to the annex process. The first phase asks for general hazards throughout the county; the second phase seeks to build an HMP that is specific to its jurisdiction by ranking hazards accordingly; the third phase asks



| Item | Action |
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municipalities and districts to devise specific action items for them to take to mitigate those habits. Rob explained that there are different processes for municipalities and districts, so it is important that each one get the correct instructions.

Public Involvement Strategy

- Domenica stated that the website is in the process of being updated to better inform the public. She stated that there is room for a sub-committee to be created in the future to discuss strategies for website improvement.
- Bart also discussed surveys that can be sent out to engage the public. He explained that Tetra Tech would create a survey that would ask the public about their current knowledge of and level of preparation for relevant hazards
- Bart also said that committee members can send screenshots and descriptions of their public engagement strategies to Tetra Tech

Closing Comments

- Action Steps: Steering committee members will decide the best goals and objectives are best for the HMP. The goal is to pare the number of goals to 4-6 and the number of objectives to 8-12.
- Tetra Tech agreed to set up a poll for everyone to vote for the mission and vision statements, as well as top goals and objectives
- It was suggested that a cloud-based platform be set up to share information, including community outreach strategies and relevant data

Tetra Tech agreed to create survey to send to committee

Next Meeting Date

- October 22, 2020 from 1pm to 3:30pm

Adjourn

- Motion to close made by Lisa Hulette, seconded by Shari Meads
- Approved at 2:37pm



Sonoma County MJHMP Steering Committee Meeting #3

Date/Time of Meeting: Thursday, October 22, 2020

Location: Digital

Subject: Steering Committee Meeting No. 3

Project Name: Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update

In Attendance
Attendees: Primaries – Gary Helfrich, Shelley Bianchi-Williamson, Richard Diaz, Hunter McLaughlin, Shari Meads, Katherine Duran, Mollie Asay, Marshall Turbeville, Scott Westrope, Ben Nicholls, Lisa Michelli; Alternates – Caerleon Safford, Adrienne Garayalde, Mickie Tagle, Mark Chandler, Kate Piontek; Public/Other – Amy Lyle, Dave Schiltgen, Eduardo Hernandez

Planning Team: Lisa Hulette, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander

Not Present: *The Nature Conservancy, Western Builders*

Summary Prepared by: Des Alexander

Quorum – Yes or No Yes

Welcome and Introductions

- Lisa gave the overview of the agenda and goals of the meeting
- Des completed the roll call
- 20 steering committee members were present, with 4 members from Tetra Tech
- A couple members of the public were on the call, including Dave Schiltgen (contributed on last HMP) and members from Graton Rancheria

Planning Process

- Lisa asked the committee to review the steering committee meeting minutes from the last minute
- When no corrections were offered, **Shari Meads moved to approve the minutes which was seconded by Richard Diaz. The minutes were approved by the committee.**
- Lisa also asked for public comment, but none was offered at the time

Old Business

- Rob and Bart clarified FEMA’s position on the term “equity” and why it would not be helpful to include in the HMP. FEMA currently has no official definition for “equity,” so they would have no accurate way to gauge whether it is included in the plan or not. However, FEMA has the BRIC (Building Resilient Infrastructure and Communities) program which focuses on funding mitigation actions for the “whole community.” Lisa explained that “whole community” would be the term used for the HMP and that the later discussion regarding community lifelines can outline how that is covered.



Meeting Summary

- Lisa went through the SurveyMonkey results regarding the final mission statement and goals. Lisa Micheli moved to accept the mission statement as written, which was seconded by Shari Meads. The committee voted and the mission statement was adopted. Steering committee members and general public members discussed redundancy in the goals as written and retooled the first five goals as a result.
- Those goals are now as follows: (1) **protect people and minimize loss of life, injury and social impacts** (2) **minimize potential for loss of property, economic and social impacts, and displacement due to hazards** (3) **minimize potential for environmental impacts and consider a broad-range of mitigation solutions, including nature-based solutions where feasible** (4) **communicate natural hazard risk to the whole community within Sonoma County** (5) **support and inform the development of relevant mitigation policies and programs**
- The motion to accept the new goals was made by Lisa Micheli and seconded by Mark Chandler. The new goals were then approved by the committee.
- Due to time constraints, the discussion on the remaining goals was postponed until the next meeting

New Business

- Since all the goals had not been finalized, Bart explained that objectives could not be discussed until that time.
- Bart went on to explain critical facilities and how it related to FEMA's community lifelines concept. He and Rob asked members to identify critical structures in their jurisdictions that would be essential before, during, and after a disaster. These could be anything from the community general store or livestock veterinary offices. This list would not be public-facing and would be used by Tetra Tech to evaluate risk and vulnerability.
- **A motion to move forward with the community lifelines construct was made by Richard Diaz and seconded by Mickie Tagle. It was then approved by the committee.**

Jurisdictional Annex Process

- Bart updated committee members with annex participant statistics. As of the meeting time, about 60-70% of participating jurisdictions had turned in their phase 1 annexes. He then reminded people of the deadlines for each of the annexes and that it is important to the process to return the annexes ASAP. He said that the preview of phase 2 will go out in the next few weeks.

Public Involvement Strategy

- Rob and Bart discussed the sample survey that Tetra Tech had created that would be used to engage the public about their perceived hazard risk.

Action Items and Next Steps

- All phase 1 annexes completed and submitted by next meeting
- Survey will be sent out
- Committee members should look ahead to phase 2 timeline



Meeting Summary

Adjourn

- Approved at 2:28pm





Sonoma County MJHMP Steering Committee Meeting #4

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|------------------------------|--|
| Date/Time of Meeting: | Thursday, November 19, 2020 |
| Location: | Digital |
| Subject: | Steering Committee Meeting No. 4 |
| Project Name: | Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update |
| In Attendance | Attendees: <i>County of Sonoma, Permit Sonoma (Planning), Permit Sonoma (GIS), Sonoma County Fire Prevention, Sonoma County PIO, Town of Windsor, City of Santa Rosa, SC Ag + Open Space, Sonoma Water, Santa Rosa City Fire, Cal Fire, The Nature Conservancy, Community Development Commission, Sonoma County Winegrowers Public/Other – Graton Rancheria</i> Planning Team: Lisa Hulette, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander |
| Not Present: | <i>City of Cotati, Pepperwood Preserve, Western Builders</i> |
| Summary Prepared by: | Des Alexander |
| Quorum – Yes or No | Yes |

Welcome and Introductions

- Lisa gave the overview of the agenda and goals of the meeting
- Des completed the roll call
- 14 member organizations were present, along with Tetra Tech team
- Graton Rancheria was also present

Planning Process

- Steering Committee asked to review and confirm minutes from meeting 3
- Moved by Shari Meads and Seconded by Gary Helfrich
- Approved by committee

Old Business

- Finalize the goals as discussed at the previous meeting
- With no further discussion on the remaining goals, Lisa Hulette moved, and Kim Jordan seconded approving all goals as written
- This motion was approved by the committee

New Business

- Objectives
 - Bart and Rob discussed how objectives will provide greater flexibility in the plan so that a greater number of actions can fall under each objective – improves the chance of obtaining mitigation grant funds





Sonoma County MJHMP Steering Committee Meeting #4

- Much of the remaining discussion was around the need to change passive language in a few of the objectives. The word “mitigate” was added to the third objective and “increase resilience and capabilities” was added to the sixth objective
- After discussion was complete, it was moved by Gary Helfrich and seconded by James Williams to approve the objectives as edited
- This was approved by the committee

Public Involvement Strategy

- Survey Review
 - Bart discussed survey that had been developed by Tetra Tech
 - In the discussion, concerns about addressing renters prompted the reworking of questions to ask for more details about residency type, hazard considerations and their effect on choice of residency, and renter’s insurance
- Public Engagement
 - County website for MJHMP is now live. Individual jurisdictions can write descriptions of their involvement with the plan or they can include a link to the county’s website on their site. Lisa or Domenica should be contacted for more information. Since this is part of FEMA’s requirements for public engagement, screenshots of each jurisdiction’s MJHMP description should be sent to Des or Bart.
 - Additional information on public engagement strategies will be sent to the committee by Domenica

Action Items and Next Steps

- Provide feedback on survey
 - Scheduled to be sent out the first week of December
- Phase 2 annexes due by December 18
 - If organizations have any questions, they are asked to contact Tetra Tech for guidance

Adjourn

- Approved at 2:16pm





Sonoma County MJHMP Steering Committee Meeting #5

| | |
|------------------------------|--|
| Date/Time of Meeting: | Thursday, December 17, 2020 |
| Location: | Digital |
| Subject: | Steering Committee Meeting No. 5 |
| Project Name: | Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update |
| In Attendance | Attendees: <i>County of Sonoma, Permit Sonoma (Planning), Permit Sonoma (GIS), Sonoma County Emergency Management, Sonoma County PIO, Town of Windsor, City of Santa Rosa, City of Cotati, SC Ag + Open Space, Cal Fire, The Nature Conservancy, Pepperwood Preserve, Community Development Commission, Sonoma County Winegrowers Public/Other – Graton Rancheria, Greenbelt Alliance</i> Planning Team: Lisa Hulette, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander |
| Not Present: | <i>County of Sonoma Fire Prevention, Sonoma Water, Western Builders, Sonoma County Winegrowers</i> |
| Summary Prepared by: | Des Alexander |
| Quorum – Yes or No | Yes |

Welcome and Introductions

- Lisa gave the overview of the agenda and goals of the meeting
- Des completed the roll call
- 13 member organizations were present, along with Tetra Tech team
- Graton Rancheria and Greenbelt Alliance were also present

Planning Process

- Steering Committee asked to review and confirm minutes from meeting 4
- Moved by Shari Meads and Seconded by Gary Helfrich
- Approved by committee

Old Business

- Discuss confirmation of mission statement, goals, and objectives
 - No commentary by the committee, all accepted as written
- Update on Phase 2 statuses
 - Bart has received all except one, despite several attempts at communication
 - Bart and Lisa will continue to follow up with organization
- Additional committee comments
 - One of the guest organizations asked about the formation of the steering committee and the public outreach strategies used
 - Another asked for clarification on why all the county's cities are not participating in the plan – some have their own LHMPs





Sonoma County MJHMP Steering Committee Meeting #5

- A third question asked about project scope limitations, specifically around natural hazards. Rob explained the difference between threat and risk to clarify.

New Business

- Overview of Phase 3
 - Will involve 3 different workshops
 - Each geared towards fire agents, municipalities, and special districts respectively
 - Will allow for project outlines and contextualization
 - Each group will think about the kinds of mitigation projects they would want to work on over the next five years
 - Bart will set up times in the new year to speed up process

Public Involvement Strategy

- Survey Status
 - Responses as of 12/17/2020 were in 200s
 - Need at least 1000 responses to feel comfortable
 - Domenica sent social media package to committee members
 - Suggestions
 - Reach out to Brant Arthur (SCTA/RCPA) for partner outreach organization list
 - Rob – plan maintenance component can be used for further public engagement after plan approval
- Public Engagement
 - Recommendation – use NextDoor to promote survey

Action Items and Next Steps

- Continue to promote survey link

Adjourn

- Approved at 1:54 PM





Sonoma County MJHMP Steering Committee Meeting #6

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|------------------------------|--|
| Date/Time of Meeting: | Thursday, January 28, 2021 |
| Location: | Digital |
| Subject: | Steering Committee Meeting No. 6 |
| Project Name: | Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update |
| In Attendance | Attendees: <i>Permit Sonoma, Sonoma County GIS, Sonoma County Fire, Sonoma County Emergency Management (alternate) Sonoma County Public Works, Sonoma County PIO, City of Santa Rosa, City of Cotati, SC Ag + Open Space, Sonoma Water, Geyserville Fire District (alternate), The Nature Conservancy, Pepperwood Preserve, Community Development Commission, Sonoma County Winegrowers</i> Planning Team: Lisa Hulette, Domenica Giovannini, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander Members of the Public: Keri Svanstrom (Sebastopol), Teri Shore (Greenbelt Alliance), Amy Lyle (City of Santa Rosa) |
| Not Present: | <i>Town of Windsor, Geyserville Fire District, CAL Fire, Western Builders</i> |
| Summary Prepared by: | Des Alexander |
| Quorum – Yes or No | Yes |

Welcome and Introductions

- The meeting started at 1:01 PM.
- Lisa Hulette welcomed the committee and Des Alexander took the roll call.

Public Comment

- Lisa opened the meeting up to public comment. She asked that each comment be limited to 2-3 minutes.
- Teri Shore from the Greenbelt Alliance commented about participating in 3-day workshop on climate change with the City of Santa Rosa. While there they went through exercises regarding hazards facing the county hazards and produced solutions and ideas that may be helpful for the plan process. She also stated the steering committee should also consider using this model for public outreach regarding the MJHMP. Amy Lyle from Santa Rosa stated this workshop was related to the Eco-Adapt/Virginia Tech workshop on climate adaption in support of Santa Rosa's Climate Adaptation Plan & General Plan updates. They are coordinating with County staff, but Lyle was willing to provide a broader update at this or a future meeting. The reports will be shared with the group as they are produced.
- Sonia Taylor stated that there needs to be a more robust public engagement process. She asked that the committee remain aware of concurrent county initiatives (strategic plan w/ climate change & resiliency goals). Santa Rosa is currently developing their WUI which has evacuation plans included. She thinks there should be a place in the plan for how to develop evacuation plans for single family communities. In response, Bart explains that CalOES and FEMA asks that





Sonoma County MJHMP Steering Committee Meeting #6

other plans be examined and that the MJHMP meant to complement plans and integrate with them. Tetra Tech is currently working with the county to learn what plans are out there for integration.

- Following the end of the comment period, Lisa commented that public comments could also be submitted through email.

Planning Process

- Lisa Hulette asked the committee to review and accept the minutes from the last steering committee. After hearing no discussion, Shari Meads motioned to accept the minutes which was seconded by Lisa Micheli. The minutes were then approved by the committee.

Old Business

- Bart gave a brief overview of the status of Phase 2 of the plan and the general progress of the plan. He explained that the hazard profiles are still in development, most of the data has been compiled, and that the next steps will involve looking at jurisdiction-specific hazards.

New Business

- Bart and Rob launched into the discussion of Phase 3 of the MJHMP process. The next step of the project will involve three separate workshops. Fire districts, special districts, and municipalities will each have their own workshop, during which each jurisdiction will be shown a breakdown of their own hazard risk and exposure. They will then be asked to develop action plans and projects that address each of those hazards.
- Projects can be as varied as plans, road improvements, grid improvements, and other tasks that would be useful and grant-eligible under BRIC. These annexes will be incorporated into the draft plan, which will then be opened for public comment. After the public comment period, the plan draft will then be sent to CalOES and FEMA for approval. This process averages 45 to 90 days.
- Rob explains the importance of risk ranking to the Phase 3 workshops. FEMA requires that all action items have a quantifiable impact, so each jurisdiction needs to think about what projects and actions they can take on to mitigate hazards.
- Tetra Tech is still finalizing the risk assessments and analysis, and they want to have results to show the public before hosting public meetings. They will be launching the StoryMap with the risk analysis information once analysis is complete.
- In the comment period, it was asked if there are any additional GIS meetings planned to review the risk indices and scenarios. Lisa Hulette explained there are not currently any meetings planned, but she expects technology-related meetings to occur in the future. There were no public comments on this process.

Public Involvement

- Jeana provided an update on the public involvement strategy. She said that the survey is still open and will remain open until 1st public meeting. It has been linked to social media and the steering committee is asked to assist in the final push. There is an email list for this process and updated information will be pushed out through this list; Domenica will load the information once the meeting is complete. Information on the workshop date will be posted on the [website](#) once that date is chosen.





Sonoma County MJHMP Steering Committee Meeting #6

- Much of the committee discussion focused on community outreach beyond digital mediums. Amy Lyle asked if it would be helpful to have a 3-week lead time to honor current city engagement methodology. She also asked if translation support was needed; Lisa Hulette informed her the county is currently doing Spanish outreach. It was suggested that the County also reach out to each community's Chamber of Commerce, as well as the Spanish community through the Corazon Healdsburg, Hispanic Chamber of Commerce, etc. WhatsApp was also discussed as having been successful for Spanish community; Domenica will reach out to county to see if this app could be used for outreach. She said she will also look into Spanish translation for public meetings.
- Rob said that the continuing public involvement phase occurs after plan is submitted for approval, so this will be an opportunity to engage in greater public outreach. If plan is not approved, then there is no opportunity for grant funding. Since FEMA wants dynamic plans there needs to be development of continuing public involvement strategies (ex. StoryMap). He asked the committee to be mindful of the plan reapproval timeline, while also respecting the desire for greater public outreach. Progress reporting is part of 5-year update process, so building components of continual outreach into the plan will be crucial to its success. This year's BRIC allotment from FEMA is estimated at \$3.7 billion, so there is a lot of potential funding on the table.
- Chris Godley also commented that DEM is also going to be actively engaging the community later this year as they develop the county's new Emergency Operations Plan (EOP), which guides emergency response. This will include cultural competence and teaming with the Office of Equity for community engagement.
- The only public comment came from Teri Shore of Greenbelt Alliance. She thanked the committee for discussing public engagement strategies. She also wanted to confirm if comments could be sent to Lisa Hulette, Tetra Tech, the Steering Committee, and/or Domenica. She explained that she has been involved in Napa's LHMP process and wanted to be able to share best practices she gained from those meetings. Lisa said that she can be used as a POC and that she will direct the comments to the appropriate channels.

Adjourn

- Occurred at 1:47 PM





Sonoma County MJHMP Steering Committee Meeting #7

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|------------------------------|---|
| Date/Time of Meeting: | Thursday, February 25, 2021 |
| Location: | Digital |
| Subject: | Steering Committee Meeting No. 7 |
| Project Name: | Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update |
| In Attendance | Attendees: <i>County of Sonoma, Sonoma County PIO, City of Santa Rosa, City of Cotati, Sonoma Water, Sonoma County Emergency Management (Chris Godley for Ben Nichols), Cal Fire, Geyserville Fire District, CAL FIRE, The Nature Conservancy, Pepperwood Preserve, Community Development Commission, Sonoma County Winegrowers</i> Planning Team: Lisa Hulette, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander Public/Other: None |
| Not Present: | <i>Permit Sonoma (Planning), Permit Sonoma (GIS), County of Sonoma Fire Prevention, SC Ag + Open Space, Town of Windsor, Santa Rosa City Fire, Western Builders</i> |
| Summary Prepared by: | Des Alexander |
| Quorum – Yes or No | Yes |

Welcome and Introductions

- Lisa gave the overview of the agenda and goals of the meeting
- Des completed the roll call
- 13 member organizations were present, along with Tetra Tech team
- No members of the public announced themselves during the roll call.

Public Comment

- No comments from the public were made.

Planning Process

- Steering Committee asked to review and confirm minutes from meeting 6
- Moved by Chris Godley and seconded by Shari Meads
- Approved by committee

Old Business

- Bart says the plan progress is currently on track
- Committee Questions and Comments
 - When are we submitting?
 - Targeting June 30th for submission of the plan; everything needs to be done by June 15th. Bart goes through timeline of the plan from now until submittal to CalOES and FEMA. Bart talks to the group briefly about plan maintenance





Sonoma County MJHMP Steering Committee Meeting #7

strategy and how the StoryMap will be a Sonoma County-based tool for them to use on continued public engagement.

- Tetra Tech previews the StoryMap with the Steering Committee. This can be used as a holistic public engagement tool, with links to public meetings, steering committee minutes, FEMA grant information, hazard mitigation in Sonoma County, etc. Hazard tab page describes results of hazard analyses. Tetra Tech is working with Esri to get raster format of wildfire data.
- Rob informed community that we are using the FIRM data, but the PFIRM data can be analyzed by the county at a later day.

New Business

- Overview of Phase 3
 - Workshops
 - Upcoming dates for workshops will be in March and April
 - Working with fire districts, municipalities, and special districts
 - Risk rankings will be completed for each jurisdiction. They will be used to develop specific action items related to the hazards unique to your area
 - FEMA's BRIC funding will be 6% of the total of last year's disasters, presenting lots of opportunity for project funding
 - The goal is for the internal review draft of the plan complete by mid to late May
 - Discussion
 - The committee asks about lengthening the public comment period. Rob says that since this is a categorical exemption project, the public comment period does not need to be longer. He asks the group to investigate if we need to do a CEQA exemption for the plan.
- Plan Maintenance Strategy
 - Rob recommends an annual progress review format to assess progress on the MJHMP.

Public Involvement Strategy

- Lisa says that the public meeting for the plan is today from 3:30 PM – 5:00 PM. The steering committee is encouraged to attend, but there is no opportunity to participate in the presentation.

Other Discussion Items

- Since Tetra Tech will not have data to present to the group, there is no need to have a steering committee meeting in March. The next meeting will be in April.

Adjourn

- Motion to adjourn by Mark Chandler and seconded by Adrienne Garayalde
- Adjourned at 1:55 PM





Sonoma County MJHMP Steering Committee Meeting #8

| | |
|------------------------------|--|
| Date/Time of Meeting: | Thursday, April 22, 2021 |
| Location: | Digital |
| Subject: | Steering Committee Meeting No. 8 |
| Project Name: | Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Update |
| In Attendance | Attendees: <i>County of Sonoma Fire Prevention, County of Sonoma Public Works, Sonoma County PIO, Town of Windsor, City of Santa Rosa, City of Cotati, Sonoma Water, Sonoma County Ag + Open Space, Geyserville Fire District, Santa Rosa City Fire, The Nature Conservancy, Pepperwood Preserve, Community Development Commission, Sonoma County Winegrowers</i> Planning Team: <i>Lisa Hulette, Bart Spencer, Rob Flaner, Carol Baumann, Des Alexander</i> Public/Other: <i>Yanin Kramsky, PhD.</i> |
| Not Present: | <i>Permit Sonoma (Planning), Permit Sonoma (GIS), County of Sonoma Emergency Management, Cal Fire, Western Builders</i> |
| Summary Prepared by: | Des Alexander |
| Quorum – Yes or No | Yes |

Welcome and Introductions

- Lisa gave the overview of the agenda and goals of the meeting
- Des completed the roll call. Kent Gylfe was present for Sonoma Water and Steve Suter was present for Santa Rosa City Fire. Karen Gaffney of SC Ag + Open Space and Kirsten Larsen of Community Development Commission have both retired and will be replaced by their alternates.
 - 14 member organizations were present, along with Tetra Tech team.
 - Yanin Kramsky, a PhD and local Bay Area resident, announced himself as a member of the public.
- Steering Committee asked to review and confirm minutes from meeting 7. Hearing no comments or revisions, it was moved by Shari Meads and seconded by Lisa Michelli to accept the minutes as written. This was approved by the steering committee.

Public Comment

- No comments from the public were made.

Planning Process

- Plan Progress
 - Bart stated that the last steps of the plan are in progress. Action items (grant-eligible and actionable) are being developed by each jurisdiction during the Phase 3 meetings. Given the current digital divide, Tetra Tech wants all jurisdictions to get as much assistance as possible. He explained that Tetra Tech is also hosting Q & A sessions to help jurisdictions with completing their annexes.
- Next Steps





Sonoma County MJHMP Steering Committee Meeting #8

- Bart explained that Phase 3 annexes are due on May 12th and will be reviewed by three Tetra Tech staff. Once reviewed, they will be added to the draft plan. The Core Planning Team and the Steering Committee will both review the draft plan internally and the final edit will commence once all comments have been given.
- The public comment period will ideally start in mid-June. A public meeting will be held during this time to provide further opportunity for comments on the plan. The StoryMap will live on the county website and will be a continually changing resource available to the residents of County.
- The plan is scheduled for concurrent review with CalOES/FEMA. This is due to grants pending in certain Sonoma County jurisdictions and will make sure the county is up to speed by the time the BRIC funding series starts in September.
- Once approved by CalOES/FEMA, the plan will need to be adopted by each jurisdiction by resolution. All adoptions should be sent to Lisa who will forward them to FEMA.
- Annual maintenance of the plan will start after the plan is approved. Permit Sonoma will be responsible for maintaining the plan through progress reporting. Every jurisdiction would send an annual progress report on their action items to an online platform set up by Tetra Tech. Lisa will use those reports to generate a county report that will be submitted to CalOES. This is considered a best practice but is not a requirement. The only requirement is continual public outreach, which will be done with the StoryMap, hazard awareness campaigns, etc.
- **Committee Comments**
 - Kent Gylfe asked for clarification on the draft plan review timeframe. Lisa said that they want to have a draft plan available by June 15th to discuss at the next steering committee. Bart said that was possible if all Phase 3 annexes are submitted by the due date. Bart also advises that if the public comment period produces any substantive criticisms, those edits would need to be made and a second public comment period would need to be scheduled. This would push back the final submittal date.
 - Kim Jordan asked about the length of the public comment period and her goal date for the Town of Windsor's plan approval. Bart said that the Town of Windsor will have the draft plan in early June, but the Board of Supervisors will not be able to make substantive changes until the plan has been officially adopted. If they did, this would result in the earlier mentioned second public comment period.
- **Actions**
 - A motion to move forward with annual plan maintenance strategy was made by Shari Meads and seconded by Shelly Bianchi-Williamson. The motion was approved by the committee.

Public Outreach

- **Public Meeting**
 - Primary public outreach will be the scheduled webinar, which will provide public comments. The public comments can also be obtained through the StoryMap and email.
 - This webinar will be held around the public draft upload date; information on the meeting will be shared through County social media channels.
- **Committee Comments**
 - No comments from the committee

Other Discussion Items/Comments





Sonoma County MJHMP Steering Committee Meeting #8

- None from the committee or the public
- Lisa reminded the committee of the ongoing phase 3 meetings and Q & A forums with Tetra Tech; their purpose is to assist jurisdictions with developing action items.

Final Steering Committee Meeting

- Thursday, June 21, 2021 from 1pm to 2pm.

Adjourn

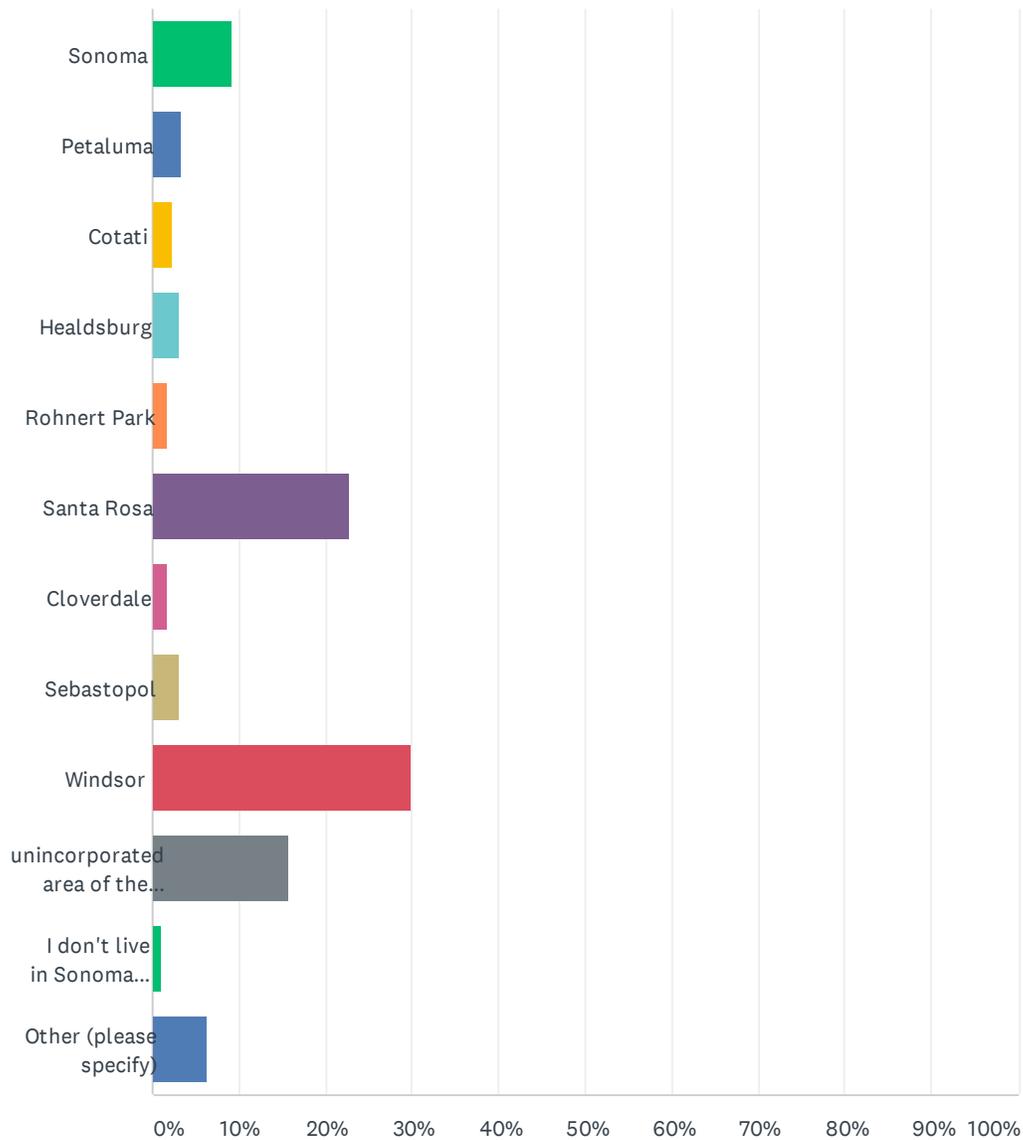
- 1:42 PM



SURVEY RESULTS

Q1 Where in Sonoma County do you live or generally stay?

Answered: 691 Skipped: 0



Sonoma County 2020 Hazard Mitigation Plan Survey

| ANSWER CHOICES | RESPONSES | |
|-----------------------------------|-----------|------------|
| Sonoma | 9.26% | 64 |
| Petaluma | 3.33% | 23 |
| Cotati | 2.32% | 16 |
| Healdsburg | 3.18% | 22 |
| Rohnert Park | 1.59% | 11 |
| Santa Rosa | 22.87% | 158 |
| Cloverdale | 1.59% | 11 |
| Sebastopol | 3.04% | 21 |
| Windsor | 29.81% | 206 |
| unincorporated area of the County | 15.77% | 109 |
| I don't live in Sonoma County | 1.01% | 7 |
| Other (please specify) | 6.22% | 43 |
| TOTAL | | 691 |

Sonoma County 2020 Hazard Mitigation Plan Survey

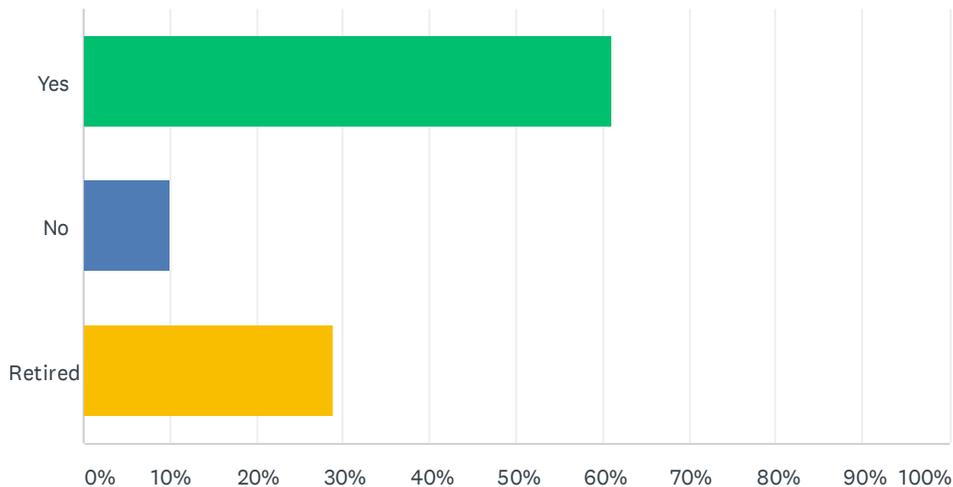
| # | OTHER (PLEASE SPECIFY) | DATE |
|----|--|---------------------|
| 1 | Cazadero | 2/25/2021 8:50 PM |
| 2 | Jenner | 2/9/2021 6:40 PM |
| 3 | Sonoma Coast north of Jenner | 2/9/2021 5:40 PM |
| 4 | Muniz Ranches | 2/9/2021 5:18 PM |
| 5 | Jenner | 2/9/2021 4:10 PM |
| 6 | Jenner | 2/9/2021 3:32 PM |
| 7 | Jenner | 2/9/2021 6:39 AM |
| 8 | unincorporated west sebastopol | 2/1/2021 3:31 PM |
| 9 | Occidental | 1/26/2021 10:31 AM |
| 10 | Why isn't Guerneville listed separately? | 1/8/2021 2:27 PM |
| 11 | Geyserville | 1/8/2021 12:08 AM |
| 12 | Unincorporated area too Close to Santa Rosa & Windsor | 1/7/2021 2:43 PM |
| 13 | Forestville | 1/4/2021 12:09 PM |
| 14 | Bodega Bay | 1/4/2021 12:06 PM |
| 15 | outside of Windsor Town limits | 1/4/2021 11:43 AM |
| 16 | Glen Ellen | 12/30/2020 12:26 PM |
| 17 | Glen Ellen | 12/30/2020 12:02 PM |
| 18 | Glen Ellen | 12/30/2020 11:57 AM |
| 19 | Glen Ellen | 12/30/2020 12:01 AM |
| 20 | Boyes Hot Springs | 12/29/2020 9:53 PM |
| 21 | Springs area of Sonoma Valley | 12/29/2020 7:32 PM |
| 22 | Oakmont | 12/28/2020 9:03 AM |
| 23 | Bodega Bay | 12/24/2020 6:15 PM |
| 24 | Larkfield Wikiup area | 12/23/2020 5:34 PM |
| 25 | Bodega Bay | 12/22/2020 1:02 PM |
| 26 | Glen ellen/mayacamas mtns | 12/22/2020 10:47 AM |
| 27 | Bodega Bay | 12/22/2020 2:34 AM |
| 28 | Bodega Bay | 12/21/2020 8:58 PM |
| 29 | Bodega Bay | 12/21/2020 8:48 PM |
| 30 | Bodega Bay | 12/21/2020 8:39 PM |
| 31 | Bodega Bay | 12/21/2020 12:03 PM |
| 32 | Glen Ellen | 12/21/2020 10:08 AM |
| 33 | Larkfield/Wikiup area | 12/18/2020 2:23 PM |
| 34 | Sonoma Valley - Boyes Hot Springs (you probably should add that or 1st District supervisor may be peeved.) | 12/18/2020 12:36 PM |
| 35 | Penngrove | 12/18/2020 11:03 AM |
| 36 | Bodega Bay | 12/18/2020 2:34 AM |
| 37 | Bodega Bay | 12/17/2020 8:41 AM |

Sonoma County 2020 Hazard Mitigation Plan Survey

| | | |
|----|---------------|--------------------|
| 38 | Bodega Bay | 12/16/2020 5:55 PM |
| 39 | Bodega Bay | 12/16/2020 2:23 PM |
| 40 | Bodega Bay | 12/16/2020 1:23 PM |
| 41 | The Sea Ranch | 12/8/2020 5:08 PM |
| 42 | Glen Ellen | 12/8/2020 5:01 PM |
| 43 | asd | 11/17/2020 4:00 PM |

Q2 Do you work in Sonoma County?

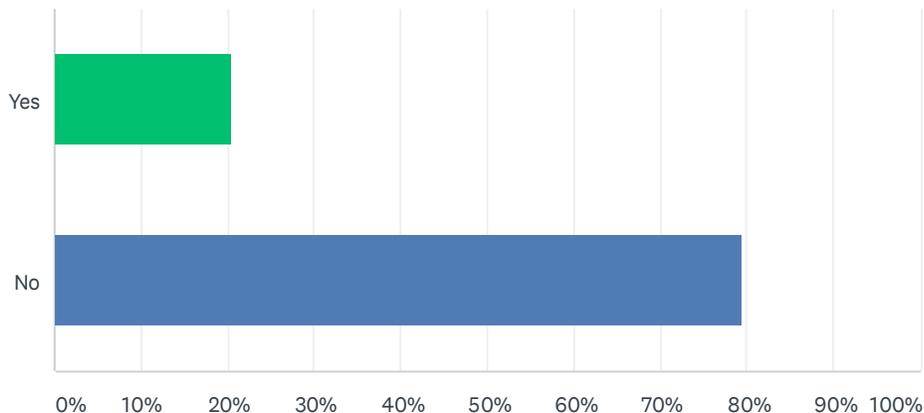
Answered: 688 Skipped: 3



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| Yes | 61.19% 421 |
| No | 10.03% 69 |
| Retired | 28.78% 198 |
| TOTAL | 688 |

Q3 Do you own or operate a business in Sonoma County?

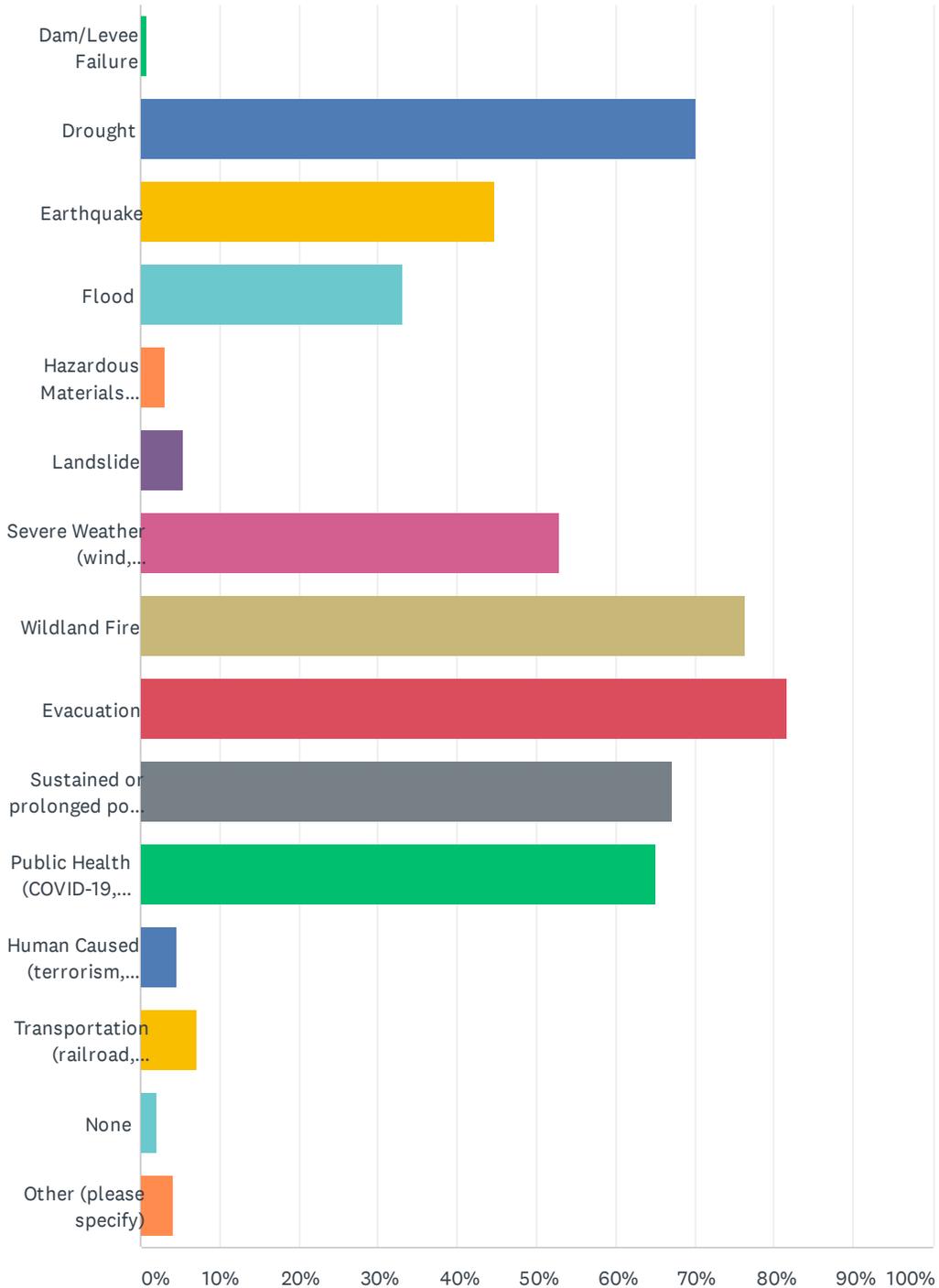
Answered: 683 Skipped: 8



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 20.50% | 140 |
| No | 79.50% | 543 |
| TOTAL | | 683 |

Q4 Which of the following hazard events have you or anyone in your household experienced in the past 20 years within Sonoma County?
(Check all that apply)

Answered: 682 Skipped: 9



Sonoma County 2020 Hazard Mitigation Plan Survey

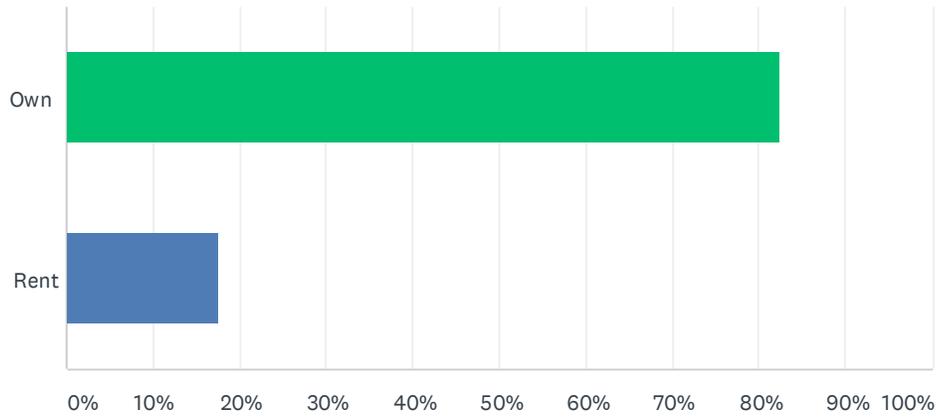
| ANSWER CHOICES | RESPONSES | |
|---|-----------|-----|
| Dam/Levee Failure | 0.73% | 5 |
| Drought | 70.09% | 478 |
| Earthquake | 44.87% | 306 |
| Flood | 32.99% | 225 |
| Hazardous Materials Release | 3.08% | 21 |
| Landslide | 5.43% | 37 |
| Severe Weather (wind, lightning, snow accumulation, etc.) | 52.93% | 361 |
| Wildland Fire | 76.39% | 521 |
| Evacuation | 81.52% | 556 |
| Sustained or prolonged power outage | 67.16% | 458 |
| Public Health (COVID-19, West-Nile, SARS, etc) | 65.10% | 444 |
| Human Caused (terrorism, Active Shooter, etc) | 4.55% | 31 |
| Transportation (railroad, airport, interstate, etc.) | 7.04% | 48 |
| None | 2.05% | 14 |
| Other (please specify) | 4.11% | 28 |
| Total Respondents: 682 | | |

Sonoma County 2020 Hazard Mitigation Plan Survey

| # | OTHER (PLEASE SPECIFY) | DATE |
|----|--|---------------------|
| 1 | Loma Prieta earthquake prior to 20 years | 2/27/2021 5:34 PM |
| 2 | Narrow country roads. Can't evacuate and fire trucks coming but can't the | 2/25/2021 8:14 PM |
| 3 | Neighbors having tree work done but leaving fire fuel on the ground as well as thrown onto my property. Spoke with one tree cutter who felt it was okay to leave large piles of dead branches in the ground to "masticate" at the hight of the 2020 fire season on a steep hillside rural residential area with poor fire service access. | 2/21/2021 8:33 AM |
| 4 | Fires the past four years | 2/19/2021 11:37 AM |
| 5 | non-local smoke (air quality issues) | 2/9/2021 5:10 PM |
| 6 | erosion | 2/9/2021 4:10 PM |
| 7 | sustained smoke and smoke damage to crops | 2/1/2021 3:31 PM |
| 8 | Death | 1/25/2021 12:33 AM |
| 9 | I am not sure what you mean by "experienced": directly or indirectly affected? | 1/23/2021 12:35 PM |
| 10 | Threat of fire; threat of evacuation; smoke and bad air quality due to smoke from fires | 1/12/2021 3:43 PM |
| 11 | 6 PPL in 2019, several in 2020. No power = no water | 1/9/2021 9:38 AM |
| 12 | Unhealthy air quality | 1/9/2021 9:04 AM |
| 13 | sustained natural gas outage, due to wildfires. | 1/8/2021 6:07 PM |
| 14 | GOVERNMENT STUPIDITY | 1/7/2021 2:43 PM |
| 15 | Civil unrest, police brutality and militarism | 1/5/2021 2:00 PM |
| 16 | Tazed by police, malicious counselors at rehab centers, constant exposure to opioid addicts and pushers, biohazard trash left in overflowing garbage cans in front of businesses and wherever the street people have been, dangerous bike lane for bicycle riding and incompetent personnel in the professional field everything from medical to administration. The list goes on and on. There is a level of incompetency and greed in this county that defies definition | 12/30/2020 5:51 PM |
| 17 | County-sanctioned construction built to flood my home | 12/30/2020 12:26 PM |
| 18 | propane supplier | 12/29/2020 8:02 PM |
| 19 | Ineffectual and inept Supervisor representing Sonoma Valley | 12/29/2020 3:18 PM |
| 20 | Heavy ash and smoke that Acacia apartments still has not cleaned (ashes still collected in the hallways) | 12/21/2020 11:22 AM |
| 21 | I've been hit by motorists multiple times while I was cycling. I regularly have to take evasive action to avoid being hit by motorists. | 12/19/2020 7:58 AM |
| 22 | Smoke from Wildlands fire, did not lose home | 12/19/2020 6:44 AM |
| 23 | Have not had Covid but am experiencing the effects on the community as is everyone else. | 12/18/2020 10:47 AM |
| 24 | Were in an evacuation zone but did not evacuate as we have a ranch that 1 Has short grass and seems safer than going anywhere and 2. Animals need care and fear if we left we would be stopped from coming back for days. | 12/17/2020 8:29 PM |
| 25 | Neighbors on Shaw Ct setting off aerial fireworks | 12/16/2020 5:55 PM |
| 26 | Threat of power outage, loss of internet access | 12/15/2020 8:15 AM |
| 27 | PG&E PSPS; heat events; CAOSI power rolling outages. | 11/17/2020 2:46 PM |
| 28 | I think extreme heat should be included here | 11/12/2020 9:39 PM |

Q5 Do you own or rent your place of residence?

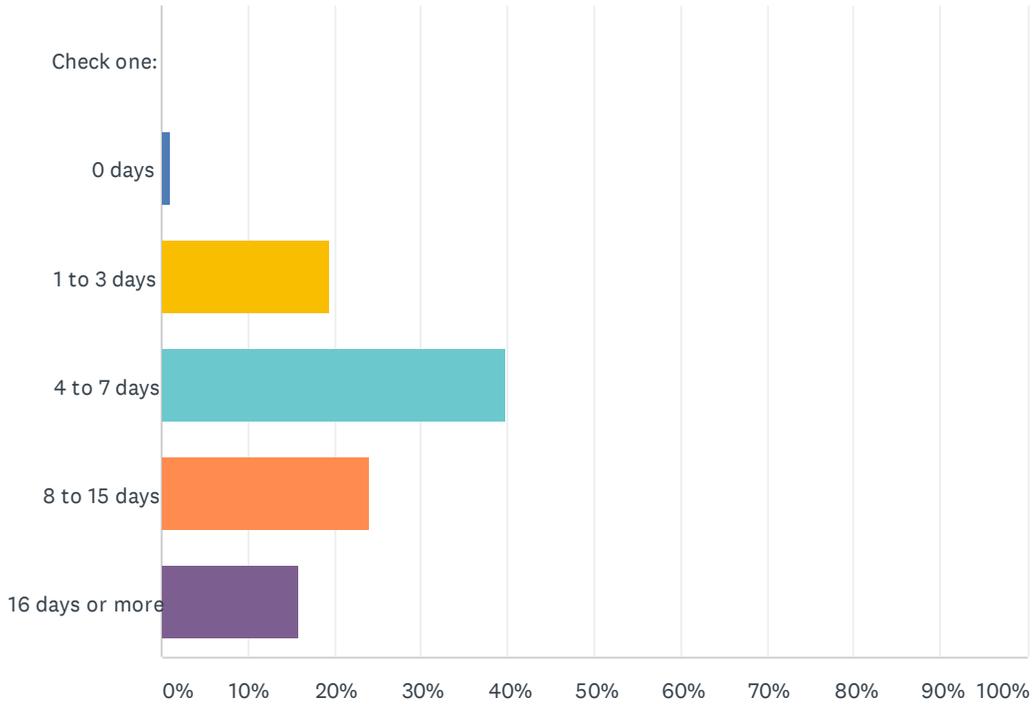
Answered: 684 Skipped: 7



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Own | 82.46% | 564 |
| Rent | 17.54% | 120 |
| TOTAL | | 684 |

Q6 If your household were impacted/isolated due to a hazard event, how many days could your household survive because of your preparedness?

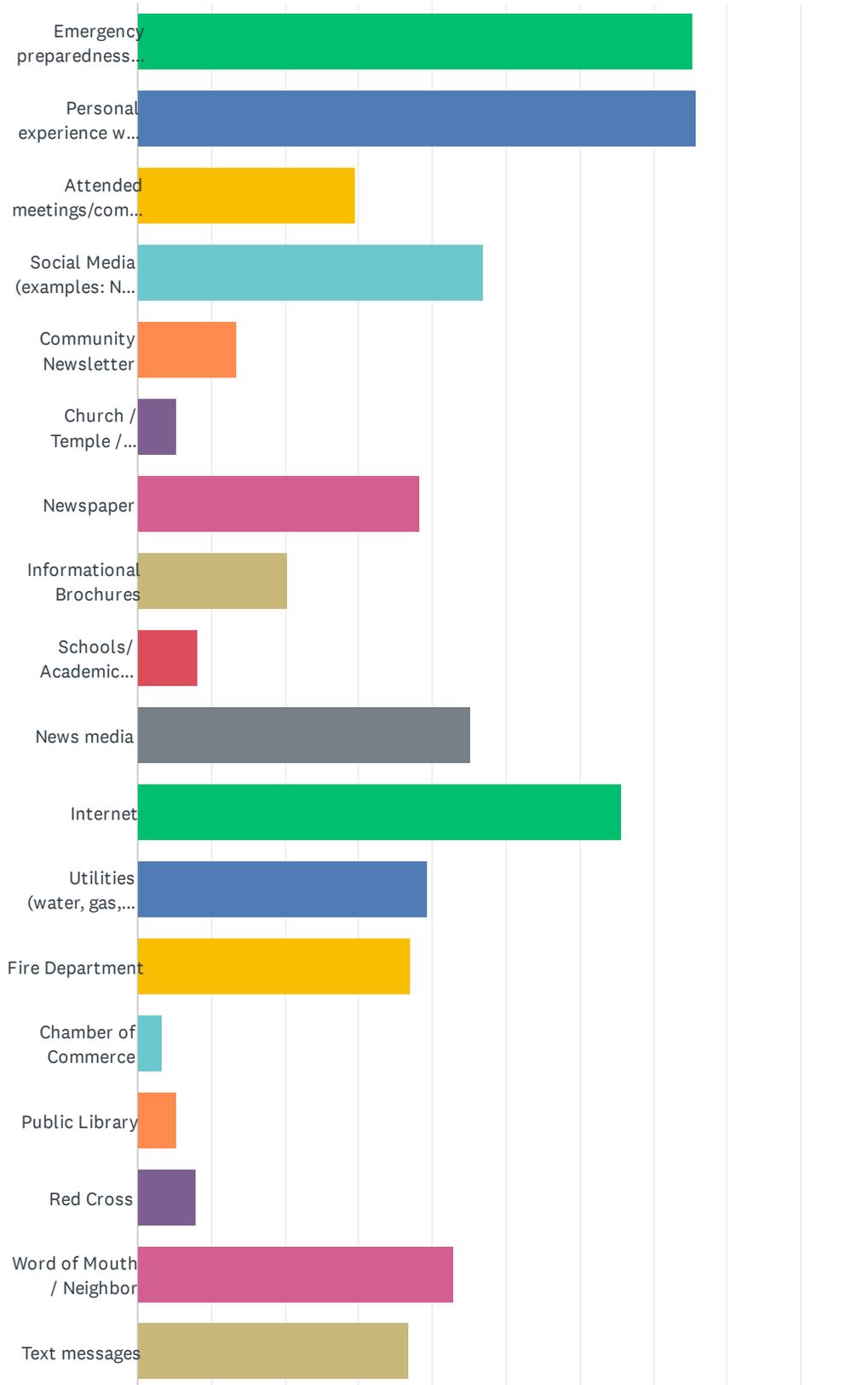
Answered: 633 Skipped: 58



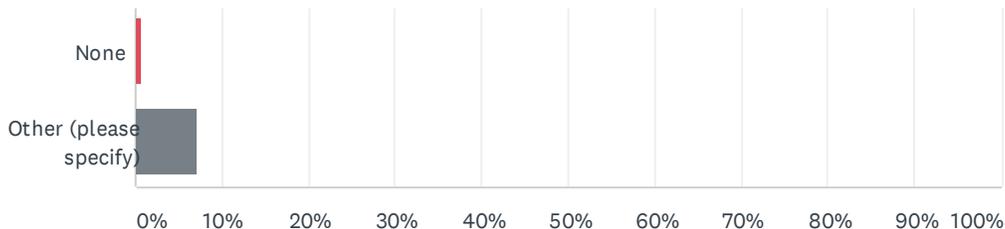
| ANSWER CHOICES | RESPONSES | |
|-----------------|-----------|------------|
| Check one: | 0.00% | 0 |
| 0 days | 0.95% | 6 |
| 1 to 3 days | 19.43% | 123 |
| 4 to 7 days | 39.81% | 252 |
| 8 to 15 days | 24.01% | 152 |
| 16 days or more | 15.80% | 100 |
| TOTAL | | 633 |

Q7 Which of the following have provided you with useful information to help you be prepared for a hazard event? (Check all that apply)

Answered: 634 Skipped: 57



Sonoma County 2020 Hazard Mitigation Plan Survey



| ANSWER CHOICES | RESPONSES | |
|---|-----------|-----|
| Emergency preparedness information from a government source (e.g., federal, state, or local emergency management) | 75.39% | 478 |
| Personal experience with one or more natural hazards/disasters | 75.71% | 480 |
| Attended meetings/community events or workshops that have dealt with disaster preparedness | 29.50% | 187 |
| Social Media (examples: Next Door, Facebook, Twitter) | 46.85% | 297 |
| Community Newsletter | 13.41% | 85 |
| Church / Temple / Worship Center | 5.21% | 33 |
| Newspaper | 38.33% | 243 |
| Informational Brochures | 20.19% | 128 |
| Schools/ Academic Institutions | 8.20% | 52 |
| News media | 45.11% | 286 |
| Internet | 65.77% | 417 |
| Utilities (water, gas, electric, etc.) | 39.27% | 249 |
| Fire Department | 37.07% | 235 |
| Chamber of Commerce | 3.31% | 21 |
| Public Library | 5.21% | 33 |
| Red Cross | 8.04% | 51 |
| Word of Mouth / Neighbor | 42.90% | 272 |
| Text messages | 36.91% | 234 |
| None | 0.63% | 4 |
| Other (please specify) | 7.10% | 45 |
| Total Respondents: 634 | | |

Sonoma County 2020 Hazard Mitigation Plan Survey

| # | OTHER (PLEASE SPECIFY) | DATE |
|----|---|---------------------|
| 1 | "Sonoma County Fire Updates" and "Caz Hills - Fire/emergency" pages on Facebook | 2/25/2021 7:27 PM |
| 2 | "Sonoma county Fire Updates" and "Caz Hills - Fire/ emergency" page on Facebook | 2/25/2021 7:17 PM |
| 3 | COPE and CERT | 2/25/2021 4:29 PM |
| 4 | professional societies | 2/12/2021 12:23 PM |
| 5 | local community organizations | 2/9/2021 5:15 PM |
| 6 | ham radio | 2/9/2021 4:14 PM |
| 7 | fire alerts on text when power is on | 2/9/2021 3:35 PM |
| 8 | 888-777 | 1/27/2021 3:05 PM |
| 9 | Internet Research | 1/27/2021 12:51 PM |
| 10 | Self taught. | 1/25/2021 12:41 AM |
| 11 | Kaiser - employer | 1/18/2021 5:05 PM |
| 12 | My dad | 1/13/2021 7:32 AM |
| 13 | workplace trainings | 1/12/2021 3:20 PM |
| 14 | Senator Mike McGuire | 1/8/2021 8:11 PM |
| 15 | County of Sonoma leaders | 1/8/2021 3:37 PM |
| 16 | Boy Scouts | 1/8/2021 7:02 AM |
| 17 | AARP magazine articles (how to pack a "go bag") | 1/7/2021 5:27 PM |
| 18 | Nixil local maps & some local government is a Partly helpful | 1/7/2021 2:57 PM |
| 19 | Common sense | 1/6/2021 9:42 AM |
| 20 | I am part of the EOC for the City of Santa Rosa | 1/5/2021 6:02 PM |
| 21 | KSRO | 1/5/2021 10:40 AM |
| 22 | Active Fire maps and air quality websites | 1/5/2021 10:34 AM |
| 23 | nixle | 1/4/2021 2:03 PM |
| 24 | I'm a FEMA trained emergency preparedness educator | 1/1/2021 6:31 PM |
| 25 | KSRO | 12/31/2020 7:49 AM |
| 26 | Instinct | 12/30/2020 5:54 PM |
| 27 | Common sense; figured it out. | 12/30/2020 5:54 PM |
| 28 | CERT Training | 12/24/2020 12:43 PM |
| 29 | map your neighborhood | 12/23/2020 11:47 PM |
| 30 | I am trained in disaster response and volunteer in the SF EOC | 12/22/2020 12:12 PM |
| 31 | CERT meetings | 12/22/2020 2:36 AM |
| 32 | Fire Safe Sonoma | 12/21/2020 9:44 AM |
| 33 | Employer News Letters | 12/21/2020 9:18 AM |
| 34 | Neighborfest | 12/19/2020 4:45 PM |
| 35 | Girl Scouts | 12/19/2020 2:34 PM |
| 36 | newspaper online; academic inst. only because i work at one | 12/18/2020 8:52 PM |
| 37 | work experience (fire department job) | 12/18/2020 10:00 AM |

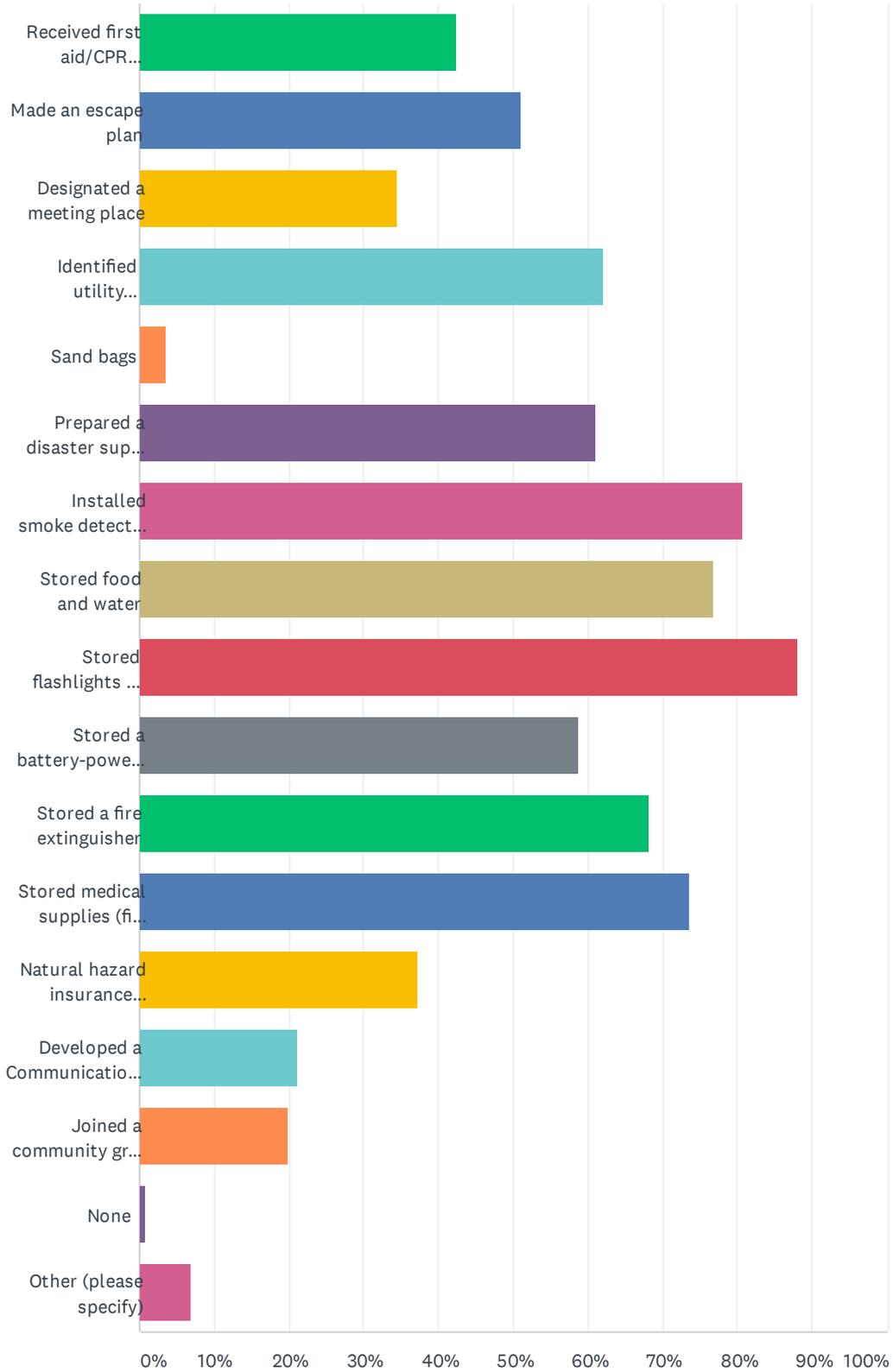
Sonoma County 2020 Hazard Mitigation Plan Survey

| | | |
|----|--|---------------------|
| 38 | Fire Safe Council | 12/18/2020 7:45 AM |
| 39 | Bodega Bay CERT | 12/18/2020 2:37 AM |
| 40 | Those in agriculture are used to being prepared, improvising, and running multiple generators. | 12/17/2020 8:42 PM |
| 41 | local government information releases | 12/17/2020 2:14 PM |
| 42 | Bodega Bay CERT | 12/16/2020 1:31 PM |
| 43 | Podcasts | 12/16/2020 1:26 PM |
| 44 | COPE and CERT | 12/16/2020 12:42 PM |
| 45 | Neighborhood gang | 12/16/2020 11:49 AM |

Q8 Which of the following steps has your household taken to prepare for a hazard event? (Check all that apply)

Answered: 636 Skipped: 55

Sonoma County 2020 Hazard Mitigation Plan Survey



Sonoma County 2020 Hazard Mitigation Plan Survey

| ANSWER CHOICES | RESPONSES | |
|--|-----------|-----|
| Received first aid/CPR training | 42.45% | 270 |
| Made an escape plan | 50.94% | 324 |
| Designated a meeting place | 34.59% | 220 |
| Identified utility shutoffs | 62.11% | 395 |
| Sand bags | 3.62% | 23 |
| Prepared a disaster supply kit | 61.01% | 388 |
| Installed smoke detectors on each level of the house | 80.82% | 514 |
| Stored food and water | 76.73% | 488 |
| Stored flashlights and batteries | 88.05% | 560 |
| Stored a battery-powered radio | 58.81% | 374 |
| Stored a fire extinguisher | 68.24% | 434 |
| Stored medical supplies (first aid kit, medications) | 73.58% | 468 |
| Natural hazard insurance (Flood, Earthquake, Wildfire) | 37.26% | 237 |
| Developed a Communication Plan | 21.07% | 134 |
| Joined a community group (CERT, Firewise, neighborhood preparedness, etc.) | 19.97% | 127 |
| None | 0.79% | 5 |
| Other (please specify) | 6.92% | 44 |
| Total Respondents: 636 | | |

Sonoma County 2020 Hazard Mitigation Plan Survey

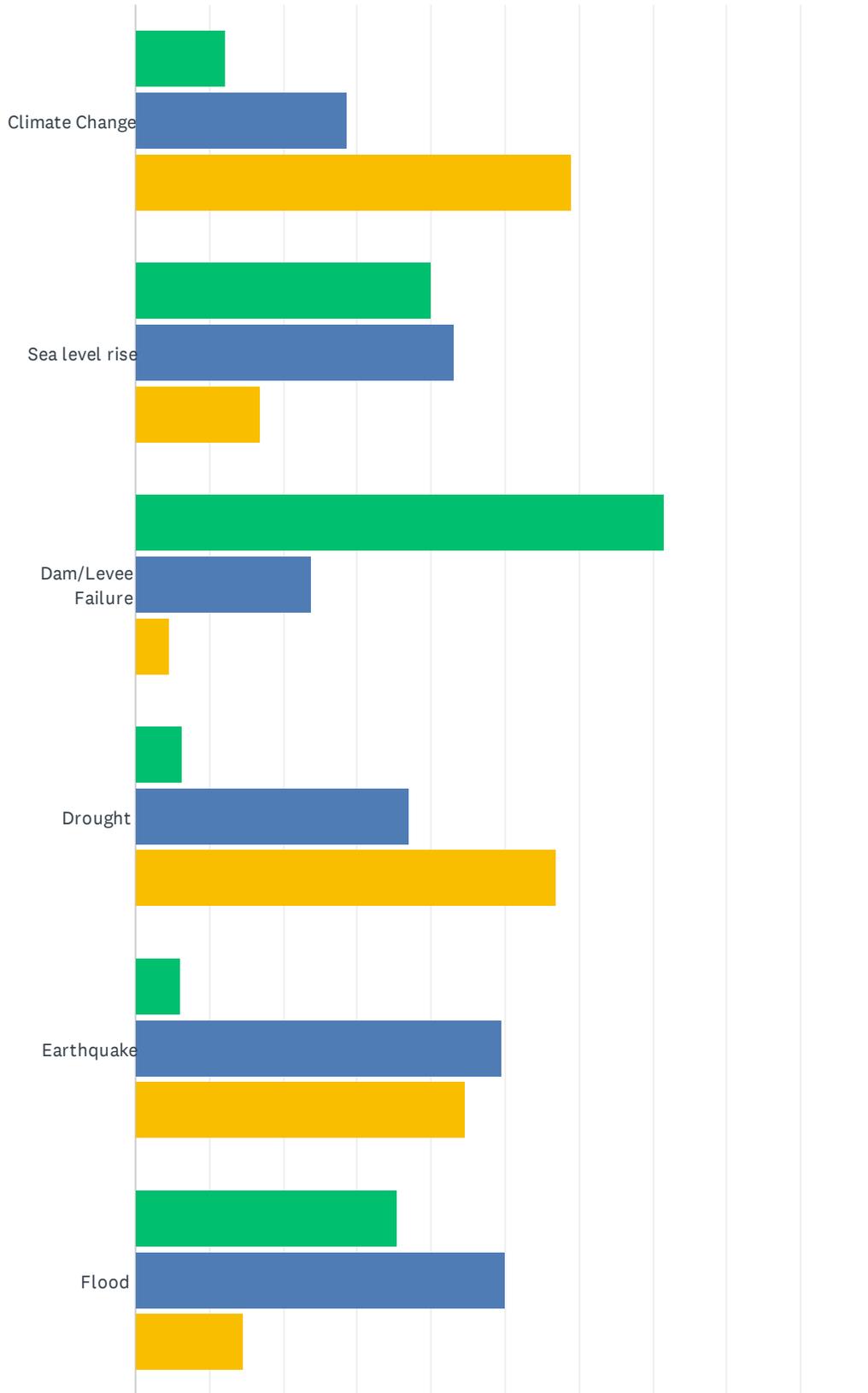
| # | OTHER (PLEASE SPECIFY) | DATE |
|----|--|---------------------|
| 1 | Generator, solar powered lights | 2/25/2021 7:27 PM |
| 2 | Generator, solar lights, propane back up fridge | 2/25/2021 7:17 PM |
| 3 | joined the fire department | 2/25/2021 4:24 PM |
| 4 | propane generator with 2 - 5gal backup tanks. On going fire fuel clearance. | 2/21/2021 8:42 AM |
| 5 | Off-grid cooking. Home food production. | 2/11/2021 9:36 AM |
| 6 | meeting places and escape plans are extremely situation-specific | 2/9/2021 5:15 PM |
| 7 | water system for fire | 2/9/2021 3:35 PM |
| 8 | Alternative Living Place | 2/9/2021 9:28 AM |
| 9 | battery for charging phones | 2/9/2021 8:15 AM |
| 10 | Cut back most shrubs and trees around our house | 2/8/2021 10:23 PM |
| 11 | Fire hardened landscape | 1/23/2021 12:39 PM |
| 12 | bought a generator | 1/23/2021 11:36 AM |
| 13 | stored masks for smoke AND covid | 1/12/2021 3:20 PM |
| 14 | Solar and home battery backups | 1/10/2021 12:39 PM |
| 15 | Solar and Test Powerwall | 1/9/2021 11:19 AM |
| 16 | Our Gehricke Road community has developed an emergency phone tree in case of evacuation | 1/9/2021 9:45 AM |
| 17 | Back up power for house | 1/9/2021 9:13 AM |
| 18 | Evacuation list posted near door | 1/8/2021 2:31 PM |
| 19 | back up battery | 1/8/2021 10:06 AM |
| 20 | Prepared bug-out bags and waterbobs | 1/5/2021 2:01 PM |
| 21 | Driving partner, because I cant. | 1/5/2021 11:37 AM |
| 22 | Cleared leaves/brush, fireproofed some outside areas of house, installed filters on windows, bought air purifier | 1/5/2021 10:34 AM |
| 23 | Completed CERT from Los Angeles Fire Department staff. | 1/5/2021 9:40 AM |
| 24 | Purchased a generator | 1/4/2021 12:48 PM |
| 25 | Fear is not an option | 12/30/2020 5:54 PM |
| 26 | Back up power supply (battery) to last 3 days | 12/30/2020 12:19 PM |
| 27 | installed battery storage system for solar | 12/28/2020 3:58 PM |
| 28 | Started the Mayacamas Fire Safe Council, and husband is volunteer Firefighter | 12/22/2020 10:50 AM |
| 29 | Prepared to abandon the state entirely. | 12/21/2020 11:26 AM |
| 30 | COAD | 12/21/2020 9:28 AM |
| 31 | Bought a generator | 12/19/2020 4:45 PM |
| 32 | Stored food and supplies elsewhere | 12/19/2020 12:28 PM |
| 33 | Wood fired stove and wood. | 12/19/2020 8:04 AM |
| 34 | Organized neighborhood COPE | 12/19/2020 6:49 AM |
| 35 | what does communication plan mean? that's too vague for me | 12/18/2020 8:52 PM |
| 36 | Created defensible space and hardened buildings | 12/18/2020 7:45 AM |
| 37 | own a type 2 fire engine with enough hose to reach any home in the neighborhood | 12/17/2020 12:25 AM |

Sonoma County 2020 Hazard Mitigation Plan Survey

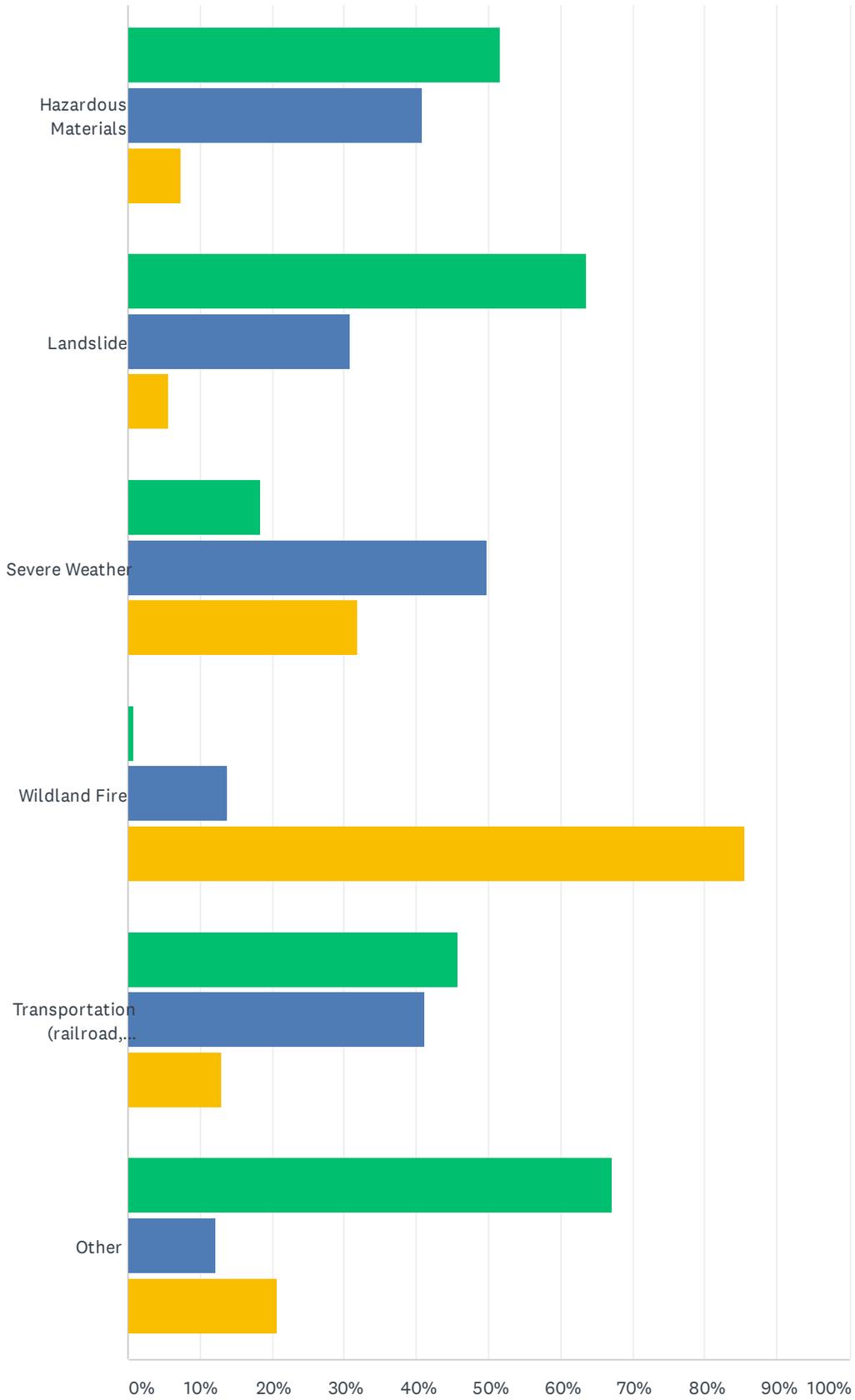
| | | |
|----|---|---------------------|
| 38 | Purchased a gas generator | 12/16/2020 1:31 PM |
| 39 | PV and battery backup power and generator | 12/16/2020 1:16 PM |
| 40 | Stored fuel and PV electric charger (1440 wh) | 12/16/2020 11:49 AM |
| 41 | Always have a 'go bag' even when at work/Never let a vehicle go below 1/2 tank of gas | 12/15/2020 2:46 PM |
| 42 | Signed up for all the alerts on phone | 12/15/2020 2:44 PM |
| 43 | Not a formal community group but local family and a few neighbors | 12/8/2020 5:44 PM |
| 44 | Purchased Two Generators for Home and Water | 12/8/2020 5:03 PM |

Q9 How concerned are you about the following hazards in Sonoma County? (Check one response for each hazard)

Answered: 641 Skipped: 50



Sonoma County 2020 Hazard Mitigation Plan Survey



Not Concerned Concerned Very Concerned

Sonoma County 2020 Hazard Mitigation Plan Survey

| | NOT CONCERNED | CONCERNED | VERY CONCERNED | TOTAL | WEIGHTED AVERAGE |
|---|---------------|---------------|----------------|-------|------------------|
| Climate Change | 12.16% 77 | 28.75% 182 | 59.08% 374 | 633 | 2.47 |
| Sea level rise | 39.87% 242 | 43.16% 262 | 16.97% 103 | 607 | 1.77 |
| Dam/Levee Failure | 71.65% 422 | 23.77% 140 | 4.58% 27 | 589 | 1.33 |
| Drought | 6.19% 39 | 36.98% 233 | 56.83% 358 | 630 | 2.51 |
| Earthquake | 6.01% 38 | 49.53% 313 | 44.46% 281 | 632 | 2.38 |
| Flood | 35.32% 213 | 50.08% 302 | 14.59% 88 | 603 | 1.79 |
| Hazardous Materials | 51.76% 308 | 40.84% 243 | 7.39% 44 | 595 | 1.56 |
| Landslide | 63.56% 375 | 30.85% 182 | 5.59% 33 | 590 | 1.42 |
| Severe Weather | 18.43% 113 | 49.76% 305 | 31.81% 195 | 613 | 2.13 |
| Wildland Fire | 0.79% 5 | 13.74% 87 | 85.47% 541 | 633 | 2.85 |
| Transportation (railroad, airport, highway, etc.) | 45.87% 272 | 41.15% 244 | 12.98% 77 | 593 | 1.67 |
| Other | 67.11% 100 | 12.08% 18 | 20.81% 31 | 149 | 1.54 |

Sonoma County 2020 Hazard Mitigation Plan Survey

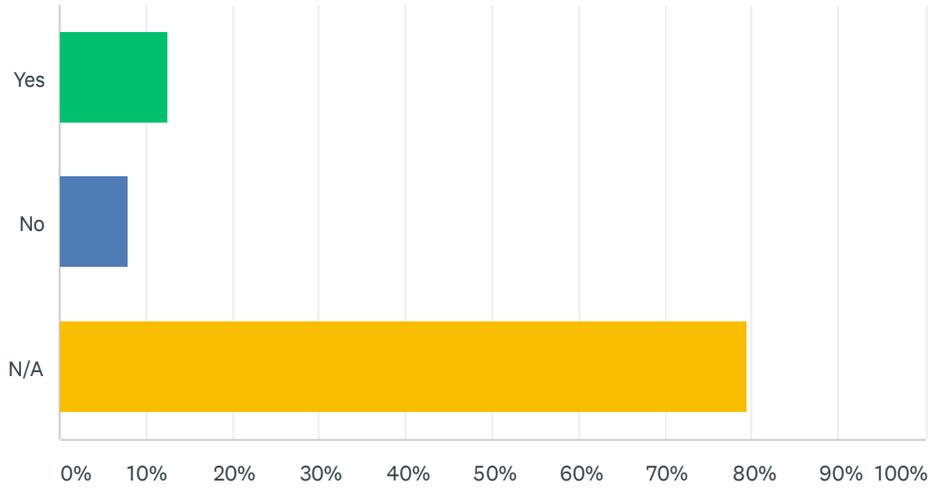
| # | (PLEASE SPECIFY OTHER HAZARD) | DATE |
|----|--|--------------------|
| 1 | Bureaucracy | 2/25/2021 8:22 PM |
| 2 | Landslide after flood has taken out Moscow Road, a critical escape route. Let's get one lane (only) restored, please. | 2/25/2021 7:27 PM |
| 3 | Our "escape route" in Monte Rio had a slide 2 years ago - Moscow Road needs to return to at least one lane open! | 2/25/2021 7:17 PM |
| 4 | informed community in emergency | 2/22/2021 10:52 AM |
| 5 | Sheriffs not helping with aggressive, gun totting, neighbors. | 2/21/2021 8:42 AM |
| 6 | loss of species because of development and vineyard expansions | 2/12/2021 12:23 PM |
| 7 | Social cohesion / strife | 2/11/2021 9:36 AM |
| 8 | Deforestation as a response to fires. Reduce fire risk by decentralizing our energy systems using solar-based microgrids and community power. Make homes safe in vulnerable locations with sprinklers (these cost \$200) and metal roofs (more expensive so rebates should be offered for that). Create no-build zones in fire prone areas. Live in balance with nature and be smart instead of making fear-based decisions that harm the ecosystem. | 2/11/2021 6:08 AM |
| 9 | indefinitely extended PG&E planned outages | 2/9/2021 5:15 PM |
| 10 | Road closures from due to natural disasters including downed trees. | 2/9/2021 3:26 PM |
| 11 | Land use and other policy that can effect events. | 2/9/2021 9:28 AM |
| 12 | evacuation routes in case of fire | 2/9/2021 8:15 AM |
| 13 | hazardous at SDC not cleaned up by stae; hwy 37 | 2/8/2021 6:05 PM |
| 14 | hwy 37. hazardous--everything at SDC that the state has not cleaned up | 2/8/2021 6:01 PM |
| 15 | Power outages and their disruptions | 1/26/2021 3:46 PM |
| 16 | One way road leading in and out of property with inadequate pull outs | 1/9/2021 11:19 AM |
| 17 | Power grid integrity and PG&E's incompetence | 1/9/2021 11:17 AM |
| 18 | Lack of potable water; our seniors complex depends on well water! | 1/9/2021 11:13 AM |
| 19 | Terrorism | 1/9/2021 9:13 AM |
| 20 | Public health hazards, such as COVID | 1/8/2021 6:12 PM |
| 21 | Asphalt plant proposed in Windsor | 1/8/2021 3:37 PM |
| 22 | Poor Roads | 1/8/2021 2:07 PM |
| 23 | Civil unrest, unlawful protesting | 1/8/2021 12:20 PM |
| 24 | Democrats | 1/8/2021 10:19 AM |
| 25 | ongoing power outage | 1/8/2021 10:06 AM |
| 26 | pandemic response | 1/8/2021 7:18 AM |
| 27 | crime driven by economic circumstances/rioting due to political unrest | 1/7/2021 11:06 PM |
| 28 | The #1 problem has been the making of proper thinning, cleaning and maintaining of Public land and private property a Crime. has over the last 20 to 30 years built up a Huge Fire & flood hazard and made much of our wild land "forest" diseased, weak & exponentially more susceptible to disease,, pests, and fire & flood! ! | 1/7/2021 2:57 PM |
| 29 | famine due to drought and exploited natural resources | 1/7/2021 8:58 AM |
| 30 | Worst Roads in the State, possibly the Country | 1/6/2021 5:16 PM |
| 31 | PG& E-caused fires, primarily due to crumbling infrastructure | 1/5/2021 3:40 PM |
| 32 | Civil unrest, police brutality and militarism | 1/5/2021 2:01 PM |

Sonoma County 2020 Hazard Mitigation Plan Survey

| | | |
|----|---|---------------------|
| 33 | Still traffic during evacuations | 1/5/2021 12:25 PM |
| 34 | Covid and lack of enforcement on your end | 1/5/2021 12:03 PM |
| 35 | Too many cars trying to evacuate at once, noise and air pollution from overhead jets | 1/5/2021 10:34 AM |
| 36 | Blocked and limited egress on Hembree in Windsor. | 1/5/2021 9:40 AM |
| 37 | compromised drinking water (salt water intrusion, pollution, etc) | 1/5/2021 8:17 AM |
| 38 | Earthquake, Infrastructure Failure, Poorly Trained Responders, Misogyny within Responder Units | 1/1/2021 6:31 PM |
| 39 | Incompetent management and authority on most levels | 12/30/2020 5:54 PM |
| 40 | Note traffic concern is relative neighborhood evacuation bottlenecks | 12/29/2020 7:36 PM |
| 41 | Blocked hwy 12 escape route | 12/28/2020 9:07 AM |
| 42 | Filthy public water | 12/22/2020 8:46 AM |
| 43 | Openly racist county officials (Sheriff, ALL supervisors failing to uphold their duties to non-English speaking residents) | 12/21/2020 11:26 AM |
| 44 | PG&E shutoffs. Home is all electric. No hot water, fridge, heat or fans. | 12/20/2020 12:22 PM |
| 45 | COVID | 12/19/2020 4:45 PM |
| 46 | Don't understand how Transportation is a hazard. | 12/19/2020 12:28 PM |
| 47 | Do you mean those transportation system ARE hazards (that's why I checked it) or that I'm worried I won't be able to use them in an emergency? | 12/19/2020 8:04 AM |
| 48 | Pandemic, there will be others | 12/19/2020 6:49 AM |
| 49 | smoke from wildland fires for weeks at a time | 12/18/2020 11:04 PM |
| 50 | Widespread lack of earthquake insurance | 12/18/2020 9:59 PM |
| 51 | Climate change/global warming | 12/18/2020 9:35 PM |
| 52 | what' do you mean transportation related to hazard; Am i afraid the airport won't work? am I worried the train won't work that we can't rely on much anyway? what if hwy 101 is unavailable? someone messed up the SMART train so we don't have that going much anymore. Some wealthy privileged people in the county didn't want it. | 12/18/2020 8:52 PM |
| 53 | Slightly concerned: civil unrest | 12/18/2020 1:42 PM |
| 54 | Being regulated in a one size fits all manner that makes my life more hazardous. The rules make it difficult or impossible to keep fire safe by preventing preemptive burning for decades. Construction rules that mean a new house is nearer flammable trees because the road improvements that would be required for a permit are unaffordable for me. Government should stop dictating private road construction, especially when county roads are so poorly maintained. | 12/17/2020 8:42 PM |
| 55 | Widespread lack of earthquake insurance | 12/17/2020 6:20 PM |
| 56 | neighbor planting 21 redwood trees 8 ft from property line and 22 ft from our house | 12/16/2020 8:30 PM |
| 57 | PG&E lack of maintenance causing fires | 12/16/2020 1:31 PM |
| 58 | food and fuel supply | 12/16/2020 12:59 PM |
| 59 | Pandemic | 12/16/2020 12:42 PM |
| 60 | Bio, Chem or Cyber-terrorism (esp. rightwing lone-wolf incels) | 12/16/2020 11:49 AM |

Q10 If you are a renter, do you have renters insurance?

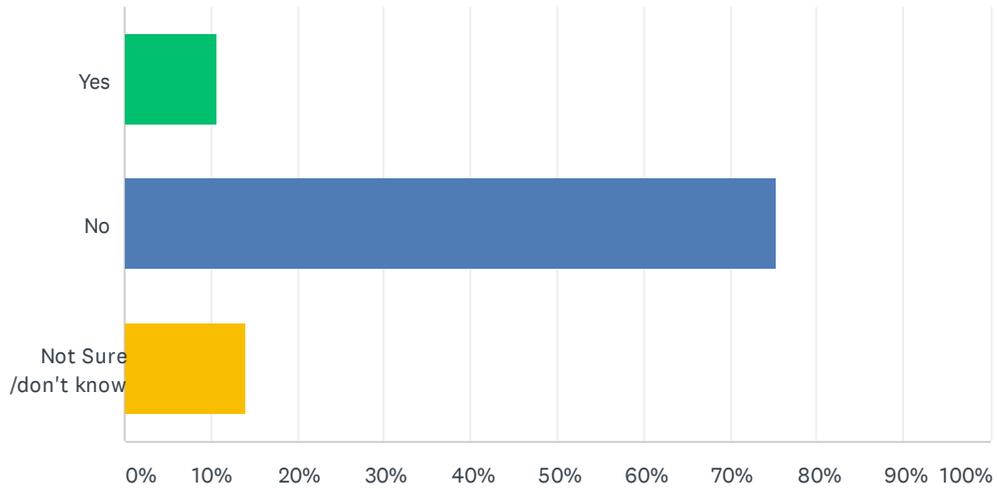
Answered: 514 Skipped: 177



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 12.45% | 64 |
| No | 7.98% | 41 |
| N/A | 79.57% | 409 |
| TOTAL | | 514 |

Q11 Is your property or rental located in or near a designated floodplain?

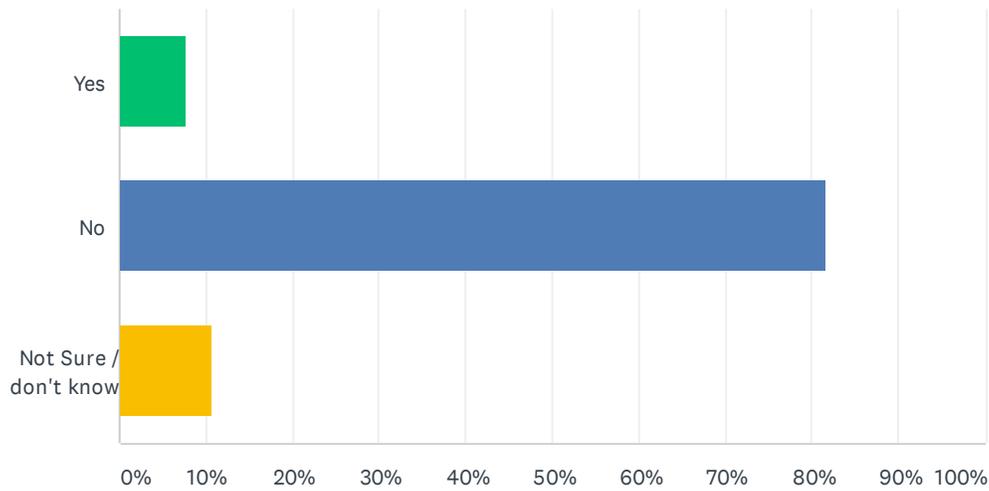
Answered: 627 Skipped: 64



| ANSWER CHOICES | RESPONSES | |
|----------------------|-----------|-----|
| Yes | 10.69% | 67 |
| No | 75.28% | 472 |
| Not Sure /don't know | 14.04% | 88 |
| TOTAL | | 627 |

Q12 Do you have flood insurance?

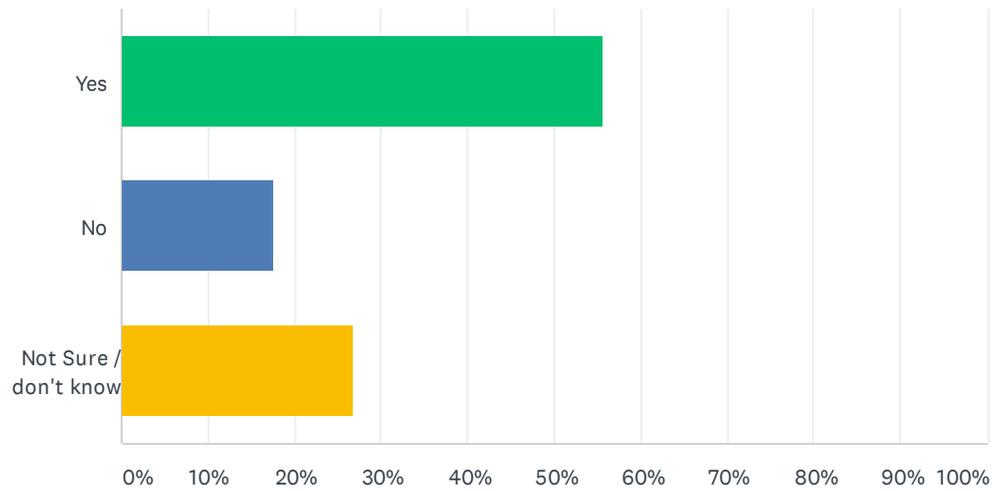
Answered: 634 Skipped: 57



| ANSWER CHOICES | RESPONSES | |
|-----------------------|-----------|-----|
| Yes | 7.73% | 49 |
| No | 81.55% | 517 |
| Not Sure / don't know | 10.73% | 68 |
| TOTAL | | 634 |

Q13 Is your property or rental located near an earthquake fault?

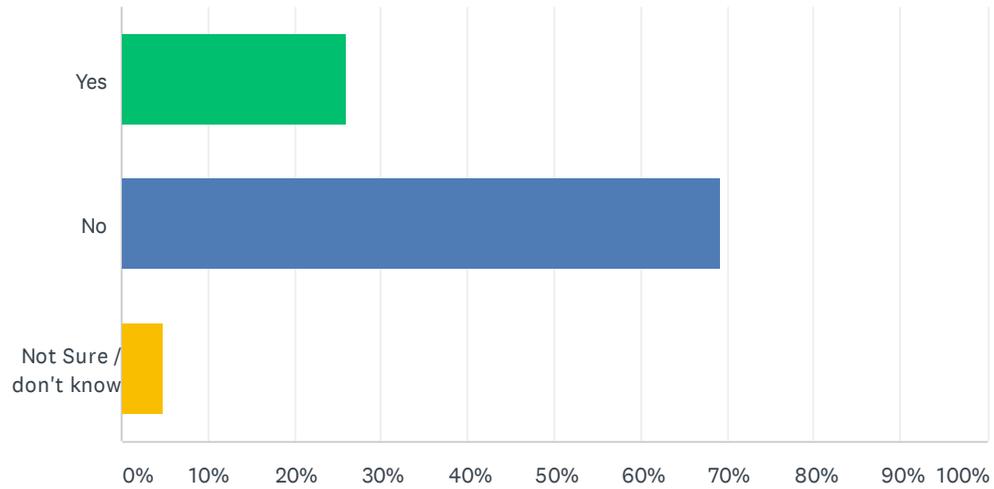
Answered: 636 Skipped: 55



| ANSWER CHOICES | RESPONSES | |
|-----------------------|-----------|------------|
| Yes | 55.66% | 354 |
| No | 17.61% | 112 |
| Not Sure / don't know | 26.73% | 170 |
| TOTAL | | 636 |

Q14 Do you have earthquake insurance?

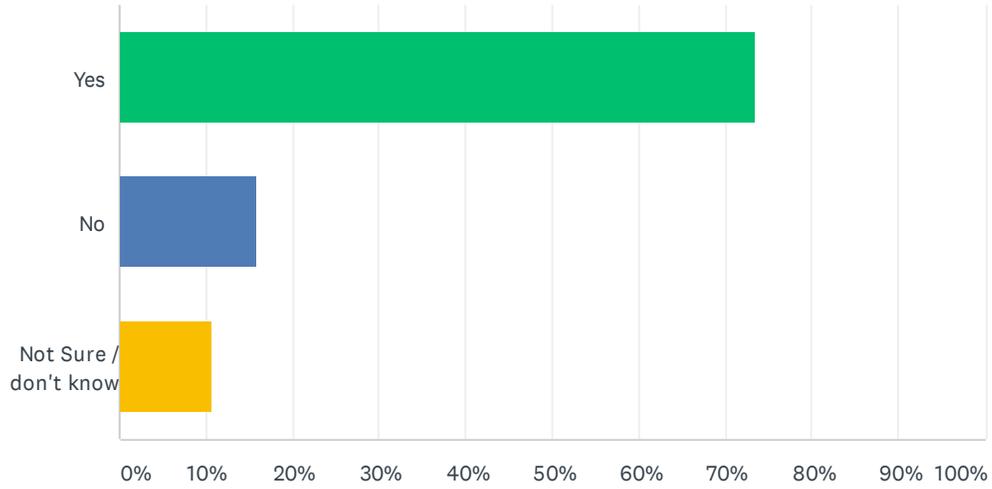
Answered: 632 Skipped: 59



| ANSWER CHOICES | RESPONSES | |
|-----------------------|-----------|-----|
| Yes | 25.95% | 164 |
| No | 69.15% | 437 |
| Not Sure / don't know | 4.91% | 31 |
| TOTAL | | 632 |

Q15 Is your property or rental located in an area at risk for wildfires?

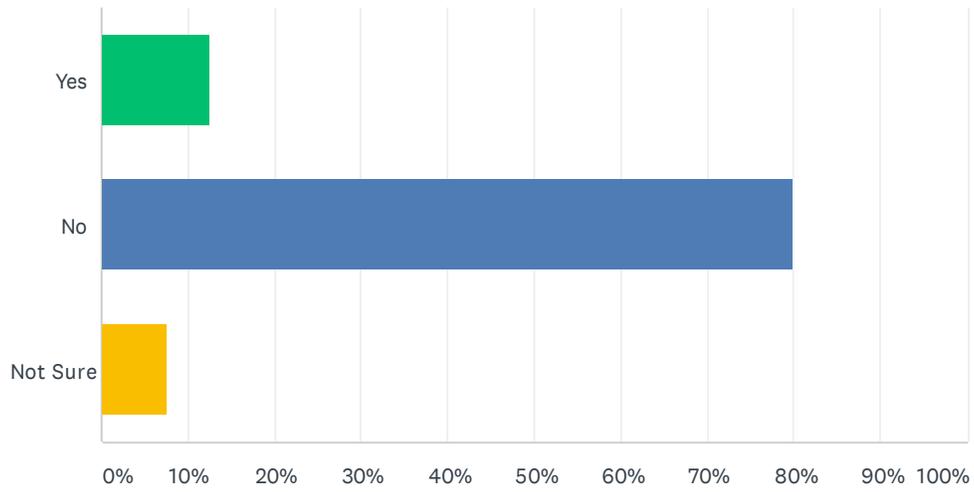
Answered: 634 Skipped: 57



| ANSWER CHOICES | RESPONSES | |
|-----------------------|-----------|------------|
| Yes | 73.50% | 466 |
| No | 15.93% | 101 |
| Not Sure / don't know | 10.57% | 67 |
| TOTAL | | 634 |

Q16 Have you ever had problems getting homeowners or renters insurance due to risks from hazards?

Answered: 632 Skipped: 59



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 12.50% | 79 |
| No | 79.91% | 505 |
| Not Sure | 7.59% | 48 |
| TOTAL | | 632 |

Sonoma County 2020 Hazard Mitigation Plan Survey

| # | IF "YES," WHICH NATURAL HAZARD WAS INVOLVED? | DATE |
|----|---|---------------------|
| 1 | recent wildfires in the county in 2017 and 2020 | 2/25/2021 8:55 PM |
| 2 | Fire | 2/25/2021 8:22 PM |
| 3 | Fire | 2/25/2021 7:27 PM |
| 4 | Fire | 2/25/2021 7:17 PM |
| 5 | Wildfire | 2/25/2021 4:29 PM |
| 6 | Can't afford more than basic home owner's insurance. | 2/21/2021 8:42 AM |
| 7 | wildfire | 2/16/2021 7:54 AM |
| 8 | Wildfires | 2/9/2021 7:26 PM |
| 9 | fire | 2/9/2021 4:14 PM |
| 10 | fire | 2/9/2021 3:35 PM |
| 11 | Fire | 2/9/2021 3:26 PM |
| 12 | Fire | 2/9/2021 2:55 PM |
| 13 | Earthquake it is too expensive for us | 2/3/2021 12:15 PM |
| 14 | Fire | 2/1/2021 3:35 PM |
| 15 | Since NorthBay Fires, hard to get homeowners insurance and price significantly went up. | 1/28/2021 11:39 AM |
| 16 | fire | 1/23/2021 11:36 AM |
| 17 | Wildfires | 1/9/2021 12:57 PM |
| 18 | Water | 1/9/2021 10:20 AM |
| 19 | Insurance in the Sonoma hills is definately a concern. We were told by our agency that they would not insure us if they were not already. We are several fire danger levels above what they now accept. | 1/9/2021 9:45 AM |
| 20 | PG&E caused fire | 1/8/2021 7:47 AM |
| 21 | Because of government stupidity mentioned before ALL of Sonoma county is now a fire hazard zone! | 1/7/2021 2:57 PM |
| 22 | kincade, geyserville fires | 1/6/2021 1:16 PM |
| 23 | Kincade Fire, Walbridge Fire (LNU) | 1/6/2021 8:44 AM |
| 24 | Earthquake insurance is not affordable. | 1/6/2021 7:52 AM |
| 25 | Fire | 1/6/2021 4:58 AM |
| 26 | wild fire | 1/5/2021 9:04 PM |
| 27 | wildfires | 1/5/2021 5:26 PM |
| 28 | Wildfire | 1/5/2021 4:55 PM |
| 29 | Fire | 1/5/2021 2:01 PM |
| 30 | Fire | 1/5/2021 1:30 PM |
| 31 | I anticipate the advent of insurance "red lining" due to wildfires. | 1/5/2021 9:40 AM |
| 32 | Tubbs Fire, Coffey Park. I'm not sure any area is not at risk of wildfre! | 1/5/2021 8:17 AM |
| 33 | Wildfire | 12/31/2020 7:18 AM |
| 34 | Wildfire | 12/30/2020 11:09 PM |
| 35 | 2017 wildfire | 12/30/2020 6:55 PM |

Sonoma County 2020 Hazard Mitigation Plan Survey

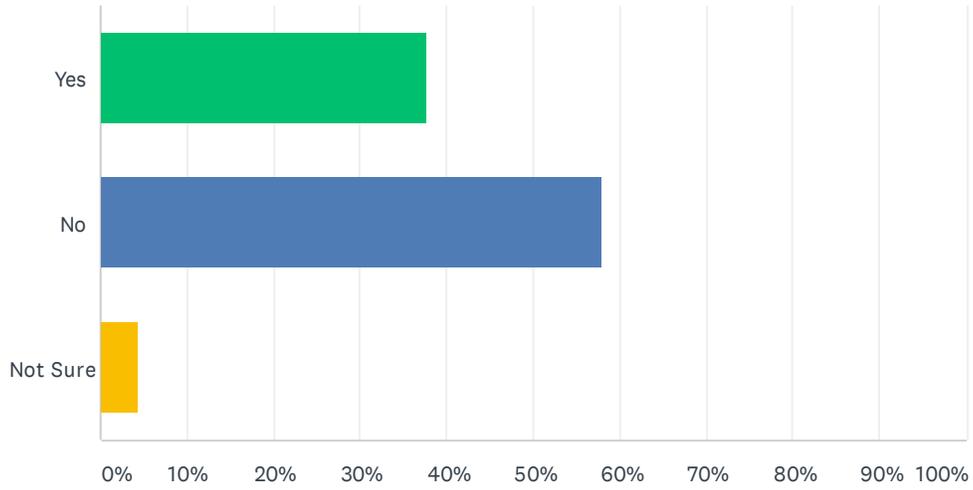
| | | |
|----|---|---------------------|
| 36 | wikd fires | 12/30/2020 12:39 PM |
| 37 | fire | 12/30/2020 12:19 PM |
| 38 | fire | 12/30/2020 10:53 AM |
| 39 | wildfire (on another property) | 12/29/2020 9:58 PM |
| 40 | Fire | 12/29/2020 7:48 AM |
| 41 | Nuns fire, homeowners insurance canceled at renewal period | 12/28/2020 3:58 PM |
| 42 | Wildfire, some insurance companies have left this marketplace | 12/23/2020 5:41 PM |
| 43 | fire, earthquake, flood | 12/22/2020 10:50 AM |
| 44 | Farmers insurance has been great and hasn't denied us insurance due to living in the WUI | 12/22/2020 10:50 AM |
| 45 | Our fire insurance premiums Md homeowners insurance premiums have gone up | 12/22/2020 9:34 AM |
| 46 | High winds destroyed a fence | 12/21/2020 10:42 PM |
| 47 | Fire | 12/21/2020 2:01 PM |
| 48 | Earthquake, Flood, Fire, distance from fire station | 12/21/2020 12:05 PM |
| 49 | wildfire | 12/21/2020 9:28 AM |
| 50 | fire | 12/21/2020 8:52 AM |
| 51 | Eathquake fault 1 mile away, insurance company tried to cancel us last year | 12/20/2020 10:25 AM |
| 52 | Wildfire | 12/19/2020 7:05 PM |
| 53 | Did an energy and seismic retrofit 10 yes ago | 12/19/2020 6:49 AM |
| 54 | Earthquake insurance is expensive and the deductible is insane typically about 10%of property value | 12/18/2020 10:51 AM |
| 55 | fire | 12/18/2020 9:27 AM |
| 56 | Fire | 12/18/2020 8:12 AM |
| 57 | Wildfire | 12/18/2020 7:45 AM |
| 58 | Fire | 12/17/2020 8:42 PM |
| 59 | tubbs nunn glass lnu wildfires | 12/17/2020 5:09 PM |
| 60 | fire insurance | 12/17/2020 12:25 AM |
| 61 | When located to the North Bay in 2012 from WA State, existing home insurer did not provide homeowner insurance for Marin/Sonoma County. | 12/16/2020 5:24 PM |
| 62 | Fire insurance difficult in 2017 | 12/16/2020 1:25 PM |
| 63 | Wildfire | 12/16/2020 12:42 PM |
| 64 | wildfire | 12/16/2020 12:29 PM |
| 65 | Not us, but nearby neighbors just had policy cancelled for wildfire risk | 12/16/2020 11:49 AM |
| 66 | fire | 12/15/2020 3:07 PM |
| 67 | wildfire | 12/15/2020 10:47 AM |
| 68 | Fire, but we were able to get coverage after cancellation | 12/14/2020 3:05 PM |
| 69 | wildfires | 12/9/2020 8:57 PM |
| 70 | Wildfire | 12/9/2020 8:35 AM |
| 71 | had to cut down trees | 12/8/2020 7:55 PM |
| 72 | Wildfire | 12/8/2020 5:10 PM |

Sonoma County 2020 Hazard Mitigation Plan Survey

| | | |
|----|--|---------------------|
| 73 | Wildfire | 12/8/2020 5:03 PM |
| 74 | You can't get Earthquake Insurance rates are over the top, Fire is becoming a real challenge and expected to become unobtainable | 12/8/2020 5:03 PM |
| 75 | Fire | 11/19/2020 10:19 AM |

Q17 When you moved into your residence, did you consider the impact a disaster could have?

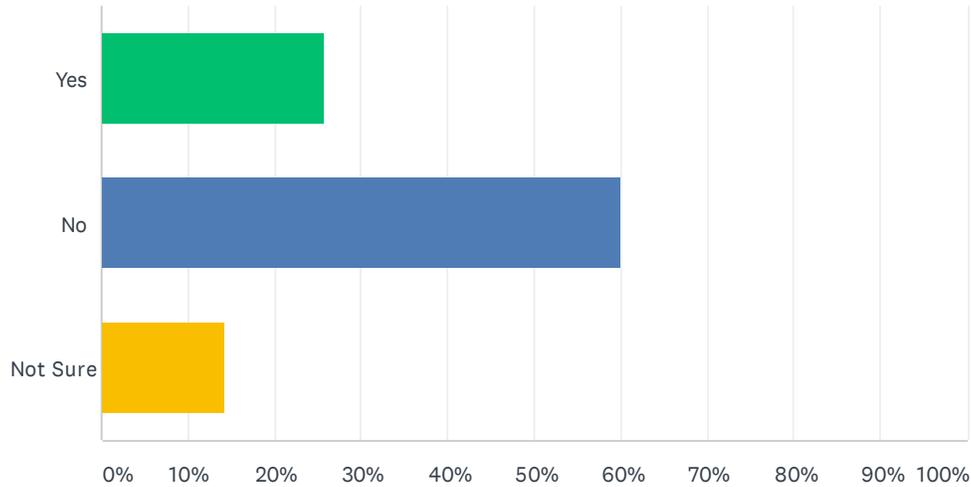
Answered: 616 Skipped: 75



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 37.66% | 232 |
| No | 57.95% | 357 |
| Not Sure | 4.38% | 27 |
| TOTAL | | 616 |

Q18 Was the presence of a hazard risk zone (e.g., dam failure zone, flood zone, landslide hazard area, high fire risk area) disclosed to you by a real estate agent, seller, or landlord before you purchased or moved into your residence?

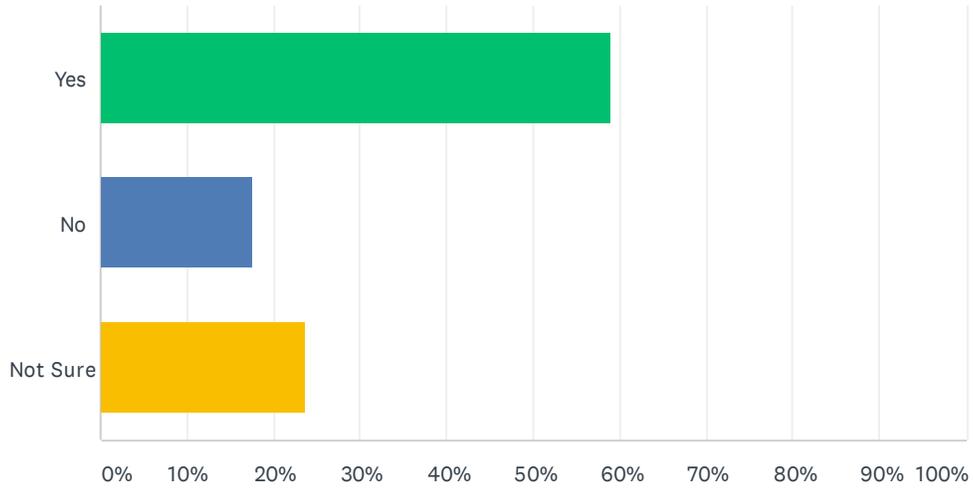
Answered: 617 Skipped: 74



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|------------|
| Yes | 25.77% | 159 |
| No | 59.97% | 370 |
| Not Sure | 14.26% | 88 |
| TOTAL | | 617 |

Q19 Would the disclosure of this type of hazard risk information influence your decision to buy or rent a residence?

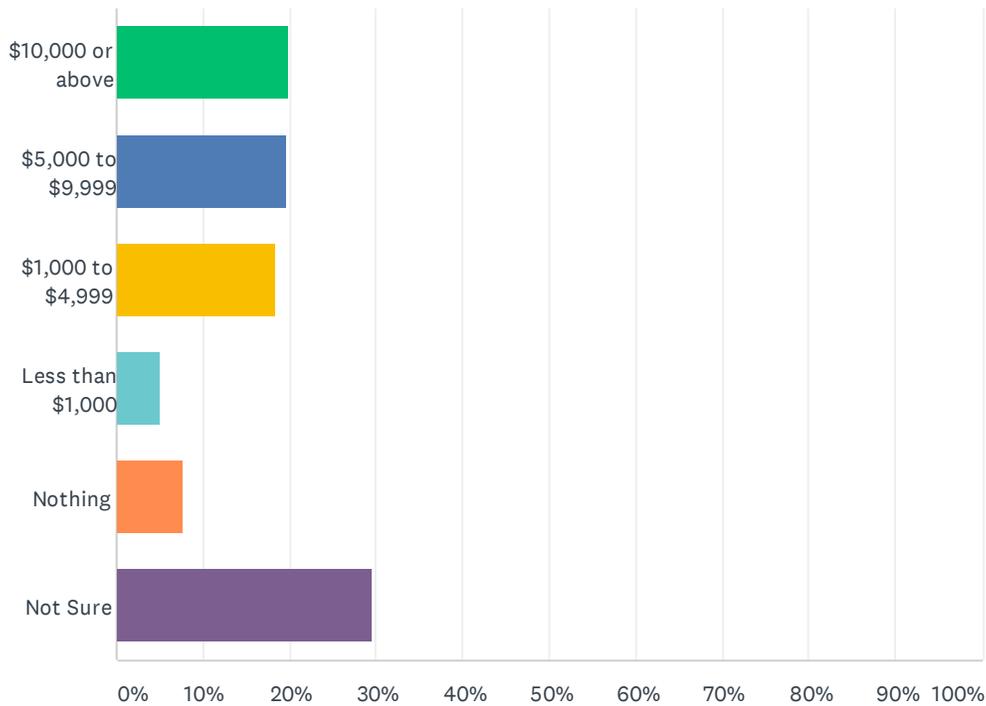
Answered: 616 Skipped: 75



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 58.93% | 363 |
| No | 17.53% | 108 |
| Not Sure | 23.54% | 145 |
| TOTAL | | 616 |

Q20 If you were eligible for funding assistance that required a local contribution, how much money would you be willing to spend to retrofit your home to reduce risks associated with disasters? (for example, by elevating a home above the flood level, performing seismic upgrades, or replacing a combustible roof with non-combustible roofing)

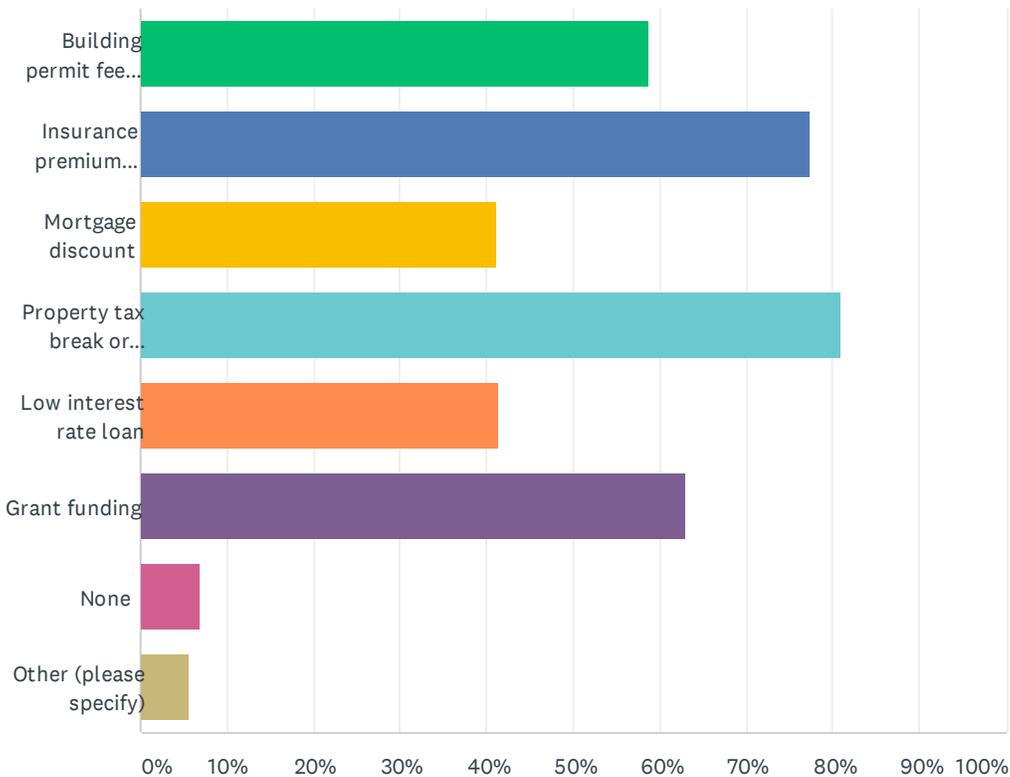
Answered: 611 Skipped: 80



| ANSWER CHOICES | RESPONSES | |
|--------------------|-----------|------------|
| \$10,000 or above | 19.80% | 121 |
| \$5,000 to \$9,999 | 19.64% | 120 |
| \$1,000 to \$4,999 | 18.33% | 112 |
| Less than \$1,000 | 5.07% | 31 |
| Nothing | 7.69% | 47 |
| Not Sure | 29.46% | 180 |
| TOTAL | | 611 |

Q21 Which of the following incentives for property owners would encourage you to spend money to retrofit your home to protect against disasters? (Check all that apply). Please note that your answers to this question does not obligate any of the planning partners to implement the incentives.

Answered: 600 Skipped: 91



| ANSWER CHOICES | RESPONSES | |
|---------------------------------|-----------|-----|
| Building permit fee waiver | 58.83% | 353 |
| Insurance premium discount | 77.50% | 465 |
| Mortgage discount | 41.17% | 247 |
| Property tax break or incentive | 81.00% | 486 |
| Low interest rate loan | 41.33% | 248 |
| Grant funding | 63.00% | 378 |
| None | 7.00% | 42 |
| Other (please specify) | 5.67% | 34 |
| Total Respondents: 600 | | |

Sonoma County 2020 Hazard Mitigation Plan Survey

| # | OTHER (PLEASE SPECIFY) | DATE |
|----|--|---------------------|
| 1 | Please! | 2/25/2021 7:18 PM |
| 2 | Would love to spend money upgrading our home if we weren't far blow the poverty level. | 2/21/2021 8:50 AM |
| 3 | If there were programs available to my landlord that I would benefit from I would discuss them with her and try to convince her to make these kinds of improvements to the property. | 2/11/2021 6:12 AM |
| 4 | our home is up to code on all these risks | 2/8/2021 9:54 PM |
| 5 | I live in a multi-family HOA property. Any assistance would go through them. | 1/27/2021 5:37 PM |
| 6 | my home is new construction so doesn't need retrofiting | 1/12/2021 3:21 PM |
| 7 | My modular home is equipped with \$5,000 worth of bracing which was provided free for low income people. | 1/10/2021 2:57 PM |
| 8 | Not sure any retrofit would protect against wildfire | 1/9/2021 2:45 PM |
| 9 | Help with fire prevention in the way of brush removal on Gehricke Road would be a high priority. | 1/9/2021 9:48 AM |
| 10 | availability of reliable/unbiased resources to assess specific recommended improvements. | 1/8/2021 6:15 PM |
| 11 | guarantee that PGE won't turn off my power and gas | 1/8/2021 2:43 PM |
| 12 | Getting ALL Government out of the way! Eliminate ALL Property Tax for ever! | 1/7/2021 3:02 PM |
| 13 | My house is relatively new and up to code. | 1/5/2021 6:04 PM |
| 14 | We're in a condo association so the question doesn't apply | 1/5/2021 12:14 PM |
| 15 | I am a renter | 1/5/2021 9:17 AM |
| 16 | Elected | 12/30/2020 5:56 PM |
| 17 | Insurance coverage | 12/23/2020 5:43 PM |
| 18 | I'm a renter; I don't care what happens to this building | 12/21/2020 11:28 AM |
| 19 | N/A | 12/19/2020 4:47 PM |
| 20 | I don't own. | 12/19/2020 8:06 AM |
| 21 | If there was financial help available I would encourage my landlord to make use of it and would help make it happen. | 12/19/2020 1:28 AM |
| 22 | the landlord would probably be interested | 12/18/2020 8:33 PM |
| 23 | I rent. | 12/18/2020 9:53 AM |
| 24 | n/a | 12/18/2020 8:21 AM |
| 25 | Government should not be so involved in trying to be alk things to all people. I is not financially sustainable.. Hazard reduction should be between insurance companies and insurers. Having a program to pay for Vulcan vent materials purchase seems like it would be a goid investment. I feel that some building code regs, such as old venting requirements, were responsible for many ember infiltration fires. M | 12/17/2020 8:52 PM |
| 26 | income tax break | 12/17/2020 5:21 PM |
| 27 | Not a property owner | 12/16/2020 1:02 PM |
| 28 | Technical assistance, bulk procurement, enforcement | 12/16/2020 11:53 AM |
| 29 | I rent, are you daft? | 12/16/2020 8:31 AM |
| 30 | Unable to afford to buy home in this county | 12/15/2020 3:22 PM |
| 31 | I'm a renter, I'm not putting any money into this house | 12/15/2020 3:18 PM |
| 32 | I rent an apartment, so I'm not in a position to retrofit anything, hence my answers to questions 20 and 21. I don't have earthquake insurance because the premiums would cost me more than | 12/15/2020 2:58 PM |

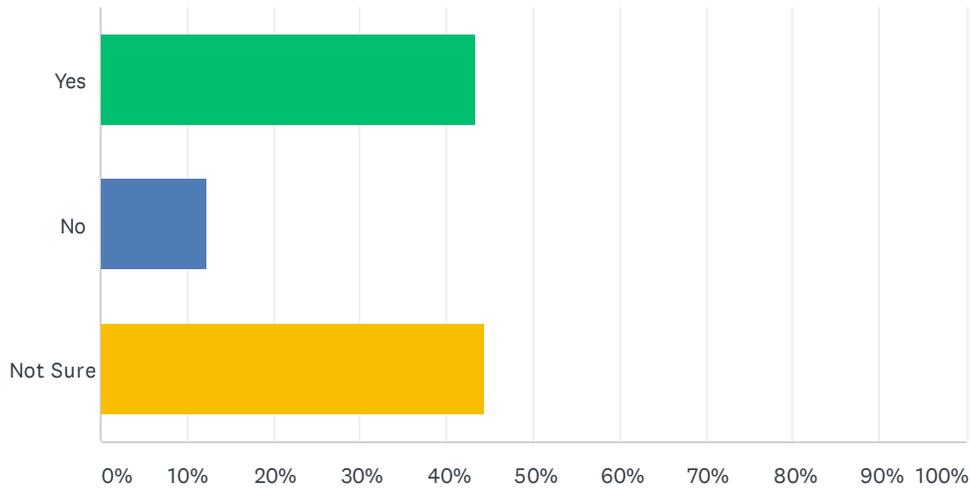
Sonoma County 2020 Hazard Mitigation Plan Survey

the value of my belongs.

| | | |
|----|---|--------------------|
| 33 | Please expand flood elevation program, grants! | 12/10/2020 8:41 PM |
| 34 | Assistance with installing rain catchment, rain gardens, soil improvements to keep rain water on the property and out of the Russian River. | 12/8/2020 10:43 PM |

Q22 If you own/owned property located in a designated “high hazard” area or had received repetitive damages from a hazard event, would you consider a ”buyout” offered by a Federal agency?

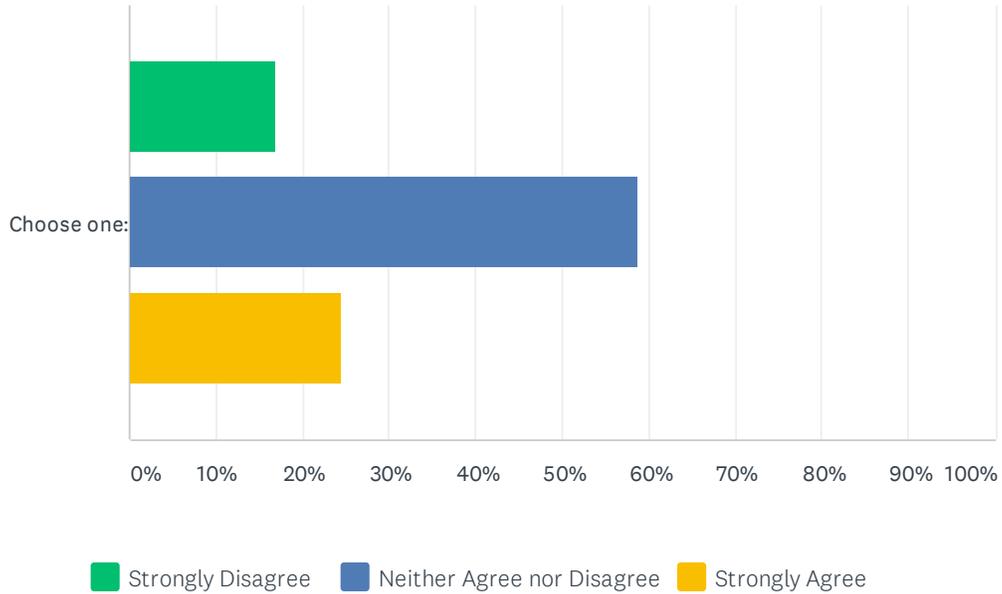
Answered: 598 Skipped: 93



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Yes | 43.31% | 259 |
| No | 12.37% | 74 |
| Not Sure | 44.31% | 265 |
| TOTAL | | 598 |

Q23 Please indicate how you feel about the following statement: Information about the risks associated with hazards is readily available and easy to locate.

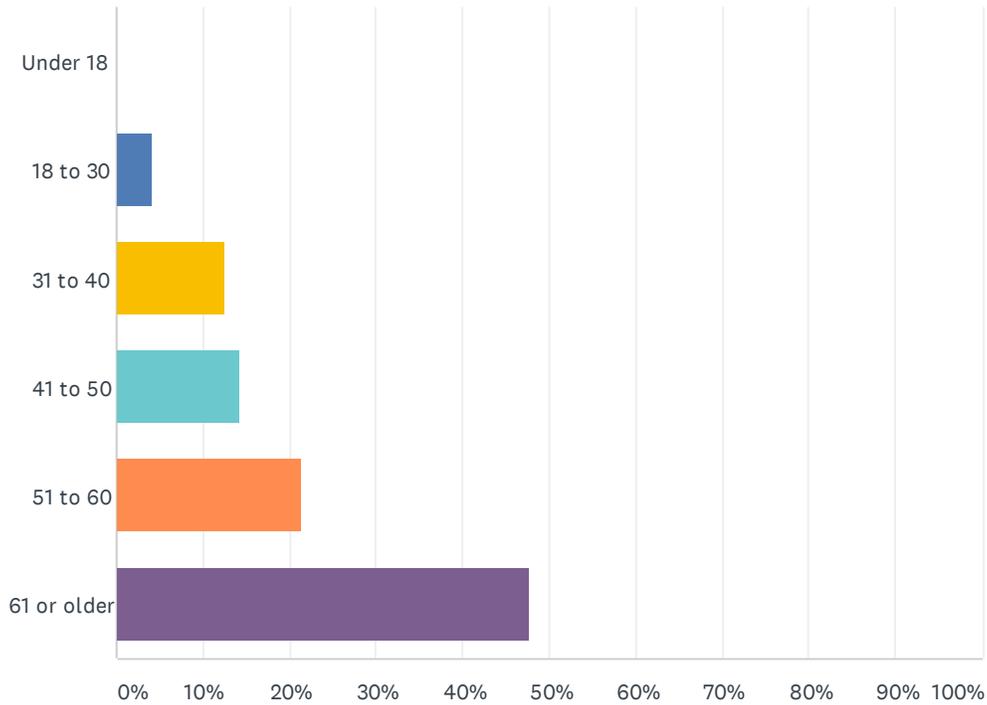
Answered: 615 Skipped: 76



| | STRONGLY DISAGREE | NEITHER AGREE NOR DISAGREE | STRONGLY AGREE | TOTAL | WEIGHTED AVERAGE |
|-------------|--------------------------|-----------------------------------|-----------------------|--------------|-------------------------|
| Choose one: | 16.91% 104 | 58.70% 361 | 24.39% 150 | 615 | 2.07 |

Q24 Please indicate your age range:

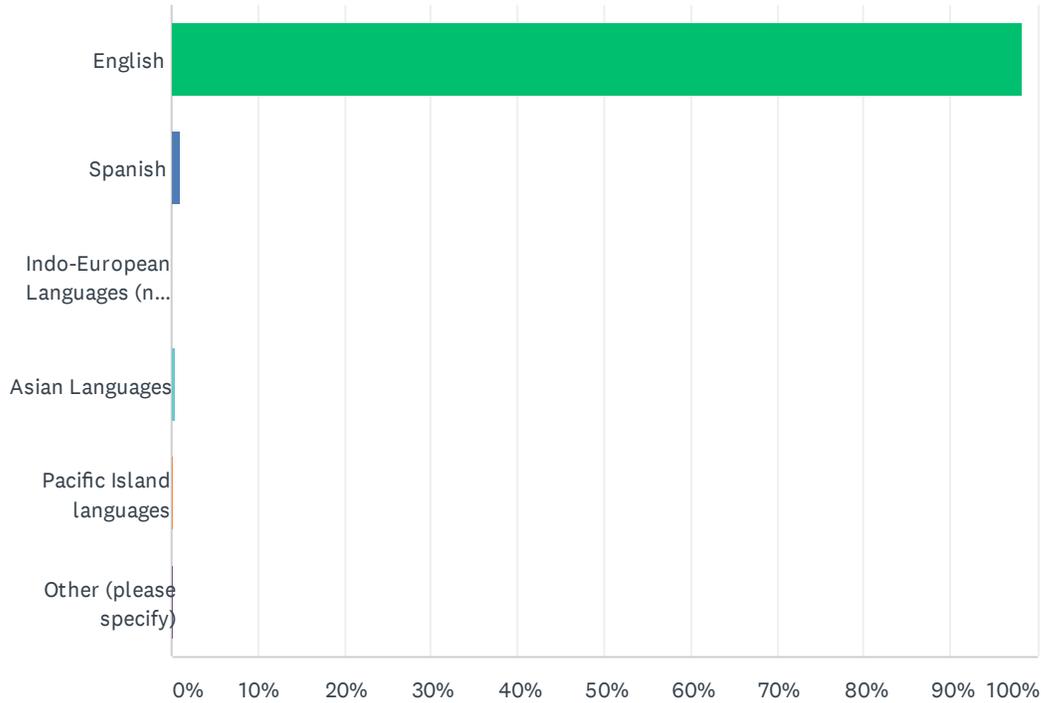
Answered: 612 Skipped: 79



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|------------|
| Under 18 | 0.00% | 0 |
| 18 to 30 | 4.08% | 25 |
| 31 to 40 | 12.58% | 77 |
| 41 to 50 | 14.22% | 87 |
| 51 to 60 | 21.41% | 131 |
| 61 or older | 47.71% | 292 |
| TOTAL | | 612 |

Q25 Please indicate the primary language spoken in your household.

Answered: 608 Skipped: 83

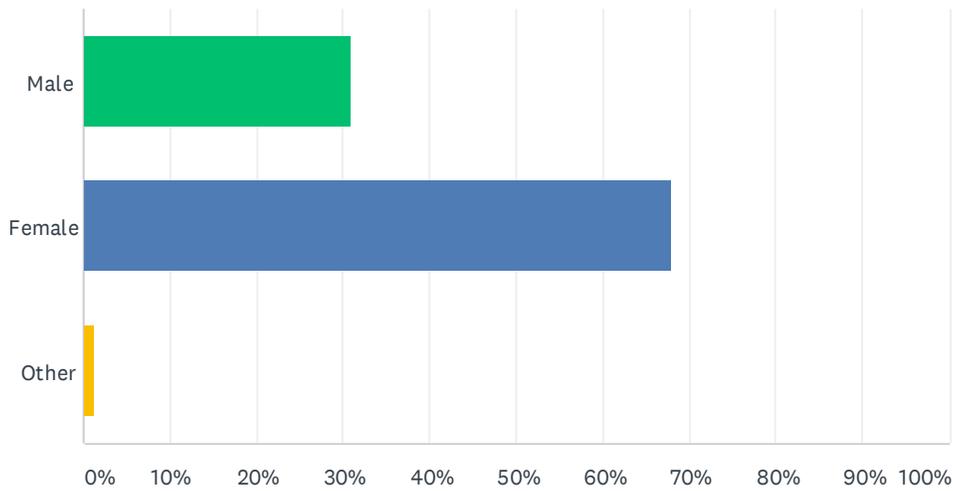


| ANSWER CHOICES | RESPONSES | |
|--|-----------|------------|
| English | 98.36% | 598 |
| Spanish | 0.99% | 6 |
| Indo-European Languages (not including English or Spanish) | 0.00% | 0 |
| Asian Languages | 0.33% | 2 |
| Pacific Island languages | 0.16% | 1 |
| Other (please specify) | 0.16% | 1 |
| TOTAL | | 608 |

| # | OTHER (PLEASE SPECIFY) | DATE |
|---|------------------------|---------------------|
| 1 | French | 12/19/2020 11:10 AM |

Q26 Please indicate your gender:

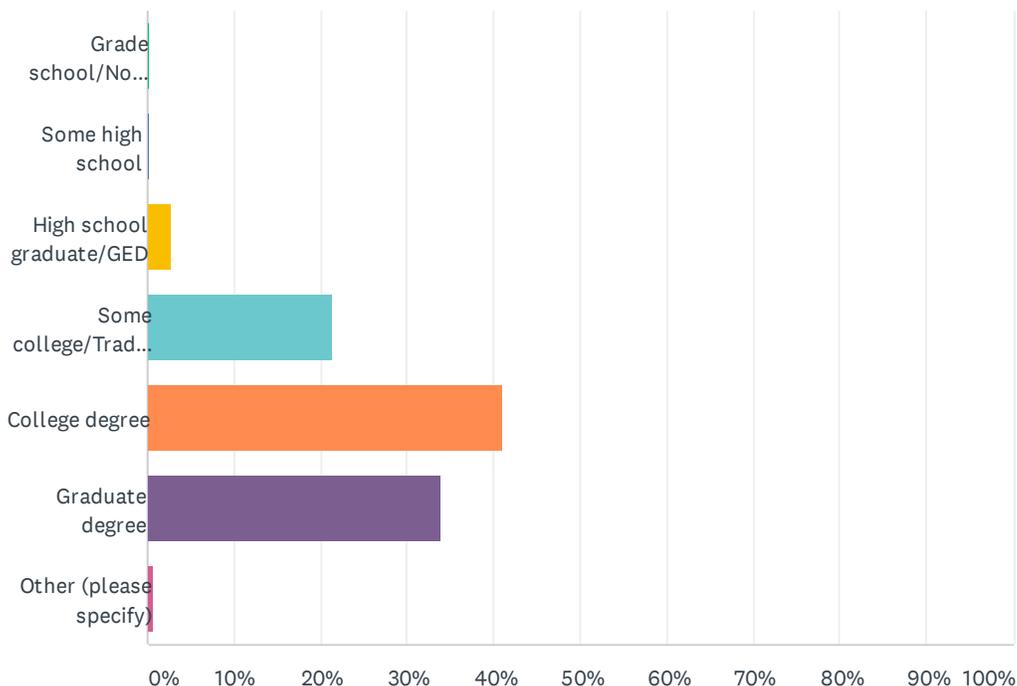
Answered: 605 Skipped: 86



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----|
| Male | 30.91% | 187 |
| Female | 67.93% | 411 |
| Other | 1.16% | 7 |
| TOTAL | | 605 |

Q27 Please indicate your highest level of education.

Answered: 610 Skipped: 81

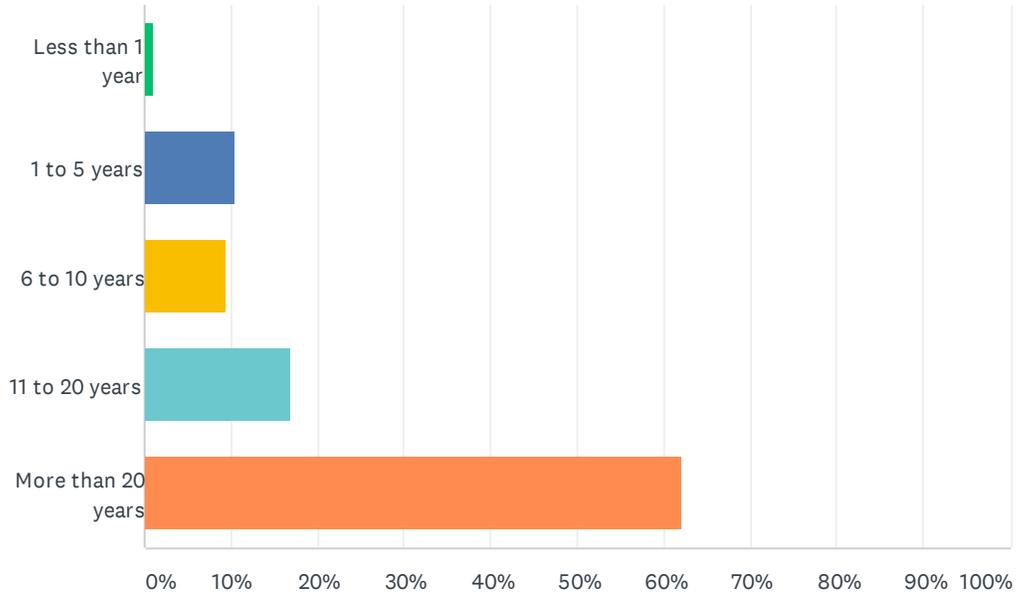


| ANSWER CHOICES | RESPONSES |
|---------------------------|------------|
| Grade school/No schooling | 0.16% 1 |
| Some high school | 0.16% 1 |
| High school graduate/GED | 2.79% 17 |
| Some college/Trade school | 21.31% 130 |
| College degree | 40.98% 250 |
| Graduate degree | 33.93% 207 |
| Other (please specify) | 0.66% 4 |
| TOTAL | 610 |

| # | OTHER (PLEASE SPECIFY) | DATE |
|---|------------------------|---------------------|
| 1 | Law degree | 1/23/2021 10:15 AM |
| 2 | None of your business | 1/10/2021 4:25 PM |
| 3 | AA Degree | 1/10/2021 2:58 PM |
| 4 | Law degree | 12/21/2020 11:29 AM |

Q28 How long have you lived in Sonoma County?

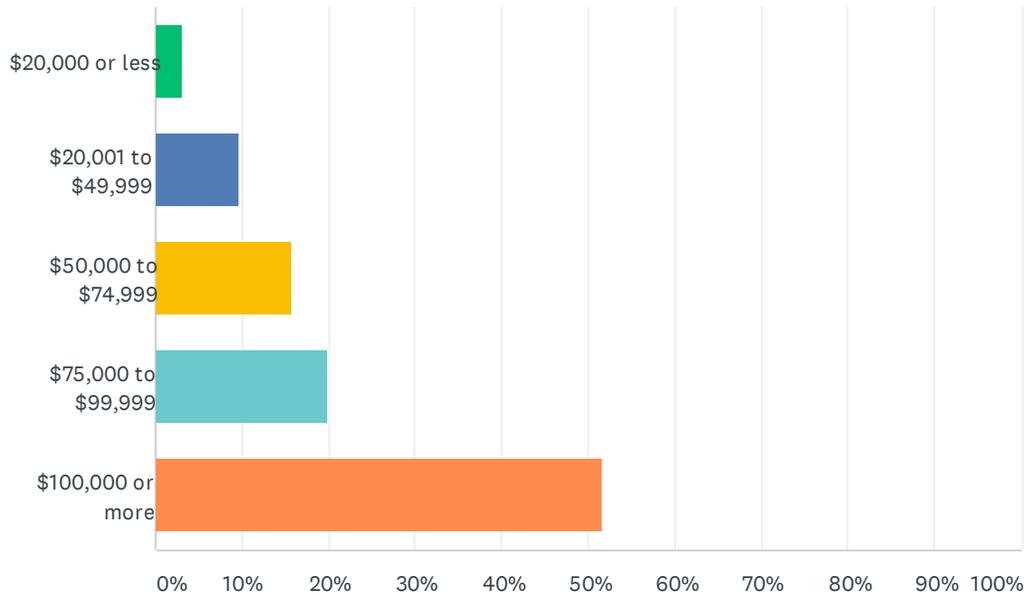
Answered: 610 Skipped: 81



| ANSWER CHOICES | RESPONSES | |
|--------------------|-----------|------------|
| Less than 1 year | 0.98% | 6 |
| 1 to 5 years | 10.49% | 64 |
| 6 to 10 years | 9.51% | 58 |
| 11 to 20 years | 16.89% | 103 |
| More than 20 years | 62.13% | 379 |
| TOTAL | | 610 |

Q29 What is your gross household income?

Answered: 580 Skipped: 111



| ANSWER CHOICES | RESPONSES | |
|----------------------|-----------|------------|
| \$20,000 or less | 3.10% | 18 |
| \$20,001 to \$49,999 | 9.66% | 56 |
| \$50,000 to \$74,999 | 15.69% | 91 |
| \$75,000 to \$99,999 | 19.83% | 115 |
| \$100,000 or more | 51.72% | 300 |
| TOTAL | | 580 |

Q30 Comments

Answered: 173 Skipped: 518

**COMMENTS AVAILABLE
BY REQUEST TO
PERMIT SONOMA**

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix B. Summary of Federal and State Agencies, Programs and Regulations

B. SUMMARY OF FEDERAL AND STATE AGENCIES, PROGRAMS AND REGULATIONS

Existing laws, ordinances, plans and programs at the federal and state level can support or impact hazard mitigation actions identified in this plan. Hazard mitigation plans are required to include a review and incorporation, if appropriate, of existing plans, studies, reports, and technical information as part of the planning process (44 CFR, Section 201.6(b)(3)). The following federal and state programs have been identified as programs that may interface with the actions identified in this plan. Each program enhances capabilities to implement mitigation actions or has a nexus with a mitigation action in this plan. Information presented in this section can be used to review local capabilities to implement the actions found in the jurisdictional annexes of Volume 2. Each planning partner has individually reviewed existing local plans, studies, reports, and technical information in its jurisdictional annex, presented in Volume 2.

FEDERAL

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) seeks to prevent discrimination against people with disabilities in employment, transportation, public accommodation, communications, and government activities. Title II of the ADA deals with compliance with the Act in emergency management and disaster-related programs, services, and activities. It applies to state and local governments as well as third parties, including religious entities and private nonprofit organizations.

The ADA has implications for sheltering requirements and public notifications. During an emergency alert, officials must use a combination of warning methods to ensure that all residents have all necessary information. Those with hearing impairments may not hear radio, television, sirens, or other audible alerts, while those with visual impairments may not see flashing lights or other visual alerts. Two technical documents for shelter operators address physical accessibility needs of people with disabilities, as well as medical needs and service animals.

The ADA intersects with disaster preparedness programs in regards to transportation, social services, temporary housing, and rebuilding. Persons with disabilities may require additional assistance in evacuation and transit (e.g., vehicles with wheelchair lifts or paratransit buses). Evacuation and other response plans should address the unique needs of residents. Local governments may be interested in implementing a special-needs registry to identify the home addresses, contact information, and needs for residents who may require more assistance.

FEMA hazard mitigation project grant applications require full compliance with applicable federal acts. Any action identified in this plan that falls within the scope of this act will need to meet its requirements.

Bureau of Land Management

The U.S. Bureau of Land Management (BLM) funds and coordinates wildfire management programs and structural fire management and prevention on BLM lands. BLM works closely with the Forest Service and state and local governments to coordinate fire safety activities. The Interagency Fire Coordination Center in Boise, Idaho serves as the center for this effort.

Civil Rights Act of 1964

The Civil Rights Act of 1964 prohibits discrimination based on race, color, religion, sex or nation origin and requires equal access to public places and employment. The Act is relevant to emergency management and hazard mitigation in that it prohibits local governments from favoring the needs of one population group over another. Local government and emergency response must ensure the continued safety and well-being of all residents equally, to the extent possible. FEMA hazard mitigation project grant applications require full compliance with applicable federal acts. Any action identified in this plan that falls within the scope of this act will need to meet its requirements.

Clean Water Act

The federal Clean Water Act (CWA) employs regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation’s surface waters so that they can support “the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water.”

Evolution of CWA programs over the last decade has included a shift from a program-by-program, source-by-source, and pollutant-by-pollutant approach to more holistic watershed-based strategies. Under the watershed approach, equal emphasis is placed on protecting healthy waters and restoring impaired ones. Numerous issues are addressed, not just those subject to CWA regulatory authority. Involvement of stakeholder groups in the development and implementation of strategies for achieving and maintaining water quality and other environmental goals is a hallmark of this approach.

The CWA is important to hazard mitigation in several ways. There are often permitting requirements for any construction within 200 feet of water of the United States, which may have implications for mitigation projects identified by a local jurisdiction. Additionally, CWA requirements apply to wetlands, which serve important functions related to preserving and protecting the natural and beneficial functions of floodplains and are linked with a community’s floodplain management program. Finally, the National Pollutant Discharge Elimination System is part of the CWA and addresses local stormwater management programs. Stormwater management plays a critical role in hazard mitigation by addressing urban drainage or localized flooding issues within jurisdictions.

FEMA hazard mitigation project grant applications require full compliance with applicable federal acts. Any action identified in this plan that falls within the scope of this act will need to meet its requirements.

Community Development Block Grant Disaster Resilience Program

In response to disasters, Congress may appropriate additional funding for the U.S. Department of Housing and Urban Development Community Development Block Grant programs to be distributed as Disaster Recovery

grants (CDBG-DR). These grants can be used to rebuild affected areas and provide seed money to start the recovery process. CDBG-DR assistance may fund a broad range of recovery activities, helping communities and neighborhoods that otherwise might not recover due to limited resources. CDBG-DR grants often supplement disaster programs of FEMA, the Small Business Administration, and the U.S. Army Corps of Engineers. Housing and Urban Development generally awards noncompetitive, nonrecurring CDBG-DR grants by a formula that considers disaster recovery needs unmet by other federal disaster assistance programs. To be eligible for CDBG-DR funds, projects must meet the following criteria:

- Address a disaster-related impact (direct or indirect) in a presidentially declared county for the covered disaster
- Be a CDBG-eligible activity (according to regulations and waivers)
- Meet a national objective.

Incorporating preparedness and mitigation into these actions is encouraged, as the goal is to rebuild in ways that are safer and stronger. CDBG-DR funding is a potential alternative source of funding for actions identified in this plan.

Community Rating System

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 meeting the following three goals of the CRS:

- Reduce flood losses.
- Facilitate accurate insurance rating.
- Promote awareness of flood insurance.

For participating communities, flood insurance premium rates are discounted in increments of 5 percent. 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 discount partially depends on location of the property. Properties outside the special flood hazard area receive smaller discounts: a 10-percent discount if the community is at Class 1 to 6 and a 5-percent discount if the community is at Class 7 to 9. The CRS classes for local communities are based on 18 creditable activities in the following categories:

- Public information
- Mapping and regulations
- Flood damage reduction
- 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 is located in these communities. 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.

Disaster Mitigation Act

The DMA is the current federal legislation addressing hazard mitigation planning. It emphasizes planning for disasters before they occur. It specifically addresses planning at the local level, requiring plans to be in place before Hazard Mitigation Assistance grant funds are available to communities. This plan is designed to meet the requirements of DMA, improving eligibility for future hazard mitigation funds.

Emergency Relief for Federally Owned Roads Program

The U.S. Forest Service’s Emergency Relief for Federally Owned Roads Program was established to assist federal agencies with repair or reconstruction of tribal transportation facilities, federal lands transportation facilities, and other federally owned roads that are open to public travel and have suffered serious damage by a natural disaster over a wide area or by a catastrophic failure. The program funds both emergency and permanent repairs. Eligible activities under this program meet some of the goals and objectives for this plan and the program is a possible funding source for actions identified in this plan.

Emergency Watershed Program

The USDA Natural Resources Conservation Service administers the Emergency Watershed Protection (EWP) Program, which responds to emergencies created by natural disasters. Eligibility for assistance is not dependent on a national emergency declaration. The program is designed to help people and conserve natural resources by relieving imminent hazards to life and property caused by floods, fires, windstorms, and other natural occurrences. EWP is an emergency recovery program. Financial and technical assistance are available for the following activities:

- Remove debris from stream channels, road culverts, and bridges
- Reshape and protect eroded banks
- Correct damaged drainage facilities
- Establish cover on critically eroding lands
- Repair levees and structures
- Repair conservation practices.

This federal program could be a possible funding source for actions identified in this plan.

Endangered Species Act

The federal Endangered Species Act (ESA) was enacted in 1973 to conserve species facing depletion or extinction and the ecosystems that support them. The act sets forth a process for determining which species are threatened and endangered and requires the conservation of the critical habitat in which those species live. The ESA provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered. Provisions are made for listing species, as well as for recovery plans and the designation of critical habitat for listed species. The ESA outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species and contains exceptions and exemptions. It is the enabling legislation for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Criminal and civil penalties are provided for violations of the ESA and the Convention.

Federal agencies must seek to conserve endangered and threatened species and use their authorities in furtherance of the ESA's purposes. The ESA defines three fundamental terms:

- Endangered means that a species of fish, animal or plant is “in danger of extinction throughout all or a significant portion of its range.” (For salmon and other vertebrate species, this may include subspecies and distinct population segments.)
- Threatened means that a species “is likely to become endangered within the foreseeable future.” Regulations may be less restrictive for threatened species than for endangered species.
- Critical habitat means “specific geographical areas that are...essential for the conservation and management of a listed species, whether occupied by the species or not.”

Five sections of the ESA are of critical importance to understanding it:

- Section 4: Listing of a Species—The National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) is responsible for listing marine species; the U.S. Fish and Wildlife Service is responsible for listing terrestrial and freshwater aquatic species. The agencies may initiate reviews for listings, or citizens may petition for them. A listing must be made “solely on the basis of the best scientific and commercial data available.” After a listing has been proposed, agencies receive comment and conduct further scientific reviews for 12 to 18 months, after which they must decide if the listing is warranted. Economic impacts cannot be considered in this decision, but it may include an evaluation of the adequacy of local and state protections. Critical habitat for the species may be designated at the time of listing.
- Section 7: Consultation—Federal agencies must ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed or proposed species or adversely modify its critical habitat. This includes private and public actions that require a federal permit. Once a final listing is made, non-federal actions are subject to the same review, termed a “consultation.” If the listing agency finds that an action will “take” a species, it must propose mitigations or “reasonable and prudent” alternatives to the action; if the proponent rejects these, the action cannot proceed.
- Section 9: Prohibition of Take—It is unlawful to “take” an endangered species, including killing or injuring it or modifying its habitat in a way that interferes with essential behavioral patterns, including breeding, feeding or sheltering.
- Section 10: Permitted Take—Through voluntary agreements with the federal government that provide protections to an endangered species, a non-federal applicant may commit a take that would otherwise be prohibited as long as it is incidental to an otherwise lawful activity (such as developing land or building a road). These agreements often take the form of a “Habitat Conservation Plan.”
- Section 11: Citizen Lawsuits—Civil actions initiated by any citizen can require the listing agency to enforce the ESA's prohibition of taking or to meet the requirements of the consultation process.

FEMA hazard mitigation project grant applications require full compliance with applicable federal acts. Any action identified in this plan that falls within the scope of this act will need to meet its requirements.

Federal Energy Regulatory Commission Dam Safety Program

The Federal Energy Regulatory Commission (FERC) cooperates with a large number of federal and state agencies to ensure and promote dam safety. More than 3,000 dams are part of regulated hydroelectric projects in the FERC program. Two-thirds of these are more than 50 years old. As dams age, concern about their safety and integrity

grows, so oversight and regular inspection are important. FERC 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 engineer approved by the FERC must inspect and evaluate projects with dams higher than 32.8 feet (10 meters), or with a total storage capacity of more than 2,000 acre-feet.

FERC monitors seismic research and applies it in performing structural analyses of hydroelectric projects. FERC also evaluates the effects of potential and actual large floods on the safety of dams. During and following floods, FERC 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.

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.

Federal Wildfire Management Policy and Healthy Forests Restoration Act

Federal Wildfire Management Policy and Healthy Forests Restoration Act (2003). These documents call for a single comprehensive federal fire policy for the Interior and Agriculture Departments (the agencies using federal fire management resources). They mandate community-based collaboration to reduce risks from wildfire.

National Dam Safety Act

Potential for catastrophic flooding due to dam failures led to passage of the National Dam Inspection Act in 1972, creation of the National Dam Safety Program in 1996, and reauthorization of the program through the Dam Safety Act in 2006. National Dam Safety Program, administered by FEMA requires a periodic engineering analysis of the majority of dams in the country; exceptions include the following:

- Dams under jurisdiction of the Bureau of Reclamation, Tennessee Valley Authority, or International Boundary and Water Commission
- Dams constructed pursuant to licenses issued under the Federal Power Act
- Dams that the Secretary of the Army determines do not pose any threat to human life or property.

The goal of this FEMA-monitored effort is to identify and mitigate the risk of dam failure so as to protect lives and property of the public. The National Dam Safety Program is a partnership among the states, federal agencies, and other stakeholders that encourages individual and community responsibility for dam safety. Under FEMA's

leadership, state assistance funds have allowed all participating states to improve their programs through increased inspections, emergency action planning, and purchases of needed equipment. FEMA has also expanded existing and initiated new training programs. Grant assistance from FEMA provides support for improvement of dam safety programs that regulate most of the dams in the United States.

National Environmental Policy Act

The National Environmental Policy Act requires federal agencies to consider the environmental impacts of proposed actions and reasonable alternatives to those actions, alongside technical and economic considerations. The National Environmental Policy Act established the Council on Environmental Quality, whose regulations (40 CFR Parts 1500-1508) set standards for compliance. Consideration and decision-making regarding environmental impacts must be documented in an environmental impact statement or environmental assessment. Environmental impact assessment requires the evaluation of reasonable alternatives to a proposed action, solicitation of input from organizations and individuals that could be affected, and an unbiased presentation of direct, indirect, and cumulative environmental impacts. FEMA hazard mitigation project grant applications require full compliance with applicable federal acts. Any action identified in this plan that falls within the scope of this act will need to meet its requirements.

National Fire Plan (2001)

The 2001 National Fire Plan was developed based on the National Fire Policy. A major aspect of the National Fire Plan is joint risk reduction planning and implementation carried out by federal, state and local agencies and communities. The National Fire Plan presented a comprehensive strategy in five key initiatives:

- Firefighting—Be adequately prepared to fight fires each fire season.
- Rehabilitation and Restoration—Restore landscapes and rebuild communities damaged by wildfires.
- Hazardous Fuel Reduction—Invest in projects to reduce fire risk.
- Community Assistance—Work directly with communities to ensure adequate protection.
- Accountability—Be accountable and establish adequate oversight, coordination, program development, and monitoring for performance.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities that enact floodplain regulations. Participation and good standing under NFIP are prerequisites to grant funding eligibility under the Robert T. Stafford Act.

For most participating communities, FEMA has prepared a detailed Flood Insurance Study. 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. Base flood elevations and the boundaries of the flood hazard areas are shown on Flood Insurance Rate Maps, which are the principle tool for identifying the extent and location of the flood hazard. Flood Insurance Rate Maps are the most detailed and consistent data source available, and for many communities they represent the minimum area of oversight under the local floodplain management program. In recent years, Flood Insurance Rate Maps have been digitized as Digital Flood Insurance Rate Maps, which are more accessible to residents, local governments and stakeholders.

NFIP participants must, at a minimum, regulate development in floodplain areas in accordance with NFIP criteria. Before issuing a permit to build in a floodplain, participating jurisdictions 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 1-percent-annual-chance flood.
- New floodplain development must not aggravate existing flood problems or increase damage to other properties.
- New floodplain development must exercise a reasonable and prudent effort to reduce its adverse impacts on threatened salmonid species.

NFIP participation is limited to local governments that possess permit authority and have the ability to adopt and enforce regulations that govern land use. This does not typically apply to special purpose districts. None of the special purpose district planning partners covered by this plan are eligible to participate in the NFIP, so their action plans do not address NFIP participation.

National Incident Management System

The National Incident Management System (NIMS) is a systematic approach for government, nongovernmental organizations, and the private sector to work together to manage incidents involving hazards. The NIMS provides a flexible but standardized set of incident management practices. Incidents typically begin and end locally, and they are managed at the lowest possible geographical, organizational, and jurisdictional level. In some cases, success depends on the involvement of multiple jurisdictions, levels of government, functional agencies, and emergency responder disciplines. These cases necessitate coordination across a spectrum of organizations. Communities using NIMS follow a comprehensive national approach that improves the effectiveness of emergency management and response personnel across the full spectrum of potential hazards (including natural hazards, technological hazards, and human-caused hazards) regardless of size or complexity.

Although participation is voluntary, federal departments and agencies are required to make adoption of NIMS by local and state jurisdictions a condition to receive federal preparedness grants and awards. The content of this plan is considered to be a viable support tool for any phase of emergency management. The NIMS program is considered as a response function, and information in this hazard mitigation plan can support the implementation and update of all NIMS-compliant plans within the planning area.

Presidential Executive Order 11988, Floodplain Management

Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. It requires federal agencies to provide leadership and take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values of floodplains. The requirements apply to the following activities:

- Acquiring, managing, and disposing of federal lands and facilities
- Providing federally undertaken, financed, or assisted construction and improvements
- Conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing.

Presidential Executive Order 11990, Protection of Wetlands

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. The requirements apply to the following activities:

- Acquiring, managing, and disposing of federal lands and facilities
- Providing federally undertaken, financed, or assisted construction and improvements
- Conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing.

All actions identified in this plan will seek full compliance with all applicable presidential executive orders.

U.S. Army Corps of Engineers Dam Safety Program

The U.S. Army Corps of Engineers operates and maintains approximately 700 dams nationwide. It is also 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 dams; surveyed each state and federal agency's capabilities, practices and regulations regarding design, construction, operation and maintenance of the dams; and developed guidelines for inspection and evaluation of dam safety. The Corps maintains the National Inventory of Dams, which contains information about a dam's location, size, purpose, type, last inspection and regulatory status.

U.S. Army Corps of Engineers Flood Hazard Management

The following U.S. Army Corps of Engineers authorities and programs related to flood hazard management:

- The Floodplain Management Services program offers 100-percent federally funded technical services such as development and interpretation of site-specific data related to the extent, duration and frequency of flooding. Special studies may be conducted to help a community understand and respond to flood risk. These may include flood hazard evaluation, flood warning and preparedness, or flood modeling.
- For more extensive studies, the Corps of Engineers offers a cost-shared program called Planning Assistance to States and Tribes. Studies under this program generally range from \$25,000 to \$100,000 with the local jurisdiction providing 50 percent of the cost.
- The Corps of Engineers has several cost-shared programs (typically 65 percent federal and 35 percent non-federal) aimed at developing, evaluating and implementing structural and non-structural capital projects to address flood risks at specific locations or within a specific watershed:
 - The Continuing Authorities Program for smaller-scale projects includes Section 205 for Flood Control, with a \$7 million federal limit and Section 14 for Emergency Streambank Protection with a \$1.5 million federal limit. These can be implemented without specific authorization from Congress.
 - Larger scale studies, referred to as General Investigations, and projects for flood risk management, for ecosystem restoration or to address other water resource issues, can be pursued through a specific authorization from Congress and are cost-shared, typically at 65 percent federal and 35 percent non-federal.
 - Watershed management planning studies can be specifically authorized and are cost-shared at 50 percent federal and 50 percent non-federal.

- The Corps of Engineers provides emergency response assistance during and following natural disasters. Public Law 84-99 enables the Corps to assist state and local authorities in flood fight activities and cost share in the repair of flood protective structures. Assistance is provided in the following categories:
 - Preparedness—The Flood Control and Coastal Emergency Act establishes an emergency fund for preparedness for emergency response to natural disasters; for flood fighting and rescue operations; for rehabilitation of flood control and hurricane protection structures. Funding for Corps of Engineers emergency response under this authority is provided by Congress through the annual Energy and Water Development Appropriation Act. Disaster preparedness activities include coordination, planning, training and conduct of response exercises with local, state and federal agencies.
 - Response Activities—Public Law 84-99 allows the Corps of Engineers to supplement state and local entities in flood fighting urban and other non-agricultural areas under certain conditions (Engineering Regulation 500-1-1 provides specific details). All flood fight efforts require a project cooperation agreement signed by the public sponsor and the sponsor must remove all flood fight material after the flood has receded. Public Law 84-99 also authorizes emergency water support and drought assistance in certain situations and allows for “advance measures” assistance to prevent or reduce flood damage conditions of imminent threat of unusual flooding.
 - Rehabilitation—Under Public Law 84-99, an eligible flood protection system can be rehabilitated if damaged by a flood event. The flood system would be restored to its pre-disaster status at no cost to the federal system owner, and at 20-percent cost to the eligible non-federal system owner. All systems considered eligible for Public Law 84-99 rehabilitation assistance have to be in the Rehabilitation and Inspection Program prior to the flood event. Acceptable operation and maintenance by the public levee sponsor are verified by levee inspections conducted by the Corps on a regular basis. The Corps has the responsibility to coordinate levee repair issues with interested federal, state, and local agencies following natural disaster events where flood control works are damaged.

These authorities and programs are all available to the planning partners to support any related mitigation actions.

U.S. Fire Administration

There are federal agencies that provide technical support to fire agencies/organizations. For example, the U.S. Fire Administration, which is a part of FEMA, provides leadership, advocacy, coordination, and support for fire agencies and organizations.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service fire management strategy uses prescribed fire to maintain early successional fire-adapted grasslands and other ecological communities throughout the National Wildlife Refuge system.

STATE

AB 9: Fire safety: wildfires: fire adapted communities.

Establishes the Regional Forest and Fire Capacity Program to support regional leadership, build local and regional capacity, and develop, prioritize, and implement strategies and projects that create fire-adapted communities by improving watershed health, forest health, community wildfire preparedness, and fire resilience.

AB 32: The California Global Warming Solutions Act

This bill identifies the following potential adverse impacts of global warming:

“... the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.”

AB 32 establishes a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 (a reduction of approximately 25 percent from forecast emission levels), with further reductions to follow. The law requires the state Air Resources Board to do the following:

- Establish a program to track and report greenhouse gas emissions.
- Approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions from sources of greenhouse gas emissions.
- Adopt early reduction measures to begin moving forward.
- Adopt, implement and enforce regulations—including market mechanisms such as “cap and-trade” programs—to ensure that the required reductions occur.

The Air Resources Board has adopted a statewide greenhouse gas emissions limit and an emissions inventory, along with requirements to measure, track, and report greenhouse gas emissions by the industries it determined to be significant sources of greenhouse gas emissions.

AB 38: Fire safety: Low-Cost Retrofits: Regional Capacity Review: Wildfire Mitigation

Requires the seller of any real property located in a high or very fire hazard severity zone to provide a disclosure notice, as specified, to the buyer with information relating to fire hardening improvements on the property.

Requires the California Natural Resources Agency, in consultation with the State Fire Marshal and the Forest Management Task Force, to review the regional capacity of each county that contains a very high fire hazard severity zone to improve forest health, fire resilience, and safety.

Requires the California Office of Emergency Services to enter into a joint powers agreement with the Department of Forestry and Fire Protection to administer a comprehensive wildfire mitigation and assistance program to encourage cost-effective structure hardening and facilitate vegetation management, contingent upon appropriation by the Legislature.

AB 70: Flood Liability

This bill provides that a city or county may be required to contribute a fair and reasonable share to compensate for property damage caused by a flood to the extent that it has increased the state’s exposure to liability for property damage by unreasonably approving new development in a previously undeveloped area that is protected by a state flood control project, unless the city or county meets specified requirements.

AB 162: Flood Planning

This California State Assembly Bill passed in 2007 requires cities and counties to address flood-related matters in the land use, conservation, and safety and housing elements of their general plans. The land use element must identify and annually review the areas covered by the general plan that are subject to flooding as identified in floodplain mapping by either FEMA or the state Department of Water Resources (DWR). During the next revision of the housing element on or after January 1, 2009, the conservation element of the general plan must identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for the purpose of groundwater recharge and stormwater management. The safety element must identify information regarding flood hazards, including:

- Flood hazard zones
- Maps published by FEMA, DWR, the U.S. Army Corps of Engineers, the Central Valley Flood Protection Board, and the Governor’s Office of Emergency Services (Cal OES)
- Historical data on flooding
- Existing and planned development in flood hazard zones.

The general plan must establish goals, policies and objectives related to flooding risks, including:

- Avoiding or minimizing the risks of flooding new development
- Evaluating whether new development should be located in flood hazard zones
- Identifying construction methods to minimize damage.

AB 162 establishes goals, policies and objectives related to flooding risks. It establishes procedures for the determination of available land suitable for urban development, which may exclude lands where FEMA or DWR has concluded that the flood management infrastructure is not adequate to avoid the risk of flooding.

AB 267: California Environmental Quality Act: Exemption: Prescribed Fire, Thinning, and Fuel Reduction Projects

Current law, until January 1, 2023, exempts from the requirements of CEQA prescribed fire, thinning, or fuel reduction projects undertaken on federal lands to reduce the risk of high-severity wildfire that have been reviewed under the federal National Environmental Policy Act of 1969. Current law requires the Department of Forestry and Fire Protection, beginning December 31, 2019, and annually thereafter until January 1, 2023, to report to the relevant policy committees of the Legislature the number of times the exemption was used. This extends the exemption from CEQA and the requirement on the department to report to the relevant policy committees of the Legislature to January 1, 2026.

AB 380: Forestry: Priority Fuel Reduction Projects

On March 22, 2019, the Governor issued a proclamation of a state of emergency directing the Department of Forestry and Fire Protection to implement fuel reduction projects for communities at greatest risk of wildfire to reduce the risk of catastrophic wildfire. The proclamation of a state of emergency exempts the identified fuel reduction projects from various legal requirements, including, among others, requirements regarding public contracting for those projects, requirements for environmental review under the California Environmental Quality Act for those projects, and licensure requirements for individuals conducting certain activities for those projects.

This bill requires the department, before December 31, 2022, and before December 31 of each year thereafter, to identify priority fuel reduction projects, as provided. The bill exempts the identified priority fuel reduction projects from legal requirements in a similar manner as provided in the proclamation of a state of emergency described above.

AB 431: Forestry: Timber Harvesting Plans: Defensible Space: Exemptions

The Z'berg-Nejedly Forest Practice Act of 1973 prohibits a person from conducting timber operations, as defined, unless a timber harvesting plan prepared by a registered professional forester has been submitted to, and approved by, the Department of Forestry and Fire Protection. The act authorizes the State Board of Forestry and Fire Protection to exempt from some or all of those provisions of the act a person engaging in specified forest management activities, as prescribed, including, only until January 1, 2022, the cutting or removal of trees on the person's property in compliance with specified defensible space requirements. This bill extends to January 1, 2026, the board's authorization to exempt a person engaging in the cutting or removal of trees on the person's property in compliance with the specified defensible space requirements.

AB 497: Forestry and Fire Protection: Local Assistance Grant Program: Fire Prevention Activities: Street and Road Vegetation Management

Under existing law, the Department of Forestry and Fire Protection is required to develop, implement, and administer forest improvement and fire prevention programs in the state. Existing law requires the department to establish a local assistance grant program for fire prevention activities in California. Existing law requires the department to prioritize, to the extent feasible, projects that are multiyear efforts and to prioritize grant applications from specified local agencies.

This bill appropriated \$25,000,000 to provide the local assistance grants. It requires the department to prioritize projects that manage vegetation along streets and roads to prevent the ignition of wildfire and that require the funds for purposes of purchasing equipment necessary for the project.

AB 575: Civil Liability: Prescribed Burning Activities: Gross Negligence

This bill provides that a private entity engaging in a prescribed burning activity that is supervised by a person certified as burn boss is liable for damages to a third party only if the prescribed burning activity was carried out in a grossly negligent manner.

AB 642: Wildfires

This omnibus fire prevention bill makes changes to support cultural and prescribed fire, including the creation of a Cultural Burning Liaison at the Department of Forestry and Fire Protection, and requires a proposal for creating a prescribed fire training center in California. The Act requires the Director of Forestry and Fire Protection to identify areas in the state as moderate and high fire hazard severity zones and to classify areas into fire hazard severity zones based on additional factors including possible lightning caused ignition. The bill requires a local agency, within 30 days of receiving a transmittal from the director that identifies fire hazard severity zones, to make the information available for public comment.

AB 747: Required Information for General Plan Safety Elements

This bill requires California communities with general plans to address evacuation routes in the safety element of the general plan. Information on the evacuation routes and their capacity, safety and viability under a range of emergency scenarios must be provided. For communities that have not adopted a local hazard mitigation plan, the safety element must be updated with this information by January 1, 2022. For those with a local hazard mitigation plan, the requirement applies upon the next revision of the hazard mitigation plan on or after January 1, 2022. Communities that have adopted a local hazard mitigation plan, emergency operations plan, or other document that fulfills the goals and objectives of this law may comply with this requirement by summarizing and incorporating by reference the other plan or document in the safety element.

In subsequent revisions to the safety element, communities also will be required to identify new information relating to flood and fire hazards and climate adaptation and resiliency strategies applicable to the city or county that was not available during the previous revision of the safety element. These subsequent updates must occur upon each revision of the general plan housing element or local hazard mitigation plan and not less than once every eight years.

AB 800: Wildfires: Local General Plans: Safety Elements: Fire Hazard Severity Zones

Existing law requires the Director of Forestry and Fire Protection to identify areas of the state as very high fire hazard severity zones, and requires each planning agency to prepare, and the legislative body of each county and city to adopt, a comprehensive, long-term general plan, including a safety element, for the physical development of the county or city. Existing law requires each city or county that contains a very high fire hazard severity zone to submit the draft element of, or draft amendment to the safety element its general plan to the State Board of Forestry and Fire Protection and to every local agency that provides fire protection to territory in the city or county at least 90 days before adoption or amendment.

This requires the director to also identify areas of the state as moderate and high fire hazard severity zones. It requires the draft element of, or draft amendment to, the safety element of a county or city's general plan to be submitted to the state board and to every local agency that provides fire protection to territory in the city or county at least 90 days before the adoption or amendment to the safety element of its general plan for each city or county that contains a moderate or high fire hazard severity zone.

Existing law requires the state board and authorizes a local agency to review the draft or an existing safety element and recommend changes to the planning agency regarding uses of land and policies in state responsibility areas and very high fire hazard severity zones and regarding methods and strategies for wildland fire risk reduction and prevention within state responsibility areas and very high fire hazard severity zones.

This bill also requires the state board and authorizes a local agency to review the draft or an existing safety element and recommend changes to the planning agency regarding uses of land and policies in moderate and high fire hazard severity zones and regarding methods and strategies for wildland fire risk reduction and prevention within moderate and high fire hazard severity zones.

The existing Subdivision Map Act vests the authority to regulate and control the design and improvement of subdivisions in the legislative body of a local agency, and sets forth procedures governing the local agency's processing, approval, conditional approval, or disapproval, and filing of tentative, final, and parcel maps, and the

modification thereof. The act generally requires a subdivider to file a tentative map or vesting tentative map with the local agency, and requires the local agency to approve, conditionally approve, or disapprove the map within a specified time period. Before approving a tentative map, or a parcel map for which a tentative map was not required, for an area located in a state responsibility area or a very high fire hazard severity zone, existing law requires a legislative body of a county to make specified findings. Existing law requires a legislative body of a county to transmit these findings to the State Board of Forestry and Fire Protection.

This requires a legislative body of a county to make specified findings before approving a tentative map, or a parcel map for which a tentative map was not required, for areas located in moderate and high fire hazard severity zones, and requires these findings to be transmitted to the state board.

By requiring new duties on a county, the bill imposes a state-mandated local program. The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement. This bill provides that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to statutory provisions.

AB 1255: Fire Prevention: Fire Risk Reduction Guidance: Local Assistance Grants

This bill requires the Department of Forestry and Fire Protection, in coordination with the Secretary of the Natural Resources Agency, to facilitate regional, habitat-specific, and area-specific approaches to fire risk reduction, prevention, and restoration of projects that improve community safety, protect sites and structures, restore burned habitat, reduce catastrophic wildfires, and protect natural resources. It requires the department to develop policies, funding programs for which the funding shall be contingent upon subsequent appropriation in the annual Budget Act or a similar statute for this purpose, and relevant program guidelines that promote specified objectives. The bill requires various state entities to establish grant programs, for which funding shall be contingent upon subsequent appropriation, to fulfill the specified objectives.

AB 1295: Residential Development Agreements: Very High Fire Risk Areas

Current law requires the Director of Forestry and Fire Protection to identify areas in the state as very high fire hazard severity zones based on the severity of fire hazard that is expected to prevail in those areas and requires each local agency to designate, by ordinance, the very high fire hazard severity zones in its jurisdiction. Current law additionally requires the director to classify lands within state responsibility areas into fire hazard severity zones. This bill, prohibits the legislative body of a city or county from entering into a residential development agreement for property in a very high fire risk area. The bill defines “very high fire risk area” for these purposes to mean a very high fire hazard severity zone designated by a local agency or a fire hazard severity zone classified by the director.

AB 1439: Property Insurance Discounts

This bill requires a residential property insurance policy to include a discount if a local government of the jurisdiction where the insured property is located funds a local wildfire protection or mitigation program. Because the bill mandates discounts for specified residential property insurance policies, thus affecting the Insurance Commissioner’s consideration of a rate, the bill would amend Proposition 103.

AB 1500: Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022

If approved by the voters, this bill would authorize the issuance of bonds in the amount of \$6,700,000,000 pursuant to the State General Obligation Bond Law to finance projects for safe drinking water, wildfire prevention, drought preparation, flood protection, extreme heat mitigation, and workforce development programs.

AB 2140: General Plans—Safety Element

This bill provides that the state may allow for more than 75 percent of public assistance funding under the California Disaster Assistance Act only if the local agency is in a jurisdiction that has adopted a local hazard mitigation plan as part of the safety element of its general plan. The local hazard mitigation plan needs to include elements specified in this legislation. In addition, this bill requires Cal OES to give preference for federal mitigation funding to cities and counties that have adopted local hazard mitigation plans. The intent of the bill is to encourage cities and counties to create and adopt hazard mitigation plans.

AB 2800: Climate Change—Infrastructure Planning

This California State Assembly bill passed in 2016 and until July 1, 2020, requires state agencies to take into account the current and future impacts of climate change when planning, designing, building, operating, maintaining, and investing in state infrastructure. The bill, by July 1, 2017, and until July 1, 2020, requires an agency to establish a Climate-Safe Infrastructure Working Group to examine how to integrate scientific data concerning projected climate change impacts into state infrastructure engineering.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent construction of buildings used for human occupancy on the surface trace of active faults. Before a new project is permitted, cities and counties require a geologic investigation to demonstrate that proposed buildings will not be constructed on active faults. The act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as liquefaction or seismically induced landslides. The law requires the State of California Geologist to establish regulatory zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. All seismic hazard mitigation actions identified in this plan will seek full compliance with the Alquist-Priolo Earthquake Fault Zoning Act.

Board of Forestry and Fire Protection Fire Safe Regulations

California's Board of Forestry and Fire Protection is authorized to adopt regulations to implement specified programs. To become effective, the Office of Administrative Law must approve these regulations. Once adopted, Board regulations are placed in Title 14 of the California Code of Regulations. The Department of Forestry and Fire Protection then implements the regulations.

Since 1991, the Board's Fire Safe Regulations have set the floor for fire safety standards for perimeters and access to all residential, commercial, and industrial building construction in state responsibility areas. They address road standards for fire equipment access, standards for road and building signs, minimum private water supplies for emergency fire use, and fuel breaks and greenbelts. Starting on July 1, 2021, these requirements will also apply in the local responsibility areas and will address construction on ridgelines.

California Coastal Management Program

The California Coastal Management Program under the California Coastal Act requires each city or county lying wholly or partly within the coastal zone to prepare a local coastal plan. The specific contents of such plans are not specified by state law, but they must be certified by the Coastal Commission as consistent with policies of the Coastal Act (Public Resources Code, Division 20). The Coastal Act has provisions relating to geologic hazards, but does not mention tsunamis specifically. Section 30253(1) of the Coastal Act states that new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard. Development should be prevented or limited in high hazard areas whenever possible. However, where development cannot be prevented or limited, land use density, building value, and occupancy should be kept at a minimum. Any mitigation project identified in this plan that intersects the mapped coastal zone will be consistent with the recommendations of the local coastal plan.

California Department of Forestry and Fire Protection

CAL FIRE has responsibility for wildfires in areas that are not under the jurisdiction of the Forest Service or a local fire organization, including lands designated as State Responsibility Areas. CAL FIRE also has fire protection responsibilities by contract and mutual aid agreements. For example, CAL FIRE provides year-round fire protection under Amador Plan agreements with certain local government agencies (Public Resources Code §4144). Through these agreements, CAL FIRE provides local structural and wildfire protection or dispatch services to a community and maintains a staffing level that otherwise would be available only during the fire season. The local entity pays the additional cost of the service.

California Department of Parks and Recreation (State Parks)

State Parks manages portions of the California coastline including coastal wetlands, estuaries, beaches, and dune systems. The State Parks Resources Management Division has limited wildfire protection resources available to suppress fires on State Park lands.

California Department of Water Resources

In California, the DWR is the coordinating agency for floodplain management. The DWR works with FEMA and local governments by providing grants and technical assistance, evaluating community floodplain management programs, reviewing local floodplain ordinances, participating in statewide flood hazard mitigation planning, and facilitating annual statewide workshops. Compliance is monitored by FEMA regional staff and by the DWR.

California Division of Safety of Dams

California's Division of Safety of Dams (a division of the DWR) monitors the dam safety program at the state level and maintains a working list of dams in the state. When a new dam is proposed, Division engineers and geologists inspect the site and the subsurface. Upon submittal of an application, the Division reviews the plans

and specifications prepared by the owner to ensure that the dam is designed to meet minimum requirements and that the design is appropriate for the known geologic conditions. After approval of the application, the Division inspects all aspects of the construction to ensure that the work is done in accordance with the approved plans and specifications. After construction, the Division inspects each dam to ensure that it is performing as intended and is not developing problems. 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. Over 1,200 dams are inspected by Division engineers on a yearly schedule to ensure performance and maintenance of dams.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was passed in 1970, shortly after the federal government enacted the National Environmental Policy Act, to institute a statewide policy of environmental protection. CEQA requires state and local agencies in California to follow a protocol of analysis and public disclosure of the potential environmental impacts of development projects. CEQA makes environmental protection a mandatory part of every California state and local agency's decision-making process.

CEQA establishes a statewide environmental policy and mandates actions all state and local agencies must take to advance the policy. Jurisdictions conduct analysis of the project to determine if there are potentially significant environmental impacts, identify mitigation measures, and possible project alternatives by preparing environmental reports for projects that requires CEQA review. This environmental review is required before an agency takes action on any policy, program, or project. Any project action identified in this plan will seek full CEQA compliance upon implementation.

California Fire Alliance

The California Fire Alliance (CFA) was established in response to directives from the 2001 National Fire Plan. The CFA pursues four strategies to deal with the National Fire Plan's community assistance initiative:

- Work with communities at risk from wildfires to develop community-based planning leadership and facilitate the development of community fire loss mitigation plans, which transcend jurisdiction and ownership boundaries.
- Assist communities in development of fire loss mitigation planning, education and projects to reduce the threat of wildfire losses on public and private lands.
- Develop an information and education outreach plan to increase awareness of wildfire protection program opportunities available to communities at risk.
- Work collaboratively to develop, modify and maintain a comprehensive list of communities at risk.

California Fire Plan

The State Board of Forestry and CAL FIRE have prepared a comprehensive update of the California Fire Plan for wildfire protection. The planning process included defining a level of service measurement; considering assets at risk; incorporating the cooperative interdependent relationships of wildfire protection providers; providing for public stakeholder involvement; and creating a fiscal framework for policy analysis. The California Fire Plan's overall goal is to reduce costs and losses from wildfire in the state by protecting assets at risk through pre-fire management and by reducing the spread of fire through more successful initial response.

California Fire Safe Council

In 1993, the statewide Fire Safe Council, consisting of private and public membership, was formed to educate and encourage Californians to plan and prepare for wildfires by reducing the risk of fire to property, communities, and natural/structural resources. In 2002, this group created a nonprofit organization and board of directors, called the California Fire Safe Council. The Council works with the California Fire Alliance to facilitate the distribution of National Fire Plan grants for wildfire risk reduction and education (www.grants.firesafecouncil.org). The Council also provides assistance to local Fire Safe Councils through its website (www.firesafecouncil.org), the distribution of educational materials, and technical assistance, primarily through regional representatives. More than 130 local Fire Safe Councils have formed in California to plan, coordinate, and implement fire prevention activities.

California Fire Service and Rescue Emergency Mutual Aid Plan

The Governor's Office of Emergency Services Fire and Rescue Branch administers the California Fire Service and Rescue Emergency Mutual Aid Plan. The agency provides guidance and procedures for agencies developing emergency operations plans, as well as training and technical support, primarily to overall emergency service organizations and urban search and rescue teams.

California General Planning Law

California state law requires that every county and city prepare and adopt a comprehensive long-range plan to serve as a guide for community development. The general plan expresses the community's goals, visions, and policies relative to future land uses, both public and private. The general plan is mandated and prescribed by state law (Cal. Gov. Code §65300 et seq.), and forms the basis for most local government land use decision-making.

The plan must consist of an integrated, internally consistent set of goals, policies, and implementation measures. In addition, the plan must focus on issues of the greatest concern to the community and be written in a clear and concise manner. City and county actions, such as those relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan.

California Multi-Hazard Mitigation Plan

Under the DMA, California must adopt a federally approved state multi-hazard mitigation plan to be eligible for certain disaster assistance and mitigation funding. The intent of the State of California Multi-Hazard Mitigation Plan is to reduce or prevent injury and damage from hazards in the state through the following:

- Documenting statewide hazard mitigation planning in California
- Describing strategies and priorities for future mitigation activities
- Facilitating the integration of local and tribal hazard mitigation planning activities into statewide efforts
- Meeting state and federal statutory and regulatory requirements.

The plan is an annex to the State Emergency Plan, and it identifies past and present mitigation activities, current policies and programs, and mitigation strategies for the future. It also establishes hazard mitigation goals and objectives. The plan will be reviewed and updated annually to reflect changing conditions and new information, especially information on local planning activities. Under 44 CFR Section 201.6, local hazard mitigation plans must be consistent with their state's hazard mitigation plan.

California Residential Mitigation Program

The California Residential Mitigation Program was established in 2011 to help Californians strengthen their homes against damage from earthquakes. The program is a joint powers authority created by Cal OES and the California Earthquake Authority, which is a not-for-profit, publicly managed, privately funded provider of home earthquake insurance to California homeowners and renters.

Earthquake Brace + Bolt was developed to help homeowners lessen the potential for damage to their houses during an earthquake. A residential seismic retrofit strengthens an existing older house, making it more resistant to earthquake activity such as ground shaking and soil failure. The seismic retrofitting involves bolting the house to its foundation and adding bracing around the perimeter of the crawl space. Most homeowners hire a contractor to do the retrofit work, and owners of houses in ZIP Codes with house characteristics suitable for this type of retrofit are eligible for up to \$3,000 toward the cost. A typical retrofit by a contractor may cost between \$3,000 and \$7,000, depending on the location and size of the house, contractor fees, and the amount of materials and work involved. If the homeowner is an experienced do-it-yourselfer, a retrofit can cost less than \$3,000.

California State Building Code

California Code of Regulations Title 24 (CCR Title 24), also known as the California Building Standards Code, is a compilation of building standards from three sources:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards authorized by the California legislature that constitute extensive additions not covered by the model codes adopted to address particular California concerns.

The state Building Standards Commission is authorized by California Building Standards Law (Health and Safety Code Sections 18901 through 18949.6) to administer the processes related to the adoption, approval, publication, and implementation of California's building codes. These building codes serve as the basis for the design and construction of buildings in California. The national model code standards adopted into Title 24 apply to all occupancies in California, except for modifications adopted by state agencies and local governing bodies. Since 1989, the Building Standards Commission has published new editions of Title 24 every three years.

On January 1, 2014, California Building Code Accessibility Standards found in Chapter 11B incorporated the 2010 Americans with Disabilities Act (ADA) Standards as the model accessibility code for California. The purpose was to ensure consistency with federal guidelines. As a result of this incorporation, the California standards will fully implement and include 2010 ADA Standards within the California Building Code while maintaining enhanced levels of accessibility already provided by existing California accessibility regulations. All planning partners that have building code and permit authority have adopted building codes that are in full compliance with the California State Building Code.

Disadvantaged and Low-income Communities Investments

Senate Bill (SB) 535 directs state and local agencies to make investments that benefit California's disadvantaged communities. It also directs the California Environmental Protection Agency to identify disadvantaged

communities for the purposes of these investments based on geographic, socio-economic, public health, and environmental hazard criteria. Assembly Bill (AB) 1550 increased the percent of funds for projects located in disadvantaged communities from 10 to 25 percent and added a focus on investments in low-income communities and households. This program is a potential alternative source of funding for actions identified in this plan.

Division of the State Architect's AB 300 List of Seismically At-Risk Schools

In 2002, California's Division of the State Architect completed an inventory of public school buildings built before 1978 that identifies buildings with characteristics that might make them unsafe in future earthquakes. This inventory provides a list of potentially at-risk schools known as the AB 300 list (the inventory was authorized by Assembly Bill 300 in 1999). Using available information on school buildings' dates of construction, seismic retrofits, and structural systems (wood-frame, concrete shear wall, or steel moment frame, etc.), the inventory categorized California public school buildings into one of two categories: those expected to perform well in future earthquakes; and those that are not expected to perform well and require more detailed seismic evaluation.

The Division of the State Architect recommends that public schools on this list undergo detailed seismic evaluations to determine if they pose life safety risks, but the state has neither required nor funded school districts to do this.

Governor's Executive Order S-13-08

Governor's Executive Order S-13-08 enhances the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. There are four key actions in the executive order:

- Initiate California's first statewide climate change adaptation strategy to assess expected climate change impacts, identify where California is most vulnerable, and recommend adaptation policies. This effort will improve coordination within state government so that better planning can more effectively address climate impacts on human health, the environment, the state's water supply and the economy.
- Request that the National Academy of Science establish an expert panel to report on sea level rise impacts in California, to inform state planning and development efforts.
- Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects.
- Initiate a report on critical infrastructure projects vulnerable to sea level rise.

Office of the State Fire Marshal

The Office of the State Fire Marshal is a division of CAL FIRE that has a wide variety of fire safety and training responsibilities and provides technical support to fire agencies/organizations.

Senate Bill 12: Local government: planning and zoning: wildfires.

This bill imposes new planning requirements on local governments, as follows:

- Defines "very high fire risk areas" to be the VHFHSZ in both the SRA and the Local Responsibility Area.

- Requires each city or county, upon the next revision of the housing element or local hazard mitigation plan on or after July 1, 2024, whichever occurs first, to review and update its safety element to include a comprehensive retrofit strategy that includes specified contents.
- Requires a city or county with VHFHSZ within its jurisdiction to amend the land use element of its general plan upon the next revision of the housing element on or after July 1, 2024. This amendment of the land use element must include the locations of all VHFHSZ within the city or county, the data and analysis described in the Office of Planning and Research’s publication *Fire Hazard Planning—General Plan Technical Advice Series*, and other specified goals, objectives, and implementation measures.
- Requires, after the initial amendment to the land use element, that a city or county review upon each revision of the housing element the implementation of the wildfire risk reduction standards within the jurisdiction and the designation of VHFHSZ.
- Provides for review and comment on draft findings by the Board and local fire agencies on whether the city or county has implemented the standards or made adequate progress, as defined.
- Requires, on or before January 1, 2023, to develop and post on its web site a clearinghouse of local ordinances, policies, and best practices relating to land use planning in VHFHSZ, wildfire risk reduction, and wildfire preparedness. The Office of Planning and Research must also regularly update the clearinghouse.

Senate Bill 92: Dam Emergency Action Plans; Public Resources Portion of Biennial Budget Bill

The State of California updated its requirements regarding emergency action plans (EAPs) via Senate Bill 92, which became effective in June 2017 as part of the state Legislature’s biennial budget process. The bill required dam owners to submit EAPs to Cal OES and the Department of Water Resources for approval by January 1, 2018 (for extremely high hazard dams), January 1, 2019 (for high-hazard dams), and January 1, 2021 (for significant hazard dams). The EAPs were to include the following:

- Emergency notification flow charts
- Information on a four-step response process
- Description of agencies’ roles and actions in response to an emergency incident
- Description of actions to be taken in advance of an emergency
- Inundation maps
- Additional information such as revision records and distribution lists.

After the EAPs are approved by the state, the law requires dam owners to send the approved EAPs to relevant stakeholders. Local public agencies can then adopt emergency procedures that incorporate the information in the EAP in a manner that conforms to local needs and includes methods and procedures for alerting and warning the public and other response and preparedness related items.

SB 92 also requires dams other than low-risk dams to have current inundation mapping, which must be updated every 10 years, or sooner if specific circumstances change. EAPs also must be updated every 10 years. It provides DWR with enforcement tools, including fines and operational restrictions for failure to comply. Cal OES is required by the law to work with state and federal agencies, dam owners, planners, and the public to make dam inundation maps available to citizens interested in learning their dam failure inundation risk.

Senate Bill 97: Guidelines for Greenhouse Gas Emissions

Senate Bill 97, enacted in 2007, amends CEQA to clearly establish that greenhouse gas emissions and the effects of greenhouse gas emissions are appropriate subjects for CEQA analysis. It directs the Governor's Office of Planning and Research to develop draft CEQA guidelines for the mitigation of greenhouse gas emissions or their effects by July 1, 2009 and directs the California Natural Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.

Senate Bill 99: Evacuation Route Planning

Senate Bill 99, enacted in 2019, requires that cities' and counties' general plans address evacuation routes from any hazard area identified in the safety element. Under this law, the safety element must include information to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. Each city or county must update its safety element with the new information upon the next revision of its housing element on or after January 1, 2020.

Senate Bill 182 Local Government: Planning and Zoning: Wildfires

California Senate Bill 182 made a number of changes to state law regarding planning for and permitting development in areas designated as very high fire risk areas. The bill requires a local jurisdiction to do the following:

- Include a comprehensive retrofit strategy in its safety element to reduce the risk of property loss and damage during wildfires.
- Amend its land use element to identify all very high fire risk areas and to establish measures to protect lives and property from unreasonable risk of wildfire.
- Adopt a very high fire risk overlay zone for its zoning ordinance.
- Allocate a lower portion of projected future housing to very high fire hazard severity zones

This bill prohibits local governments from entering into a development agreement for property in a very high fire risk area, approving a permit for a project in a very high fire risk area, or approving a tentative map for a subdivision in a very high fire risk area, unless the jurisdiction makes specified findings based on substantial evidence.

Senate Bill 379: General Plans: Safety Element—Climate Adaptation

Senate Bill 379 builds upon the flood planning inclusions into the safety and housing elements and the hazard mitigation planning safety element inclusions in general plans outlined in AB 162 and AB 2140, respectively. SB 379 focuses on a new requirement that cities and counties include climate adaptation and resiliency strategies in the safety element of their general plans beginning January 1, 2017. In addition, this bill requires general plans to include a set of goals, policies and objectives, and specified implementation measures based on the conclusions drawn from climate adaptation research and recommendations.

Senate Bill 1000: General Plan Amendments—Safety and Environmental Justice Elements

In 2016, Senate Bill 1000 amended California’s Planning and Zoning Law in two ways:

- The original law established requirements for initial revisions of general plan safety elements to address flooding, fire, and climate adaptation and resilience. It also required subsequent review and revision as necessary based on new information. Senate Bill 1000 specifies that the subsequent reviews and revision based on new information are required to address only flooding and fires (not climate adaptation and resilience).
- Senate Bill 1000 adds a requirement that, upon adoption or revision of any two other general plan elements on or after January 1, 2018, an environmental justice element be adopted for the general plan or environmental justice goals, policies and objectives be incorporated into other elements of the plan.

Senate Bill 1241: General Plans: Safety Element—Fire Hazard Impacts

In 2012, Senate Bill 1241 passed requiring that the safety elements of all future general plans address fire risk in state responsibility areas and very high fire hazard severity zones. The bill requires cities and counties to make findings regarding available fire protection and suppression services before approving a tentative map or parcel map.

Standardized Emergency Management System

CCR Title 19 establishes the Standardized Emergency Management System (SEMS) to standardize the response to emergencies involving multiple jurisdictions. SEMS is intended to be flexible and adaptable to the needs of all emergency responders in California. It requires emergency response agencies to use basic principles and components of emergency management. Local governments must use SEMS by December 1, 1996, to be eligible for state funding of response-related personnel costs under CCR Title 19 (Sections 2920, 2925 and 2930). The roles and responsibilities of Individual agencies contained in existing laws or the state emergency plan are not superseded by these regulations. This hazard mitigation plan is considered to be a support document for all phases of emergency management, including those associated with SEMS.

Western Governors Association Ten-Year Comprehensive Strategy

The *Western Governors Association Ten-Year Comprehensive Strategy: A Collaborative Approach for Reducing Wildfire Risks to Communities and the Environment* (August 2001) is strategy implementation plan prepared by federal and Western state agencies that outlines measures to restore fire-adapted ecosystems and reduce hazardous fuels.

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix C. Mapping Methods and Data Sources

C. MAPPING METHODS AND DATA SOURCES

DAM FAILURE INUNDATION MAPPING

Dam breach inundation maps, including inundation boundaries and depth grids, were downloaded from the California Department of Water Resources' (DWR) website - <https://fnds.water.ca.gov/maps/damim/>. As required by California Water Code section 6161, the Division of Safety of Dams (DSOD) at DWR reviews and approves inundation maps prepared by licensed civil engineers and submitted by dam owners for extremely high, high, and significant hazard dams and their critical appurtenant structures. Inundation maps are based on a hypothetical failure of a dam or critical appurtenant structure and the information depicted on the maps is approximate. The dams and failure scenarios are as follows:

- Annadel No. 1 (National Dam ID CA00056) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 11/15/2018.
- Cook No. 2 (NID CA01056) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 7/30/2020.
- Delta Pond (NID CA01272) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 3/13/2019.
- Dutcher Creek (NID CA01362) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 7/14/2020.
- Fern Lake (NID CA00007) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 3/7/2019.
- Foothill Regulating Park (NID CA01057) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 2/4/2019.
- Foss Creek North Area (NID CA01431) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 3/19/2020.
- Lagunita (NID CA00992) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 3/6/2019.
- Lake Helen (NID CA01060) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 10/1/2020.
- Lytton (NID CA01042) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 3/22/2019.
- Lytton (NID CA01042) - Scenario shows an inundation extent for a sunny day failure of Northern (Auxiliary) Dam. File downloaded from DSOD website generated on 3/22/2019.

- Mallacomes (NID CA00591) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 1/11/2019.
- Matanzas Creek (NID CA00794) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 8/19/2020.
- Merlo (NID CA01313) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 12/5/2019.
- Middle Fork Brush Creek (NID CA00793) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 12/24/2020.
- Piner Creek (NID CA00792) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 12/24/2020.
- Piner Creek (NID CA00792) - Scenario shows an inundation extent for a sunny day failure of Saddle Dam 1. File downloaded from DSOD website generated on 12/24/2020.
- Santa Rosa Creek Reservoir (NID CA00795) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 8/18/2020.
- Suttentfield (NID CA00010) - Scenario shows an inundation extent for a sunny day failure of Main Dam. File downloaded from DSOD website generated on 4/29/2019.
- Suttentfield (NID CA00010) - Scenario shows an inundation extent for a sunny day failure of Saddle Dam 1. File downloaded from DSOD website generated on 4/29/2019.

Additional dam inundation areas data for Azalea, Fountaingrove, Lake Ralphine, and Warm Springs Dam was provided by Sonoma County. This data was originally used in the County's 2011 Hazard Mitigation Plan.

EARTHQUAKE MAPPING

Liquefaction Susceptibility

The Liquefaction dataset provided by the County presents a map and database of Quaternary deposits and liquefaction susceptibility areas the urban core of the San Francisco Bay region within the County of Sonoma. It supersedes the equivalent area of U.S. Geological Survey Open-File Report 00-444 (Knudsen and others, 2000), which covers the larger 9-county San Francisco Bay region. The report consists of (1) a spatial database, (2) two small-scale colored maps (Quaternary deposits and liquefaction susceptibility), (3) a text describing the Quaternary map and liquefaction interpretation (part 3), and (4) a text introducing the report and describing the database (part 1).

The nine counties surrounding San Francisco Bay straddle the San Andreas fault system, which exposes the region to serious earthquake hazard (Working Group on California Earthquake Probabilities, 1999). Much of the land adjacent to the Bay and the major rivers and streams is underlain by unconsolidated deposits that are particularly vulnerable to earthquake shaking and liquefaction of water-saturated granular sediment. This new map provides a consistent detailed treatment of the central part of the 9-county region in which much of the mapping of Open-File Report 00-444 was either at smaller (less detailed) scale or represented only preliminary revision of earlier work.

Like Open-File Report 00-444, the current mapping uses geomorphic expression, pedogenic soils, inferred depositional environments, and geologic age to define and distinguish the map units. Further scrutiny of the

factors controlling liquefaction susceptibility has led to some changes relative to Open-File Report 00-444: particularly the reclassification of San Francisco Bay mud (Qhbm) to have only MODERATE susceptibility and the rating of artificial fills according to the Quaternary map units inferred to underlie them.

The report is the product of cooperative work by the National Earthquake Hazards Reduction Program (NEHRP) and National Cooperative Geologic Mapping Program of the U.S. Geological Survey, William Lettis and Associates, Inc. (WLA), and the California Geological Survey. An earlier version was submitted to the U.S. Geological Survey by WLA as a final report for a NEHRP grant (Witter and others, 2005). The mapping has been carried out by WLA geologists under contract to the NEHRP Earthquake Program (Grant 99-HQ-GR-0095) and by the California Geological Survey. For detailed information about the map the USGS has an open report, "Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California. U.S. Geological Survey Open File Report 2006-1037 Version 1.1. <http://pubs.usgs.gov/of/2006/1037/>

National Earthquake Hazard Reduction Program (NEHRP) Soils

NEHRP soils information is derived from a shear wave velocity (Vs30) data produced by the California Geological Survey in 2015. The Vs30 data represents simplified geologic units that have been correlated to the time-averaged shear-wave velocity in the upper 30 meters of the earth's surface. The geologic units were compiled from published maps that range in scale from 1:250,000 to 1:24,000. (Wills, et. al., 2015)

Probabilistic Peak Ground Acceleration Maps

Probabilistic peak ground acceleration data, by Census tract, are generated by Hazus 4.2 SP03. In Hazus' probabilistic analysis procedure, the ground shaking demand is characterized by spectral contour maps developed by the U.S. Geological Survey (USGS) as part of a 2018 update of the National Seismic Hazard Maps. USGS probabilistic seismic hazard maps are revised about every six years to reflect newly published or thoroughly reviewed earthquake science and to keep pace with regular updates of the building code. Hazus includes maps for eight probabilistic hazard levels: ranging from ground shaking with a 39 percent probability of being exceeded in 50 years (100-year return period) to the ground shaking with a 2 percent probability of being exceeded in 50 years (2,500-year return period).

Shake Maps

A shake map is designed as a rapid response tool to portray the extent and variation of ground shaking throughout the affected region immediately following significant earthquakes. Ground motion and intensity maps are derived from peak ground motion amplitudes recorded on seismic sensors (accelerometers), with interpolation based on estimated amplitudes where data are lacking, and site amplification corrections. Color-coded instrumental intensity maps are derived from empirical relations between peak ground motions and Modified Mercalli intensity. For this plan, shake maps were prepared by the USGS for four earthquake scenarios:

- An earthquake on the Hayward fault with the following characteristics:
 - Magnitude: 7.57
 - Epicenter: N 38.08 W 122.41
 - Depth: 7.1 km
- An earthquake on the Maacama fault with the following characteristics:
 - Magnitude: 7.55

- Epicenter: N 39.18 W 123.14
- Depth: 7.2 km
- An earthquake on the Rodgers Creek-Healdsburg fault with the following characteristics:
 - Magnitude: 7.19
 - Epicenter: N 38.48 W 122.69
 - Depth: 8.4 km
- An earthquake on the San Andreas fault with the following characteristics:
 - Magnitude: 8.04
 - Epicenter: N 38.4 W 123.11
 - Depth: 6.6 km

FLOOD MAPPING

Flood hazard areas are a combination of areas from the countywide effective FEMA Digital Flood Insurance Rate Map (DFIRM), the Preliminary FIRM (PFIRM), and the County’s Russian River Flood Modeling. The DFIRM is dated March 7, 2017 with latest incorporated LOMR effective June 19, 2020. The PFIRM is dated May 15, 2020.

The Russian River Flood Modeling data, produced by Sonoma County and QSI, includes polygon features and water depth rasters for each flood stage. The following metadata was provided by the County:

- The polygon features within this dataset represent the extent of modeled water surfaces within the Russian River Modeling and Buildings study area. The water surface extents were estimated using HEC RAS 5.0.1 hydrologic modeling software. The projection is CASP 2 with horizontal datum NAD83(2011), vertical datum NAVD88 (Geoid 12A), and the units are US Survey Feet.
- The water depth digital elevation model (DEM) represents the difference between water surface elevation models and bare earth (all vegetation and man-made structures removed) digital elevation models. The water surface elevations were estimated using HEC RAS 5.0.1 hydrologic modeling software. Each pixel is three feet by three feet and represents an average height above ground for that area. QSI collected the LiDAR and created this data set for the Russian River Modeling and Buildings study area. The projection is CASP 2 with horizontal datum NAD83(2011), vertical datum NAVD88 (Geoid 12A), and the units are US Survey Feet. See Process Steps for derivation of raster datasets.

LANDSLIDE MAPPING

Susceptibility to Deep-Seated Landslides data provided by the California Geological Survey. The map, and associated data, show the relative likelihood of deep-seated landsliding based on regional estimates of rock strength and steepness of slopes. On the most basic level, weak rocks and steep slopes are most likely to generate landslides. The map uses detailed information on the location of past landslides, the location and relative strength of rock units, and steepness of slope to estimate susceptibility to deep-seated landsliding (0 to X, low to high). The USGS 2009 National Elevation Dataset (NED) with 10-m grid size was used as the base map. This landslide susceptibility map is intended to provide infrastructure owners, emergency planners and the public with a general overview of where landslides are more likely to occur. (Wills, et. al., 2011)

SEA LEVEL RISE MAPPING

Projected sea level rise data are from the USGS Coastal Storm Modeling System (CoSMoS), accessed via the Our Coast Our Future web platform (Point Blue Conservation Science and USGS). The data for Sonoma County is a seamless mashup of v2.1 (inner bay), and v2.0 and v2.2 for different stretches of the outer coast. The projections were generated using the latest downscaled climate projections and calibrated hydrodynamic models by the CoSMoS project team led by Patrick Barnard, at the USGS Pacific Coastal and Marine Science Center.

TSUNAMI MAPPING

Initial tsunami modeling was performed by the University of Southern California Tsunami Research Center funded through the California Emergency Management Agency by the National Tsunami Hazard Mitigation Program. The tsunami modeling process utilized the MOST (Method of Splitting Tsunamis) computational program (Version 0), which allows for wave evolution over a variable bathymetry and topography used for the inundation mapping (Titov and Gonzalez, 1997; Titov and Synolakis, 1998). The bathymetric/topographic data that were used in the tsunami models consist of a series of nested grids. Near-shore grids with a 3 arc-second (75- to 90-meters) resolution or higher, were adjusted to “Mean High Water” sea-level conditions, representing a conservative sea level for the intended use of the tsunami modeling and mapping. A suite of tsunami source events was selected for modeling, representing realistic local and distant earthquakes and hypothetical extreme undersea, near-shore landslides.

Local tsunami sources that were considered include offshore reverse-thrust faults, restraining bends on strike-slip fault zones and large submarine landslides capable of significant seafloor displacement and tsunami generation. Distant tsunami sources that were considered include great subduction zone events that are known to have occurred historically (1960 Chile and 1964 Alaska earthquakes) and others which can occur around the Pacific Ocean “Ring of Fire.” In order to enhance the result from the 75- to 90-meter inundation grid data, a method was developed utilizing higher-resolution digital topographic data (3- to 10-meters resolution) that better defines the location of the maximum inundation line (U.S. Geological Survey, 1993; Intermap, 2003; NOAA, 2004). The location of the enhanced inundation line was determined by using digital imagery and terrain data on a GIS platform with consideration given to historic inundation information (Lander, et al., 1993). This information was verified, where possible, by field work coordinated with local county personnel.

The accuracy of the inundation line shown on these maps is subject to limitations in the accuracy and completeness of available terrain and tsunami source information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus, although an attempt has been made to identify a credible upper bound to inundation at any location along the coastline, it remains possible that actual inundation could be greater in a major tsunami event. This map does not represent inundation from a single scenario event. It was created by combining inundation results for an ensemble of source events affecting a given region. For this reason, all of the inundation region in a particular area will not likely be inundated during a single tsunami event. (State of California, 2009)

WILDFIRE MAPPING

Sonoma County Wildfire Hazard Index data developed by Sonoma County PRMD, Sonoma County, FireSAFE Sonoma, Tukman Geospatial, Digital Mapping Solutions, and Wildland Resource Management. The Sonoma County Wildfire Hazard Index is a model that predicts relative wildfire hazard on the landscape. Higher index values represent a higher relative hazard. The index is based on inputs that inform potential fire behavior, inputs

that represent fire probability occurrence in any 1 pixel, and a model of wildfire suppression difficulty. For a full description of input and methods, go to the story map:

<https://storymaps.arcgis.com/stories/a64d596a8be941c8b28263718880e433>. The hazard index reflects landscape conditions through the 2018 fire season.

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Appendix D. Risk Assessment Results

**EXPOSURE AND VULNERABILITY
RESULTS BY JURISDICTION**

| Jurisdiction (7) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Es | | |
|----------------------------|--------------------------|-------------------------------|---|---|-----------------------|------------------------|-------------------------|
| | | | | | Buildings Exposed (2) | Population Exposed (3) | % of Population Exposed |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 0 | 0 | 0.0% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 26 | 3 | 0.0% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 4,035 | 10,607 | 87.7% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 0 | 0 | 0.0% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 118 | 95 | 0.2% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 10,157 | 30,660 | 17.7% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 324 | 445 | 5.7% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 0 | 0 | 0.0% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 4,791 | 15,958 | 56.5% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 147 | 392 | 1.1% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 426 | 846 | 4.3% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 27 | 58 | 0.8% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 2,057 | 3,939 | 16.1% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 5,956 | 9,949 | 22.9% |
| Total | 485,459 | 173,484 | 151,196 | \$218,574,570,981 | 28,064 | 72,953 | 15.0% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020. Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Percent of residential buildings exposed multiplied by the Estimated Population.

(4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 4.2 SP03, and adjusted to reflect the estimated population.

(6) Calculated using a user-defined (UDF) analysis in Hazus 4.2 SP03.

(7) Supervisorial Districts exclude the incorporated areas.

Dam Failure Combined

| Jurisdiction (7) | Estimated Building Exposure | | | |
|----------------------------|-----------------------------------|----------------------------------|--|--------------------------|
| | Value Structure in \$ Exposed (2) | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value Exposed |
| Cloverdale | \$0 | \$0 | \$0 | 0.0% |
| Cotati | \$67,316,628 | \$75,119,715 | \$142,436,343 | 6.6% |
| Healdsburg | \$2,384,958,969 | \$1,950,444,290 | \$4,335,403,259 | 90.3% |
| Petaluma | \$0 | \$0 | \$0 | 0.0% |
| Rohnert Park | \$566,943,053 | \$482,141,386 | \$1,049,084,440 | 10.8% |
| Santa Rosa | \$6,608,317,015 | \$5,508,762,434 | \$12,117,079,448 | 27.5% |
| Sebastopol | \$391,640,260 | \$374,628,175 | \$766,268,434 | 28.6% |
| Sonoma | \$0 | \$0 | \$0 | 0.0% |
| Windsor | \$1,764,292,857 | \$1,088,437,382 | \$2,852,730,239 | 44.5% |
| 1st Supervisorial District | \$105,242,814 | \$109,419,221 | \$214,662,035 | 0.9% |
| 2nd Supervisorial District | \$854,366,563 | \$809,580,795 | \$1,663,947,359 | 10.1% |
| 3rd Supervisorial District | \$63,394,977 | \$60,627,642 | \$124,022,619 | 6.1% |
| 4th Supervisorial District | \$2,880,316,002 | \$2,784,308,444 | \$5,664,624,445 | 19.1% |
| 5th Supervisorial District | \$4,436,214,711 | \$3,874,980,907 | \$8,311,195,618 | 16.4% |
| Total | \$20,123,003,848 | \$17,118,450,390 | \$37,241,454,238 | 17.0% |

Dam Failure Combined

| Jurisdiction (7) | Economic Impact | | | | | | | |
|----------------------------|-----------------------------|--------------------------|---|------------------------|-----------------------------------|----------------------------------|--|--------------------------|
| | Structure Debris (Tons) (4) | Displaced Population (5) | People Requiring Short-Term Shelter (5) | Buildings Impacted (6) | Value Structure in \$ Damaged (6) | Value Contents in \$ Damaged (6) | Total Value (Structure and Contents in \$) Damaged (6) | % of Total Value Damaged |
| Cloverdale | 0 | 0 | 0 | 0 | \$0 | \$0 | \$0 | 0.0% |
| Cotati | 80 | 1 | 0 | 8 | \$729,043 | \$3,082,717 | \$3,811,760 | 0.2% |
| Healdsburg | 730,525 | 9,668 | 741 | 3,997 | \$1,769,745,504 | \$1,612,943,535 | \$3,382,689,039 | 70.4% |
| Petaluma | 0 | 0 | 0 | 0 | \$0 | \$0 | \$0 | 0.0% |
| Rohnert Park | 27,620 | 81 | 8 | 63 | \$31,870,674 | \$44,588,987 | \$76,459,662 | 0.8% |
| Santa Rosa | 284,716 | 14,149 | 1,049 | 9,452 | \$638,136,928 | \$1,011,352,894 | \$1,649,489,822 | 3.7% |
| Sebastopol | 120,496 | 189 | 8 | 320 | \$198,847,307 | \$285,004,542 | \$483,851,850 | 18.1% |
| Sonoma | 0 | 0 | 0 | 0 | \$0 | \$0 | \$0 | 0.0% |
| Windsor | 101,363 | 12,679 | 869 | 3,828 | \$402,022,974 | \$364,962,991 | \$766,985,965 | 12.0% |
| 1st Supervisorial District | 4,597 | 55 | 2 | 147 | \$9,396,528 | \$18,089,301 | \$27,485,829 | 0.1% |
| 2nd Supervisorial District | 118,237 | 381 | 17 | 337 | \$98,517,852 | \$311,915,643 | \$410,433,494 | 2.5% |
| 3rd Supervisorial District | 115 | 7 | 0 | 19 | \$1,204,506 | \$5,172,321 | \$6,376,826 | 0.3% |
| 4th Supervisorial District | 580,308 | 1,897 | 90 | 1,937 | \$2,079,433,982 | \$1,966,748,294 | \$4,046,182,276 | 13.6% |
| 5th Supervisorial District | 755,141 | 5,253 | 373 | 5,294 | \$2,316,307,472 | \$2,299,577,011 | \$4,615,884,483 | 9.1% |
| Total | 2,723,197 | 44,359 | 3,157 | 25,402 | \$7,546,212,770 | \$7,923,438,235 | \$15,469,651,005 | 7.1% |

Dam Failure Combined

| Jurisdiction (7) | Acres of Inundation Area | Number of Structures in Inundation Area (2) | | | | | | | |
|----------------------------|--------------------------|---|-------------|------------|-------------|-----------|------------|-----------|--------------|
| | | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 93 | 1 | 14 | 6 | 0 | 0 | 5 | 0 | 26 |
| Healdsburg | 4,041 | 3,551 | 341 | 45 | 37 | 15 | 30 | 16 | 4035 |
| Petaluma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rohnert Park | 720 | 25 | 69 | 11 | 6 | 0 | 6 | 1 | 118 |
| Santa Rosa | 9,343 | 8,895 | 969 | 47 | 25 | 21 | 156 | 44 | 10157 |
| Sebastopol | 600 | 143 | 166 | 6 | 0 | 0 | 7 | 2 | 324 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 5,159 | 4,529 | 192 | 9 | 19 | 5 | 30 | 7 | 4791 |
| 1st Supervisorial District | 1,008 | 135 | 3 | 0 | 2 | 0 | 6 | 1 | 147 |
| 2nd Supervisorial District | 4,822 | 245 | 15 | 0 | 136 | 1 | 29 | 0 | 426 |
| 3rd Supervisorial District | 234 | 6 | 13 | 2 | 3 | 0 | 3 | 0 | 27 |
| 4th Supervisorial District | 58,513 | 1,061 | 41 | 24 | 890 | 2 | 37 | 2 | 2057 |
| 5th Supervisorial District | 35,104 | 4,973 | 231 | 8 | 592 | 11 | 131 | 10 | 5956 |
| Total | 119,638 | 23,564 | 2054 | 158 | 1710 | 55 | 440 | 83 | 28064 |

| Jurisdiction (5) | Estimated Exposure | | | | |
|----------------------------|--------------------------|----------------------|-------------------------------|---|--------------------------|
| | Estimated Population (1) | % Population Exposed | Total Number of Buildings (2) | Total Building Value (Structure and contents in \$) (2) | % of Total Value Exposed |
| Cloverdale | 9,213 | 100% | 3,158 | \$2,499,664,593 | 100% |
| Cotati | 7,533 | 100% | 2,682 | \$2,163,132,258 | 100% |
| Healdsburg | 12,089 | 100% | 4,552 | \$4,803,401,892 | 100% |
| Petaluma | 61,873 | 100% | 19,609 | \$18,679,915,783 | 100% |
| Rohnert Park | 43,069 | 100% | 11,790 | \$9,749,459,659 | 100% |
| Santa Rosa | 173,628 | 100% | 53,547 | \$44,098,486,212 | 100% |
| Sebastopol | 7,745 | 100% | 2,832 | \$2,676,395,901 | 100% |
| Sonoma | 11,050 | 100% | 4,605 | \$3,658,235,342 | 100% |
| Windsor | 28,248 | 100% | 8,444 | \$6,407,101,168 | 100% |
| 1st Supervisorial District | 36,194 | 100% | 15,141 | \$24,979,542,737 | 100% |
| 2nd Supervisorial District | 19,634 | 100% | 7,529 | \$16,492,697,080 | 100% |
| 3rd Supervisorial District | 7,192 | 100% | 986 | \$2,021,097,760 | 100% |
| 4th Supervisorial District | 24,507 | 100% | 11,044 | \$29,660,322,569 | 100% |
| 5th Supervisorial District | 43,484 | 100% | 27,565 | \$50,685,118,028 | 100% |
| TOTAL | 485,459 | 100% | 173,484 | \$218,574,570,981 | 100% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.
 Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 4.2 SP03.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Economic Impact | | | | | | |
|-----------------------------------|--|--|---|--------------------------------------|-------------------------------------|---|-----------------------------|
| | Structure Debris (x 1,000 Tons) (3) | Number of Displaced Households (3) | People Requiring Short-Term Shelter (3) | Value Structure in \$ Damaged (4) | Value Contents in \$ Damaged (4) | Total Value (Structure and Contents in \$) Damaged (4) | % of Total Value Damaged |
| Cloverdale | 48.24 | 32 | 24 | \$379,953,882 | \$164,329,166 | \$544,283,048 | 21.8% |
| Cotati | 46.08 | 35 | 22 | \$210,003,336 | \$87,341,089 | \$297,344,425 | 13.7% |
| Healdsburg | 197.37 | 59 | 39 | \$757,507,578 | \$344,109,215 | \$1,101,616,793 | 22.9% |
| Petaluma | 559.20 | 553 | 331 | \$2,128,763,746 | \$905,475,398 | \$3,034,239,144 | 16.2% |
| Rohnert Park | 278.68 | 836 | 526 | \$1,200,251,226 | \$459,829,300 | \$1,660,080,526 | 17.0% |
| Santa Rosa | 1,686.90 | 2,771 | 1,845 | \$6,668,591,060 | \$2,725,718,264 | \$9,394,309,324 | 21.3% |
| Sebastopol | 29.02 | 8 | 4 | \$120,890,370 | \$50,789,629 | \$171,680,000 | 6.4% |
| Sonoma | 56.43 | 34 | 17 | \$321,664,974 | \$128,590,609 | \$450,255,582 | 12.3% |
| Windsor | 155.53 | 177 | 112 | \$662,620,937 | \$273,811,705 | \$936,432,643 | 14.6% |
| 1st Supervisorial District | 255.26 | 231 | 139 | \$2,241,550,989 | \$1,130,182,247 | \$3,371,733,236 | 13.5% |
| 2nd Supervisorial District | 224.52 | 69 | 40 | \$1,136,565,223 | \$588,891,469 | \$1,725,456,692 | 10.5% |
| 3rd Supervisorial District | 94.28 | 62 | 46 | \$285,956,617 | \$124,733,871 | \$410,690,488 | 20.3% |
| 4th Supervisorial District | 318.72 | 115 | 76 | \$2,743,432,262 | \$1,555,375,845 | \$4,298,808,107 | 14.5% |
| 5th Supervisorial District | 166.92 | 37 | 27 | \$2,510,707,319 | \$1,367,391,987 | \$3,878,099,306 | 7.7% |
| TOTAL | 4,117.15 | 5,020 | 3,250 | \$21,368,459,518 | \$9,906,569,794 | 31,275,029,312 | 14.3% |

| Jurisdiction (5) | Estimated Exposure | | | | |
|-----------------------------------|--------------------------|----------------------|-------------------------------|---|--------------------------|
| | Estimated Population (1) | % Population Exposed | Total Number of Buildings (2) | Total Building Value (Structure and contents in \$) (2) | % of Total Value Exposed |
| Cloverdale | 9,213 | 100% | 3,158 | \$2,499,664,593 | 100% |
| Cotati | 7,533 | 100% | 2,682 | \$2,163,132,258 | 100% |
| Healdsburg | 12,089 | 100% | 4,552 | \$4,803,401,892 | 100% |
| Petaluma | 61,873 | 100% | 19,609 | \$18,679,915,783 | 100% |
| Rohnert Park | 43,069 | 100% | 11,790 | \$9,749,459,659 | 100% |
| Santa Rosa | 173,628 | 100% | 53,547 | \$44,098,486,212 | 100% |
| Sebastopol | 7,745 | 100% | 2,832 | \$2,676,395,901 | 100% |
| Sonoma | 11,050 | 100% | 4,605 | \$3,658,235,342 | 100% |
| Windsor | 28,248 | 100% | 8,444 | \$6,407,101,168 | 100% |
| 1st Supervisorial District | 36,194 | 100% | 15,141 | \$24,979,542,737 | 100% |
| 2nd Supervisorial District | 19,634 | 100% | 7,529 | \$16,492,697,080 | 100% |
| 3rd Supervisorial District | 7,192 | 100% | 986 | \$2,021,097,760 | 100% |
| 4th Supervisorial District | 24,507 | 100% | 11,044 | \$29,660,322,569 | 100% |
| 5th Supervisorial District | 43,484 | 100% | 27,565 | \$50,685,118,028 | 100% |
| TOTAL | 485,459 | 100% | 173,484 | \$218,574,570,981 | 100% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 4.2 SP03.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Economic Impact | | | | | | |
|----------------------------|--|--|---|--------------------------------------|-------------------------------------|---|-----------------------------|
| | Structure Debris (x 1,000 Tons) (3) | Number of Displaced Households (3) | People Requiring Short-Term Shelter (3) | Value Structure in \$ Damaged (4) | Value Contents in \$ Damaged (4) | Total Value (Structure and Contents in \$) Damaged (4) | % of Total Value Damaged |
| Cloverdale | 33.96 | 27 | 20 | \$303,669,156 | \$127,819,155 | \$431,488,311 | 17.3% |
| Cotati | 11.11 | 3 | 2 | \$86,385,552 | \$40,070,307 | \$126,455,859 | 5.8% |
| Healdsburg | 123.31 | 16 | 11 | \$481,613,664 | \$218,865,334 | \$700,478,997 | 14.6% |
| Petaluma | 69.00 | 18 | 11 | \$649,619,149 | \$282,985,000 | \$932,604,149 | 5.0% |
| Rohnert Park | 76.21 | 124 | 78 | \$727,546,422 | \$282,803,295 | \$1,010,349,717 | 10.4% |
| Santa Rosa | 1,028.84 | 1,290 | 830 | \$4,527,180,892 | \$1,824,513,863 | \$6,351,694,755 | 14.4% |
| Sebastopol | 12.61 | 1 | 1 | \$60,084,422 | \$28,375,434 | \$88,459,856 | 3.3% |
| Sonoma | 4.80 | 0 | 0 | \$41,668,458 | \$18,231,869 | \$59,900,327 | 1.6% |
| Windsor | 76.64 | 78 | 49 | \$438,866,780 | \$182,696,198 | \$621,562,978 | 9.7% |
| 1st Supervisorial District | 48.12 | 20 | 11 | \$1,066,302,825 | \$561,187,897 | \$1,627,490,722 | 6.5% |
| 2nd Supervisorial District | 47.00 | 5 | 3 | \$349,900,334 | \$185,464,936 | \$535,365,270 | 3.2% |
| 3rd Supervisorial District | 36.55 | 10 | 8 | \$125,305,537 | \$56,089,889 | \$181,395,425 | 9.0% |
| 4th Supervisorial District | 222.47 | 64 | 43 | \$2,283,462,553 | \$1,311,514,078 | \$3,594,976,631 | 12.1% |
| 5th Supervisorial District | 72.30 | 9 | 7 | \$1,470,937,624 | \$802,319,064 | \$2,273,256,688 | 4.5% |
| TOTAL | 1,862.92 | 1,663 | 1,072 | \$12,612,543,369 | \$5,922,936,318 | 18,535,479,687 | 8.5% |

| Jurisdiction (5) | Estimated Exposure | | | | |
|----------------------------|--------------------------|----------------------|-------------------------------|---|--------------------------|
| | Estimated Population (1) | % Population Exposed | Total Number of Buildings (2) | Total Building Value (Structure and contents in \$) (2) | % of Total Value Exposed |
| Cloverdale | 9,213 | 100% | 3,158 | \$2,499,664,593 | 100% |
| Cotati | 7,533 | 100% | 2,682 | \$2,163,132,258 | 100% |
| Healdsburg | 12,089 | 100% | 4,552 | \$4,803,401,892 | 100% |
| Petaluma | 61,873 | 100% | 19,609 | \$18,679,915,783 | 100% |
| Rohnert Park | 43,069 | 100% | 11,790 | \$9,749,459,659 | 100% |
| Santa Rosa | 173,628 | 100% | 53,547 | \$44,098,486,212 | 100% |
| Sebastopol | 7,745 | 100% | 2,832 | \$2,676,395,901 | 100% |
| Sonoma | 11,050 | 100% | 4,605 | \$3,658,235,342 | 100% |
| Windsor | 28,248 | 100% | 8,444 | \$6,407,101,168 | 100% |
| 1st Supervisorial District | 36,194 | 100% | 15,141 | \$24,979,542,737 | 100% |
| 2nd Supervisorial District | 19,634 | 100% | 7,529 | \$16,492,697,080 | 100% |
| 3rd Supervisorial District | 7,192 | 100% | 986 | \$2,021,097,760 | 100% |
| 4th Supervisorial District | 24,507 | 100% | 11,044 | \$29,660,322,569 | 100% |
| 5th Supervisorial District | 43,484 | 100% | 27,565 | \$50,685,118,028 | 100% |
| TOTAL | 485,459 | 100% | 173,484 | \$218,574,570,981 | 100% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.
 Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

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(3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 4.2 SP03.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Economic Impact | | | | | | |
|-----------------------------------|--|--|---|--------------------------------------|-------------------------------------|---|-----------------------------|
| | Structure Debris (x 1,000 Tons) (3) | Number of Displaced Households (3) | People Requiring Short-Term Shelter (3) | Value Structure in \$ Damaged (4) | Value Contents in \$ Damaged (4) | Total Value (Structure and Contents in \$) Damaged (4) | % of Total Value Damaged |
| Cloverdale | 24.98 | 22 | 17 | \$263,351,591 | \$111,201,703 | \$374,553,293 | 15.0% |
| Cotati | 24.74 | 23 | 15 | \$146,672,788 | \$66,051,524 | \$212,724,312 | 9.8% |
| Healdsburg | 141.62 | 37 | 25 | \$564,188,183 | \$261,333,291 | \$825,521,474 | 17.2% |
| Petaluma | 291.98 | 376 | 225 | \$1,636,528,478 | \$720,663,646 | \$2,357,192,124 | 12.6% |
| Rohnert Park | 167.82 | 630 | 397 | \$966,776,257 | \$384,337,784 | \$1,351,114,041 | 13.9% |
| Santa Rosa | 1,197.51 | 2,177 | 1,454 | \$5,188,940,590 | \$2,155,812,203 | \$7,344,752,794 | 16.7% |
| Sebastopol | 11.33 | 3 | 2 | \$72,511,103 | \$36,385,476 | \$108,896,580 | 4.1% |
| Sonoma | 32.60 | 22 | 11 | \$233,961,487 | \$96,983,376 | \$330,944,863 | 9.0% |
| Windsor | 95.01 | 143 | 90 | \$516,202,150 | \$220,446,027 | \$736,648,177 | 11.5% |
| 1st Supervisorial District | 161.98 | 169 | 103 | \$1,877,310,021 | \$981,229,178 | \$2,858,539,199 | 11.4% |
| 2nd Supervisorial District | 115.10 | 47 | 28 | \$820,452,854 | \$446,960,813 | \$1,267,413,667 | 7.7% |
| 3rd Supervisorial District | 61.24 | 42 | 31 | \$191,366,765 | \$88,078,652 | \$279,445,417 | 13.8% |
| 4th Supervisorial District | 183.34 | 76 | 51 | \$2,297,201,865 | \$1,340,567,134 | \$3,637,769,000 | 12.3% |
| 5th Supervisorial District | 83.36 | 24 | 18 | \$1,775,846,039 | \$987,177,663 | \$2,763,023,702 | 5.5% |
| TOTAL | 2,592.60 | 3,792 | 2,466 | \$16,551,310,172 | \$7,897,228,469 | 24,448,538,642 | 11.2% |

| Jurisdiction (5) | Estimated Exposure | | | | |
|----------------------------|--------------------------|----------------------|-------------------------------|---|--------------------------|
| | Estimated Population (1) | % Population Exposed | Total Number of Buildings (2) | Total Building Value (Structure and contents in \$) (2) | % of Total Value Exposed |
| Cloverdale | 9,213 | 100% | 3,158 | \$2,499,664,593 | 100% |
| Cotati | 7,533 | 100% | 2,682 | \$2,163,132,258 | 100% |
| Healdsburg | 12,089 | 100% | 4,552 | \$4,803,401,892 | 100% |
| Petaluma | 61,873 | 100% | 19,609 | \$18,679,915,783 | 100% |
| Rohnert Park | 43,069 | 100% | 11,790 | \$9,749,459,659 | 100% |
| Santa Rosa | 173,628 | 100% | 53,547 | \$44,098,486,212 | 100% |
| Sebastopol | 7,745 | 100% | 2,832 | \$2,676,395,901 | 100% |
| Sonoma | 11,050 | 100% | 4,605 | \$3,658,235,342 | 100% |
| Windsor | 28,248 | 100% | 8,444 | \$6,407,101,168 | 100% |
| 1st Supervisorial District | 36,194 | 100% | 15,141 | \$24,979,542,737 | 100% |
| 2nd Supervisorial District | 19,634 | 100% | 7,529 | \$16,492,697,080 | 100% |
| 3rd Supervisorial District | 7,192 | 100% | 986 | \$2,021,097,760 | 100% |
| 4th Supervisorial District | 24,507 | 100% | 11,044 | \$29,660,322,569 | 100% |
| 5th Supervisorial District | 43,484 | 100% | 27,565 | \$50,685,118,028 | 100% |
| TOTAL | 485,459 | 100% | 173,484 | \$218,574,570,981 | 100% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.
 Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

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(3) Calculated using a Census tract level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 4.2 SP03.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Economic Impact | | | | | | |
|----------------------------|--|--|---|--------------------------------------|-------------------------------------|---|-----------------------------|
| | Structure Debris (x 1,000 Tons) (3) | Number of Displaced Households (3) | People Requiring Short-Term Shelter (3) | Value Structure in \$ Damaged (4) | Value Contents in \$ Damaged (4) | Total Value (Structure and Contents in \$) Damaged (4) | % of Total Value Damaged |
| Cloverdale | 5.57 | 1 | 1 | \$65,279,411 | \$28,257,026 | \$93,536,437 | 3.7% |
| Cotati | 14.26 | 6 | 4 | \$94,867,644 | \$43,138,923 | \$138,006,567 | 6.4% |
| Healdsburg | 28.92 | 0 | 0 | \$154,671,237 | \$71,743,254 | \$226,414,491 | 4.7% |
| Petaluma | 189.42 | 152 | 90 | \$1,282,511,409 | \$556,790,333 | \$1,839,301,742 | 9.8% |
| Rohnert Park | 70.73 | 172 | 109 | \$694,526,564 | \$273,145,514 | \$967,672,078 | 9.9% |
| Santa Rosa | 290.68 | 202 | 136 | \$1,686,884,763 | \$700,219,007 | \$2,387,103,769 | 5.4% |
| Sebastopol | 19.14 | 5 | 2 | \$80,605,692 | \$35,024,707 | \$115,630,399 | 4.3% |
| Sonoma | 4.92 | 0 | 0 | \$45,567,141 | \$19,876,361 | \$65,443,501 | 1.8% |
| Windsor | 16.20 | 8 | 5 | \$170,326,379 | \$68,042,999 | \$238,369,378 | 3.7% |
| 1st Supervisorial District | 27.58 | 4 | 3 | \$509,543,680 | \$258,475,943 | \$768,019,623 | 3.1% |
| 2nd Supervisorial District | 87.26 | 11 | 7 | \$592,919,793 | \$317,021,981 | \$909,941,774 | 5.5% |
| 3rd Supervisorial District | 14.02 | 3 | 2 | \$65,443,357 | \$30,983,244 | \$96,426,601 | 4.8% |
| 4th Supervisorial District | 38.57 | 4 | 3 | \$944,402,725 | \$540,751,038 | \$1,485,153,763 | 5.0% |
| 5th Supervisorial District | 188.45 | 15 | 8 | \$3,353,192,426 | \$1,820,447,851 | \$5,173,640,277 | 10.2% |
| TOTAL | 995.71 | 584 | 370 | \$9,740,742,221 | \$4,763,918,178 | 14,504,660,400 | 6.6% |

| Jurisdiction (5) | Estimated Exposure | | | | |
|-----------------------------------|--------------------------|----------------------|-------------------------------|---|--------------------------|
| | Estimated Population (1) | % Population Exposed | Total Number of Buildings (2) | Total Building Value (Structure and contents in \$) (2) | % of Total Value Exposed |
| Cloverdale | 9,213 | 100% | 3,158 | \$2,499,664,593 | 100% |
| Cotati | 7,533 | 100% | 2,682 | \$2,163,132,258 | 100% |
| Healdsburg | 12,089 | 100% | 4,552 | \$4,803,401,892 | 100% |
| Petaluma | 61,873 | 100% | 19,609 | \$18,679,915,783 | 100% |
| Rohnert Park | 43,069 | 100% | 11,790 | \$9,749,459,659 | 100% |
| Santa Rosa | 173,628 | 100% | 53,547 | \$44,098,486,212 | 100% |
| Sebastopol | 7,745 | 100% | 2,832 | \$2,676,395,901 | 100% |
| Sonoma | 11,050 | 100% | 4,605 | \$3,658,235,342 | 100% |
| Windsor | 28,248 | 100% | 8,444 | \$6,407,101,168 | 100% |
| 1st Supervisorial District | 36,194 | 100% | 15,141 | \$24,979,542,737 | 100% |
| 2nd Supervisorial District | 19,634 | 100% | 7,529 | \$16,492,697,080 | 100% |
| 3rd Supervisorial District | 7,192 | 100% | 986 | \$2,021,097,760 | 100% |
| 4th Supervisorial District | 24,507 | 100% | 11,044 | \$29,660,322,569 | 100% |
| 5th Supervisorial District | 43,484 | 100% | 27,565 | \$50,685,118,028 | 100% |
| TOTAL | 485,459 | 100% | 173,484 | \$218,574,570,981 | 100% |

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 Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

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(4) Calculated using an Advanced Engineering Building Model (AEBM) analysis in Hazus 4.2 SP03.

(5) Supervisorial Districts exclude the incorporated areas.

Earthquake 100-yr Probabilistic

| Jurisdiction (5) | Economic Impact | | | | | | |
|-----------------------------------|--|--|---|--------------------------------------|-------------------------------------|---|-----------------------------|
| | Structure Debris (x 1,000 Tons) (3) | Number of Displaced Households (3) | People Requiring Short-Term Shelter (3) | Value Structure in \$ Damaged (4) | Value Contents in \$ Damaged (4) | Total Value (Structure and Contents in \$) Damaged (4) | % of Total Value Damaged |
| Cloverdale | 8.54 | 4 | 3 | \$82,168,859 | \$38,644,277 | \$120,813,136 | 4.8% |
| Cotati | 7.11 | 6 | 4 | \$91,248,116 | \$45,142,948 | \$136,391,064 | 6.3% |
| Healdsburg | 26.61 | 5 | 3 | \$189,182,234 | \$95,827,814 | \$285,010,048 | 5.9% |
| Petaluma | 142.04 | 127 | 74 | \$1,068,192,713 | \$484,594,569 | \$1,552,787,282 | 8.3% |
| Rohnert Park | 50.74 | 155 | 98 | \$727,049,946 | \$292,241,881 | \$1,019,291,826 | 10.5% |
| Santa Rosa | 305.91 | 445 | 294 | \$2,396,675,918 | \$1,043,144,948 | \$3,439,820,866 | 7.8% |
| Sebastopol | 7.68 | 3 | 1 | \$55,563,516 | \$28,953,291 | \$84,516,807 | 3.2% |
| Sonoma | 10.05 | 7 | 4 | \$76,876,369 | \$37,655,594 | \$114,531,963 | 3.1% |
| Windsor | 20.66 | 24 | 15 | \$251,310,398 | \$104,378,205 | \$355,688,603 | 5.6% |
| 1st Supervisorial District | 65.17 | 47 | 28 | \$1,075,922,602 | \$569,144,411 | \$1,645,067,014 | 6.6% |
| 2nd Supervisorial District | 50.67 | 13 | 8 | \$436,893,194 | \$252,553,641 | \$689,446,835 | 4.2% |
| 3rd Supervisorial District | 15.57 | 8 | 6 | \$62,336,473 | \$34,041,626 | \$96,378,099 | 4.8% |
| 4th Supervisorial District | 60.55 | 17 | 11 | \$1,314,042,352 | \$771,444,751 | \$2,085,487,103 | 7.0% |
| 5th Supervisorial District | 65.51 | 12 | 7 | \$1,768,679,534 | \$998,200,432 | \$2,766,879,966 | 5.5% |
| TOTAL | 836.82 | 874 | 558 | \$9,596,142,225 | \$4,795,968,387 | 14,392,110,613 | 6.6% |

| Jurisdiction (7) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Es | | |
|----------------------------|--------------------------|-------------------------------|---|---|-----------------------|------------------------|-------------------------|
| | | | | | Buildings Exposed (2) | Population Exposed (3) | % of Population Exposed |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 44 | 133 | 1.4% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 219 | 615 | 8.2% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 14 | 3 | 0.0% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 261 | 271 | 0.4% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 54 | 137 | 0.3% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 130 | 283 | 0.2% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 116 | 171 | 2.2% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 43 | 86 | 0.8% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 73 | 215 | 0.8% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 251 | 421 | 1.2% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 268 | 242 | 1.2% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 95 | 502 | 7.0% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 285 | 197 | 0.8% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 2,717 | 4,493 | 10.3% |
| Total | 485,459 | 173,484 | 151,196 | \$218,574,570,981 | 4,570 | 7,768 | 1.6% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Percent of residential buildings exposed multiplied by the Estimated Population.

(4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 4.2 SP03, and adjusted to reflect the estimated population.

(6) Calculated using a user-defined (UDF) analysis in Hazus 4.2 SP03.

(7) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (7) | Estimated Building Exposure | | | |
|-----------------------------------|-----------------------------------|----------------------------------|--|--------------------------|
| | Value Structure in \$ Exposed (2) | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value Exposed |
| Cloverdale | \$14,305,167 | \$8,934,309 | \$23,239,476 | 0.9% |
| Cotati | \$96,111,845 | \$65,510,668 | \$161,622,513 | 7.5% |
| Healdsburg | \$65,936,658 | \$76,125,566 | \$142,062,224 | 3.0% |
| Petaluma | \$883,955,331 | \$903,787,136 | \$1,787,742,467 | 9.6% |
| Rohnert Park | \$150,734,068 | \$115,987,059 | \$266,721,127 | 2.7% |
| Santa Rosa | \$290,176,657 | \$282,998,998 | \$573,175,655 | 1.3% |
| Sebastopol | \$167,918,615 | \$166,382,980 | \$334,301,595 | 12.5% |
| Sonoma | \$29,772,068 | \$27,833,996 | \$57,606,064 | 1.6% |
| Windsor | \$42,129,955 | \$35,300,010 | \$77,429,966 | 1.2% |
| 1st Supervisorial District | \$489,557,483 | \$474,268,685 | \$963,826,168 | 3.9% |
| 2nd Supervisorial District | \$742,027,242 | \$730,983,665 | \$1,473,010,906 | 8.9% |
| 3rd Supervisorial District | \$122,603,934 | \$125,770,271 | \$248,374,205 | 12.3% |
| 4th Supervisorial District | \$1,059,823,134 | \$1,140,175,496 | \$2,199,998,629 | 7.4% |
| 5th Supervisorial District | \$2,127,094,669 | \$1,908,290,329 | \$4,035,384,998 | 8.0% |
| Total | \$6,282,146,827 | \$6,062,349,168 | \$12,344,495,994 | 5.6% |

| Jurisdiction (7) | Economic Impact | | | | | | | |
|----------------------------|-----------------------------|--------------------------|---|------------------------|-----------------------------------|----------------------------------|--|--------------------------|
| | Structure Debris (Tons) (4) | Displaced Population (5) | People Requiring Short-Term Shelter (5) | Buildings Impacted (6) | Value Structure in \$ Damaged (6) | Value Contents in \$ Damaged (6) | Total Value (Structure and Contents in \$) Damaged (6) | % of Total Value Damaged |
| Cloverdale | 829 | 25 | 1 | 37 | \$2,183,139 | \$3,527,398 | \$5,710,537 | 0.2% |
| Cotati | 246 | 146 | 9 | 21 | \$1,142,660 | \$1,387,160 | \$2,529,820 | 0.1% |
| Healdsburg | 6,244 | 0 | 0 | 13 | \$27,737,548 | \$30,582,300 | \$58,319,848 | 1.2% |
| Petaluma | 23,517 | 44 | 3 | 164 | \$31,818,052 | \$58,452,775 | \$90,270,827 | 0.5% |
| Rohnert Park | 1,169 | 12 | 1 | 47 | \$8,453,640 | \$5,553,814 | \$14,007,453 | 0.1% |
| Santa Rosa | 21,055 | 24 | 1 | 56 | \$81,255,363 | \$108,516,153 | \$189,771,516 | 0.4% |
| Sebastopol | 1,309 | 51 | 2 | 60 | \$12,747,300 | \$21,149,410 | \$33,896,710 | 1.3% |
| Sonoma | 122 | 10 | 1 | 11 | \$741,842 | \$3,391,473 | \$4,133,315 | 0.1% |
| Windsor | 28 | 16 | 0 | 7 | \$401,507 | \$2,388,267 | \$2,789,774 | 0.0% |
| 1st Supervisorial District | 51,261 | 41 | 1 | 152 | \$106,166,900 | \$183,478,274 | \$289,645,175 | 1.2% |
| 2nd Supervisorial District | 88,833 | 22 | 0 | 193 | \$93,382,312 | \$234,797,588 | \$328,179,899 | 2.0% |
| 3rd Supervisorial District | 1,367 | 78 | 3 | 67 | \$2,551,228 | \$12,228,816 | \$14,780,044 | 0.7% |
| 4th Supervisorial District | 173,781 | 28 | 1 | 248 | \$381,467,683 | \$570,212,620 | \$951,680,303 | 3.2% |
| 5th Supervisorial District | 287,351 | 1,188 | 61 | 2,518 | \$845,480,010 | \$1,059,721,759 | \$1,905,201,769 | 3.8% |
| Total | 657,111 | 1,684 | 85 | 3,594 | \$1,595,529,184 | \$2,295,387,807 | \$3,890,916,991 | 1.8% |

| Jurisdiction (7) | Acres of Floodplain | Number of Structures in Floodplain (2) | | | | | | | |
|----------------------------|---------------------|--|------------|------------|-------------|-----------|------------|-----------|-------------|
| | | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 128 | 42 | 2 | 0 | 0 | 0 | 0 | 0 | 44 |
| Cotati | 59 | 200 | 4 | 0 | 0 | 1 | 14 | 0 | 219 |
| Healdsburg | 113 | 1 | 2 | 5 | 5 | 0 | 0 | 1 | 14 |
| Petaluma | 1,604 | 80 | 121 | 29 | 6 | 1 | 24 | 0 | 261 |
| Rohnert Park | 105 | 36 | 11 | 0 | 4 | 0 | 3 | 0 | 54 |
| Santa Rosa | 1,241 | 82 | 19 | 0 | 3 | 0 | 26 | 0 | 130 |
| Sebastopol | 198 | 55 | 52 | 6 | 0 | 0 | 3 | 0 | 116 |
| Sonoma | 46 | 32 | 2 | 0 | 0 | 0 | 9 | 0 | 43 |
| Windsor | 394 | 61 | 4 | 0 | 3 | 0 | 5 | 0 | 73 |
| 1st Supervisorial District | 18,343 | 145 | 20 | 3 | 75 | 0 | 8 | 0 | 251 |
| 2nd Supervisorial District | 13,674 | 70 | 33 | 6 | 129 | 0 | 28 | 2 | 268 |
| 3rd Supervisorial District | 299 | 52 | 17 | 5 | 11 | 1 | 8 | 1 | 95 |
| 4th Supervisorial District | 12,322 | 53 | 13 | 20 | 180 | 0 | 19 | 0 | 285 |
| 5th Supervisorial District | 9,969 | 2,246 | 136 | 5 | 221 | 9 | 93 | 7 | 2717 |
| Total | 58,495 | 3,155 | 436 | 79 | 637 | 12 | 240 | 11 | 4570 |

| Jurisdiction (7) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Es | | |
|-----------------------------------|--------------------------|-------------------------------|---|---|-----------------------|------------------------|-------------------------|
| | | | | | Buildings Exposed (2) | Population Exposed (3) | % of Population Exposed |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 46 | 133 | 1.4% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 533 | 1,516 | 20.1% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 15 | 3 | 0.0% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 912 | 2,082 | 3.4% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 169 | 573 | 1.3% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 544 | 1,541 | 0.9% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 151 | 212 | 2.7% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 945 | 2,232 | 20.2% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 574 | 1,941 | 6.9% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 331 | 630 | 1.7% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 357 | 370 | 1.9% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 175 | 869 | 12.1% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 525 | 598 | 2.4% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 3,139 | 5,163 | 11.9% |
| Total | 485,459 | 173,484 | 151,196 | \$218,574,570,981 | 8,416 | 17,861 | 3.7% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Percent of residential buildings exposed multiplied by the Estimated Population.

(4) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 4.2 SP03.

(5) Calculated using a Census block level, general building stock (GBS) analysis in Hazus 4.2 SP03, and adjusted to reflect the estimated population.

(6) Calculated using a user-defined (UDF) analysis in Hazus 4.2 SP03.

(7) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (7) | Estimated Building Exposure | | | |
|-----------------------------------|-----------------------------------|----------------------------------|--|--------------------------|
| | Value Structure in \$ Exposed (2) | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value Exposed |
| Cloverdale | \$31,211,515 | \$25,840,656 | \$57,052,171 | 2.3% |
| Cotati | \$246,335,257 | \$177,345,038 | \$423,680,294 | 19.6% |
| Healdsburg | \$71,171,118 | \$83,977,256 | \$155,148,374 | 3.2% |
| Petaluma | \$1,528,830,217 | \$1,510,084,804 | \$3,038,915,021 | 16.3% |
| Rohnert Park | \$197,329,821 | \$140,324,347 | \$337,654,168 | 3.5% |
| Santa Rosa | \$538,423,205 | \$473,713,335 | \$1,012,136,540 | 2.3% |
| Sebastopol | \$214,806,323 | \$206,577,958 | \$421,384,281 | 15.7% |
| Sonoma | \$363,120,342 | \$232,546,848 | \$595,667,190 | 16.3% |
| Windsor | \$260,084,153 | \$214,682,138 | \$474,766,291 | 7.4% |
| 1st Supervisorial District | \$536,904,811 | \$508,213,331 | \$1,045,118,142 | 4.2% |
| 2nd Supervisorial District | \$917,141,038 | \$898,006,387 | \$1,815,147,425 | 11.0% |
| 3rd Supervisorial District | \$262,764,367 | \$257,433,437 | \$520,197,804 | 25.7% |
| 4th Supervisorial District | \$1,505,058,283 | \$1,602,649,884 | \$3,107,708,167 | 10.5% |
| 5th Supervisorial District | \$2,421,241,484 | \$2,161,731,965 | \$4,582,973,449 | 9.0% |
| Total | \$9,094,421,934 | \$8,493,127,383 | \$17,587,549,317 | 8.0% |

| Jurisdiction (7) | Economic Impact | | | | | | | |
|-----------------------------------|-----------------------------|--------------------------|---|------------------------|-----------------------------------|----------------------------------|--|--------------------------|
| | Structure Debris (Tons) (4) | Displaced Population (5) | People Requiring Short-Term Shelter (5) | Buildings Impacted (6) | Value Structure in \$ Damaged (6) | Value Contents in \$ Damaged (6) | Total Value (Structure and Contents in \$) Damaged (6) | % of Total Value Damaged |
| Cloverdale | 838 | 25 | 1 | 38 | \$2,445,691 | \$3,660,429 | \$6,106,119 | 0.2% |
| Cotati | 665 | 537 | 32 | 83 | \$4,448,746 | \$8,025,539 | \$12,474,285 | 0.6% |
| Healdsburg | 6,253 | 1 | 0 | 13 | \$28,995,807 | \$32,558,522 | \$61,554,330 | 1.3% |
| Petaluma | 47,789 | 558 | 40 | 531 | \$61,219,393 | \$98,592,564 | \$159,811,956 | 0.9% |
| Rohnert Park | 130 | 74 | 4 | 45 | \$8,752,491 | \$5,235,926 | \$13,988,417 | 0.1% |
| Santa Rosa | 23,685 | 245 | 12 | 222 | \$88,354,715 | \$127,155,086 | \$215,509,801 | 0.5% |
| Sebastopol | 1,859 | 68 | 2 | 83 | \$15,895,806 | \$29,022,401 | \$44,918,207 | 1.7% |
| Sonoma | 952 | 890 | 50 | 406 | \$9,269,943 | \$14,921,178 | \$24,191,121 | 0.7% |
| Windsor | 1,322 | 379 | 24 | 29 | \$3,076,215 | \$5,812,157 | \$8,888,372 | 0.1% |
| 1st Supervisorial District | 56,210 | 69 | 2 | 199 | \$109,777,687 | \$189,954,156 | \$299,731,843 | 1.2% |
| 2nd Supervisorial District | 100,788 | 40 | 0 | 254 | \$97,942,466 | \$252,978,633 | \$350,921,099 | 2.1% |
| 3rd Supervisorial District | 9,491 | 238 | 11 | 106 | \$7,651,725 | \$22,717,225 | \$30,368,950 | 1.5% |
| 4th Supervisorial District | 200,230 | 147 | 9 | 329 | \$429,116,682 | \$642,570,725 | \$1,071,687,408 | 3.6% |
| 5th Supervisorial District | 334,045 | 1,532 | 83 | 2,926 | \$979,240,050 | \$1,200,989,375 | \$2,180,229,425 | 4.3% |
| Total | 784,257 | 4,802 | 273 | 5,264 | \$1,846,187,418 | \$2,634,193,916 | \$4,480,381,334 | 2.0% |

| Jurisdiction (7) | Acres of Floodplain | Number of Structures in Floodplain (2) | | | | | | | |
|----------------------------|---------------------|--|------------|------------|-------------|-----------|------------|-----------|-------------|
| | | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 145 | 42 | 3 | 0 | 1 | 0 | 0 | 0 | 46 |
| Cotati | 245 | 493 | 24 | 0 | 1 | 1 | 14 | 0 | 533 |
| Healdsburg | 127 | 1 | 2 | 6 | 5 | 0 | 0 | 1 | 15 |
| Petaluma | 2,041 | 615 | 208 | 48 | 9 | 1 | 31 | 0 | 912 |
| Rohnert Park | 138 | 150 | 11 | 0 | 4 | 0 | 4 | 0 | 169 |
| Santa Rosa | 1,701 | 447 | 55 | 3 | 6 | 1 | 31 | 1 | 544 |
| Sebastopol | 225 | 68 | 73 | 6 | 0 | 0 | 4 | 0 | 151 |
| Sonoma | 329 | 830 | 93 | 1 | 1 | 5 | 13 | 2 | 945 |
| Windsor | 647 | 551 | 12 | 3 | 3 | 0 | 5 | 0 | 574 |
| 1st Supervisorial District | 18,731 | 217 | 22 | 3 | 81 | 0 | 8 | 0 | 331 |
| 2nd Supervisorial District | 14,274 | 107 | 41 | 6 | 167 | 1 | 33 | 2 | 357 |
| 3rd Supervisorial District | 528 | 90 | 49 | 9 | 16 | 1 | 9 | 1 | 175 |
| 4th Supervisorial District | 14,526 | 161 | 64 | 56 | 223 | 0 | 21 | 0 | 525 |
| 5th Supervisorial District | 10,884 | 2,581 | 177 | 7 | 246 | 10 | 110 | 8 | 3139 |
| Total | 64,542 | 6,353 | 834 | 148 | 763 | 20 | 283 | 15 | 8416 |

Flood Awareness Areas

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Flood Awareness Areas (3) | | | | | | |
|----------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|-----------------------------------|----------------------------------|--|------------------|
| | | | | | Estimated Exposure | | | | | | |
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed | Value Structure in \$ Exposed (2) | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 39 | 82 | 0.89% | 64,655,538 | 64,446,989 | 129,102,528 | 5.16% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 0 | 0 | 0.00% | 0 | 0 | 0 | 0.00% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 11 | 6 | 0.05% | 33,523,012 | 33,279,221 | 66,802,232 | 1.39% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 45 | 95 | 0.15% | 121,387,057 | 100,303,862 | 221,690,919 | 1.19% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.00% | 0 | 0 | 0 | 0.00% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 17 | 10 | 0.01% | 179,815,607 | 179,330,010 | 359,145,616 | 0.81% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 79 | 81 | 1.04% | 131,553,171 | 134,005,763 | 265,558,934 | 9.92% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 4 | 11 | 0.10% | 792,271 | 396,136 | 1,188,407 | 0.03% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 9 | 14 | 0.05% | 13,364,204 | 12,419,696 | 25,783,901 | 0.40% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 255 | 560 | 1.55% | 303,157,456 | 274,465,264 | 577,622,720 | 2.31% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 136 | 111 | 0.56% | 374,115,679 | 367,668,573 | 741,784,252 | 4.50% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 0 | 0 | 0.00% | 0 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 683 | 1,028 | 4.20% | 1,383,540,358 | 1,439,075,604 | 2,822,615,961 | 9.52% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 3,376 | 5,526 | 12.71% | 2,636,044,983 | 2,372,651,833 | 5,008,696,816 | 9.88% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 4,654 | 7,524 | 1.55% | 5,241,949,336 | 4,978,042,951 | 10,219,992,287 | 4.68% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Hazard data provided by Sonoma County

(4) Percent of residential buildings exposed multiplied by the Estimated Population.

(5) Supervisorial Districts exclude the incorporated areas.

Flood Awareness Areas

| Jurisdiction (5) | Number of Structures in Hazard Area (2) | | | | | | | |
|----------------------------|---|------------|------------|-------------|-----------|------------|-----------|--------------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 26 | 8 | 1 | 2 | 0 | 2 | 0 | 39 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 2 | 1 | 0 | 7 | 0 | 1 | 0 | 11 |
| Petaluma | 28 | 11 | 2 | 2 | 0 | 2 | 0 | 45 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 3 | 12 | 0 | 1 | 0 | 1 | 0 | 17 |
| Sebastopol | 26 | 45 | 6 | 0 | 0 | 2 | 0 | 79 |
| Sonoma | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Windsor | 4 | 2 | 0 | 2 | 0 | 1 | 0 | 9 |
| 1st Supervisorial District | 193 | 12 | 2 | 41 | 1 | 6 | 0 | 255 |
| 2nd Supervisorial District | 32 | 17 | 4 | 63 | 0 | 20 | 0 | 136 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 277 | 17 | 22 | 341 | 0 | 25 | 1 | 683 |
| 5th Supervisorial District | 2,762 | 188 | 9 | 300 | 12 | 97 | 8 | 3,376 |
| Total | 3,357 | 313 | 46 | 759 | 13 | 157 | 9 | 4,654 |

Landslide

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Lands | | |
|-----------------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed |
| | | | | | Cloverdale | 9,213 | 3,158 |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 0 | 0 | 0.0% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 0 | 0 | 0.0% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 954 | 3,193 | 5.2% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.0% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 56 | 172 | 0.1% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 0 | 0 | 0.0% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 0 | 0 | 0.0% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 0 | 0 | 0.0% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 404 | 879 | 2.4% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 210 | 421 | 2.1% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 0 | 0 | 0.0% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 199 | 282 | 1.2% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 1,348 | 1,965 | 4.5% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 3,173 | 6,919 | 1.4% |

Landslide

| Jurisdiction (5) | Landslide Susceptibility Category Very High (3) | | | |
|----------------------------|---|---|---|-----------------------------|
| | Estimated Exposure | | | |
| | <u>Value Structure in \$ Exposed (2)</u> | <u>Value Contents in \$ Exposed (2)</u> | <u>Value (Structure and contents in \$) Exposed (2)</u> | <u>% of Total Value</u> |
| Cloverdale | \$675,200 | \$337,600 | \$1,012,800 | 0.0% |
| Cotati | \$0 | \$0 | \$0 | 0.0% |
| Healdsburg | \$0 | \$0 | \$0 | 0.0% |
| Petaluma | \$429,487,331 | \$237,680,735 | \$667,168,067 | 3.6% |
| Rohnert Park | \$0 | \$0 | \$0 | 0.0% |
| Santa Rosa | \$47,360,237 | \$35,776,504 | \$83,136,741 | 0.2% |
| Sebastopol | \$0 | \$0 | \$0 | 0.0% |
| Sonoma | \$0 | \$0 | \$0 | 0.0% |
| Windsor | \$0 | \$0 | \$0 | 0.0% |
| 1st Supervisorial District | \$462,624,881 | \$389,394,708 | \$852,019,589 | 3.4% |
| 2nd Supervisorial District | \$396,620,127 | \$374,865,087 | \$771,485,214 | 4.7% |
| 3rd Supervisorial District | \$0 | \$0 | \$0 | 0.0% |
| 4th Supervisorial District | \$391,387,867 | \$382,058,026 | \$773,445,893 | 2.6% |
| 5th Supervisorial District | \$1,633,370,547 | \$1,516,697,051 | \$3,150,067,598 | 6.2% |
| Total | \$3,361,526,190 | \$2,936,809,711 | \$6,298,335,902 | 2.9% |

Landslide

| Jurisdiction (5) | Number of Structures in Category Very High (2) | | | | | | | |
|----------------------------|--|------------|------------|-------------|----------|------------|-----------|--------------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 943 | 4 | 0 | 4 | 1 | 0 | 2 | 954 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 50 | 2 | 0 | 1 | 0 | 3 | 0 | 56 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 303 | 17 | 0 | 83 | 0 | 1 | 0 | 404 |
| 2nd Supervisorial District | 122 | 3 | 2 | 79 | 0 | 4 | 0 | 210 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 76 | 6 | 0 | 114 | 0 | 3 | 0 | 199 |
| 5th Supervisorial District | 982 | 31 | 1 | 301 | 3 | 29 | 1 | 1,348 |
| Total | 2,478 | 63 | 3 | 582 | 4 | 40 | 3 | 3,173 |

Landslide

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Lan | | |
|-----------------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed |
| | | | | | Cloverdale | 9,213 | 3,158 |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 66 | 194 | 2.6% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 477 | 1,326 | 11.0% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 1,370 | 4,405 | 7.1% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 16 | 61 | 0.1% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 3,688 | 12,123 | 7.0% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 118 | 342 | 4.4% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 139 | 325 | 2.9% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 214 | 722 | 2.6% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 3,332 | 7,176 | 19.8% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 522 | 1,074 | 5.5% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 74 | 608 | 8.5% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 2,976 | 5,554 | 22.7% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 10,676 | 16,032 | 36.9% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 24,283 | 51,796 | 10.7% |

Landslide

| Jurisdiction (5) | Landslide Susceptibility Category High (3) | | | |
|----------------------------|--|---|---|-----------------------------|
| | Estimated Exposure | | | |
| | <u>Value Structure in \$ Exposed (2)</u> | <u>Value Contents in \$ Exposed (2)</u> | <u>Value (Structure and contents in \$) Exposed (2)</u> | <u>% of Total Value</u> |
| Cloverdale | \$268,731,497 | \$174,912,491 | \$443,643,988 | 17.7% |
| Cotati | \$54,467,843 | \$42,948,389 | \$97,416,231 | 4.5% |
| Healdsburg | \$248,728,578 | \$165,791,305 | \$414,519,884 | 8.6% |
| Petaluma | \$697,146,436 | \$498,183,462 | \$1,195,329,898 | 6.4% |
| Rohnert Park | \$5,015,639 | \$2,507,820 | \$7,523,459 | 0.1% |
| Santa Rosa | \$2,134,356,419 | \$1,383,144,613 | \$3,517,501,032 | 8.0% |
| Sebastopol | \$68,969,229 | \$50,557,468 | \$119,526,696 | 4.5% |
| Sonoma | \$100,337,689 | \$69,925,487 | \$170,263,176 | 4.7% |
| Windsor | \$84,796,379 | \$46,998,001 | \$131,794,380 | 2.1% |
| 1st Supervisorial District | \$4,364,597,074 | \$3,873,843,493 | \$8,238,440,567 | 33.0% |
| 2nd Supervisorial District | \$888,658,247 | \$830,322,637 | \$1,718,980,884 | 10.4% |
| 3rd Supervisorial District | \$51,850,883 | \$38,131,243 | \$89,982,126 | 4.5% |
| 4th Supervisorial District | \$5,670,078,536 | \$5,406,470,795 | \$11,076,549,330 | 37.3% |
| 5th Supervisorial District | \$12,869,009,143 | \$11,962,682,210 | \$24,831,691,353 | 49.0% |
| Total | \$27,506,743,592 | \$24,546,419,412 | \$52,053,163,004 | 23.8% |

Landslide

| Jurisdiction (5) | Number of Structures in Category High (2) | | | | | | | |
|----------------------------|---|------------|------------|--------------|-----------|------------|-----------|---------------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 586 | 14 | 0 | 10 | 1 | 4 | 0 | 615 |
| Cotati | 63 | 0 | 0 | 1 | 0 | 0 | 2 | 66 |
| Healdsburg | 444 | 18 | 4 | 8 | 2 | 1 | 0 | 477 |
| Petaluma | 1,301 | 48 | 1 | 6 | 1 | 8 | 5 | 1,370 |
| Rohnert Park | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Santa Rosa | 3,517 | 92 | 2 | 30 | 6 | 37 | 4 | 3,688 |
| Sebastopol | 110 | 6 | 0 | 1 | 0 | 1 | 0 | 118 |
| Sonoma | 121 | 6 | 0 | 6 | 1 | 5 | 0 | 139 |
| Windsor | 205 | 3 | 0 | 0 | 1 | 5 | 0 | 214 |
| 1st Supervisorial District | 2,473 | 101 | 4 | 723 | 4 | 25 | 2 | 3,332 |
| 2nd Supervisorial District | 311 | 32 | 5 | 168 | 1 | 5 | 0 | 522 |
| 3rd Supervisorial District | 63 | 0 | 0 | 11 | 0 | 0 | 0 | 74 |
| 4th Supervisorial District | 1,496 | 48 | 11 | 1,388 | 3 | 27 | 3 | 2,976 |
| 5th Supervisorial District | 8,014 | 281 | 13 | 2,178 | 27 | 149 | 14 | 10,676 |
| Total | 18,720 | 649 | 40 | 4,530 | 47 | 267 | 30 | 24,283 |

Landslide

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Landslide | | |
|-----------------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed |
| | | | | | Cloverdale | 9,213 | 3,158 |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 309 | 925 | 12.3% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 331 | 908 | 7.5% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 1,312 | 4,344 | 7.0% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.0% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 4,793 | 16,183 | 9.3% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 1,308 | 3,834 | 49.5% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 21 | 40 | 0.4% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 38 | 127 | 0.4% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 2,704 | 6,204 | 17.1% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 2,814 | 7,637 | 38.9% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 75 | 656 | 9.1% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 1,274 | 2,714 | 11.1% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 6,383 | 10,357 | 23.8% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 21,473 | 54,240 | 11.2% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Susceptibility to Deep-Seated Landslides data provided by CA Geological Survey.

(4) Percent of residential buildings exposed multiplied by the Estimated Population.

(5) Supervisorial Districts exclude the incorporated areas.

Landslide

| Jurisdiction (5) | Landslide Susceptibility Category Moderate (3) | | | |
|----------------------------|--|-------------------------------------|--|---------------------|
| | Estimated Exposure | | | |
| | Value Structure in \$ Exposed (2) | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value |
| Cloverdale | \$107,364,685 | \$96,528,716 | \$203,893,401 | 8.2% |
| Cotati | \$131,305,826 | \$79,109,383 | \$210,415,209 | 9.7% |
| Healdsburg | \$183,723,320 | \$128,760,564 | \$312,483,884 | 6.5% |
| Petaluma | \$475,720,807 | \$266,193,571 | \$741,914,379 | 4.0% |
| Rohnert Park | \$0 | \$0 | \$0 | 0.0% |
| Santa Rosa | \$2,574,738,315 | \$1,667,322,998 | \$4,242,061,313 | 9.6% |
| Sebastopol | \$581,882,733 | \$396,902,197 | \$978,784,931 | 36.6% |
| Sonoma | \$21,933,349 | \$17,987,842 | \$39,921,191 | 1.1% |
| Windsor | \$20,264,070 | \$11,523,628 | \$31,787,697 | 0.5% |
| 1st Supervisorial District | \$2,735,776,944 | \$2,243,707,099 | \$4,979,484,043 | 19.9% |
| 2nd Supervisorial District | \$2,870,876,060 | \$2,372,423,299 | \$5,243,299,360 | 31.8% |
| 3rd Supervisorial District | \$46,423,068 | \$32,789,226 | \$79,212,294 | 3.9% |
| 4th Supervisorial District | \$1,385,620,571 | \$1,208,647,192 | \$2,594,267,764 | 8.7% |
| 5th Supervisorial District | \$4,964,110,406 | \$4,070,074,016 | \$9,034,184,422 | 17.8% |
| Total | \$16,099,740,155 | \$12,591,969,732 | \$28,691,709,887 | 13.1% |

Landslide

| Jurisdiction (5) | Number of Structures in Category Moderate (2) | | | | | | | |
|----------------------------|---|------------|------------|--------------|-----------|------------|-----------|---------------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 98 | 8 | 1 | 3 | 0 | 1 | 0 | 111 |
| Cotati | 301 | 1 | 1 | 4 | 1 | 0 | 1 | 309 |
| Healdsburg | 304 | 8 | 1 | 12 | 4 | 2 | 0 | 331 |
| Petaluma | 1,283 | 18 | 0 | 4 | 1 | 6 | 0 | 1,312 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 4,695 | 46 | 3 | 25 | 8 | 13 | 3 | 4,793 |
| Sebastopol | 1,232 | 58 | 1 | 3 | 4 | 8 | 2 | 1,308 |
| Sonoma | 15 | 1 | 0 | 2 | 1 | 2 | 0 | 21 |
| Windsor | 36 | 1 | 0 | 0 | 0 | 1 | 0 | 38 |
| 1st Supervisorial District | 2,138 | 60 | 1 | 491 | 2 | 11 | 1 | 2,704 |
| 2nd Supervisorial District | 2,211 | 44 | 6 | 521 | 8 | 15 | 9 | 2,814 |
| 3rd Supervisorial District | 68 | 0 | 0 | 6 | 0 | 1 | 0 | 75 |
| 4th Supervisorial District | 731 | 22 | 3 | 507 | 2 | 8 | 1 | 1,274 |
| 5th Supervisorial District | 5,177 | 150 | 5 | 970 | 19 | 48 | 14 | 6,383 |
| Total | 18,289 | 417 | 22 | 2,548 | 50 | 116 | 31 | 21,473 |

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | | | |
|----------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 0 | 0 | 0.00% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 0 | 0 | 0.00% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 0 | 0 | 0.00% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 108 | 213 | 0.34% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.00% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 0 | 0 | 0.00% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 0 | 0 | 0.00% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 0 | 0 | 0.00% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 0 | 0 | 0.00% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 73 | 20 | 0.06% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 75 | 24 | 0.12% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 0 | 0 | 0.00% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 72 | 98 | 0.23% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 328 | 356 | 0.07% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Sea level rise - 200cm (no storm) - data provided by Our Coast Our Future (OCOF).

(4) Percent of residential buildings exposed multiplied by the Estimated Population.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Sea Level Rise 200cm No Storm (3) | | | |
|----------------------------|--|---|---|-----------------------------|
| | Estimated Exposure | | | |
| | <u>Value Structure in \$ Exposed (2)</u> | <u>Value Contents in \$ Exposed (2)</u> | <u>Value (Structure and contents in \$) Exposed (2)</u> | <u>% of Total Value</u> |
| Cloverdale | 0 | 0 | 0 | 0.00% |
| Cotati | 0 | 0 | 0 | 0.00% |
| Healdsburg | 0 | 0 | 0 | 0.00% |
| Petaluma | 264,005,056 | 232,490,418 | 496,495,474 | 2.66% |
| Rohnert Park | 0 | 0 | 0 | 0.00% |
| Santa Rosa | 0 | 0 | 0 | 0.00% |
| Sebastopol | 0 | 0 | 0 | 0.00% |
| Sonoma | 0 | 0 | 0 | 0.00% |
| Windsor | 0 | 0 | 0 | 0.00% |
| 1st Supervisorial District | 265,065,335 | 263,686,342 | 528,751,677 | 2.12% |
| 2nd Supervisorial District | 249,680,891 | 248,103,274 | 497,784,166 | 3.02% |
| 3rd Supervisorial District | 0 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 0 | 0 | 0 | 0.00% |
| 5th Supervisorial District | 92,881,743 | 88,206,768 | 181,088,511 | 0.36% |
| Total | 871,633,025 | 832,486,802 | 1,704,119,828 | 0.78% |

| Jurisdiction (5) | Number of Structures in Hazard Area (2) | | | | | | | |
|----------------------------|---|------------|------------|-------------|----------|------------|-----------|------------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 63 | 28 | 10 | 2 | 0 | 5 | 0 | 108 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 7 | 10 | | 52 | 0 | 4 | 0 | 73 |
| 2nd Supervisorial District | 7 | 8 | 2 | 57 | 0 | 1 | 0 | 75 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5th Supervisorial District | 49 | 7 | 1 | 11 | 0 | 4 | 0 | 72 |
| Total | 126 | 53 | 13 | 122 | 0 | 14 | 0 | 328 |

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | S | | |
|----------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 0 | 0 | 0.00% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 0 | 0 | 0.00% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 0 | 0 | 0.00% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 439 | 880 | 1.42% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.00% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 0 | 0 | 0.00% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 0 | 0 | 0.00% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 0 | 0 | 0.00% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 0 | 0 | 0.00% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 85 | 32 | 0.09% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 80 | 24 | 0.12% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 0 | 0 | 0.00% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 133 | 170 | 0.39% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 737 | 1,106 | 0.23% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Sea level rise - 200cm with 100-year storm - data provided by Our Coast Our Future (OCOF).

(4) Percent of residential buildings exposed multiplied by the Estimated Population.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Sea Level Rise 200cm 100-yr Storm (3) | | | |
|----------------------------|--|---|---|-----------------------------|
| | Estimated Exposure | | | |
| | <u>Value Structure in \$ Exposed (2)</u> | <u>Value Contents in \$ Exposed (2)</u> | <u>Value (Structure and contents in \$) Exposed (2)</u> | <u>% of Total Value</u> |
| Cloverdale | 0 | 0 | 0 | 0.00% |
| Cotati | 0 | 0 | 0 | 0.00% |
| Healdsburg | 0 | 0 | 0 | 0.00% |
| Petaluma | 737,089,813 | 690,352,052 | 1,427,441,865 | 7.64% |
| Rohnert Park | 0 | 0 | 0 | 0.00% |
| Santa Rosa | 0 | 0 | 0 | 0.00% |
| Sebastopol | 0 | 0 | 0 | 0.00% |
| Sonoma | 0 | 0 | 0 | 0.00% |
| Windsor | 0 | 0 | 0 | 0.00% |
| 1st Supervisorial District | 317,287,920 | 314,809,434 | 632,097,354 | 2.53% |
| 2nd Supervisorial District | 279,608,743 | 278,031,126 | 557,639,870 | 3.38% |
| 3rd Supervisorial District | 0 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 0 | 0 | 0 | 0.00% |
| 5th Supervisorial District | 153,141,665 | 151,412,009 | 304,553,674 | 0.60% |
| Total | 1,487,128,142 | 1,434,604,620 | 2,921,732,763 | 1.34% |

| Jurisdiction (5) | Number of Structures in Hazard Area (2) | | | | | | | |
|----------------------------|---|------------|------------|-------------|----------|------------|-----------|------------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 260 | 129 | 29 | 4 | 0 | 13 | 4 | 439 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 11 | 14 | 0 | 56 | 0 | 4 | 0 | 85 |
| 2nd Supervisorial District | 7 | 9 | 2 | 61 | 0 | 1 | 0 | 80 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5th Supervisorial District | 85 | 17 | 1 | 18 | 0 | 11 | 1 | 133 |
| Total | 363 | 169 | 32 | 139 | 0 | 29 | 5 | 737 |

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | | | |
|----------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 0 | 0 | 0.00% |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 0 | 0 | 0.00% |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 0 | 0 | 0.00% |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 0 | 0 | 0.00% |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.00% |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 0 | 0 | 0.00% |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 0 | 0 | 0.00% |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 0 | 0 | 0.00% |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 0 | 0 | 0.00% |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 0 | 0 | 0.00% |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 4 | 0 | 0.00% |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 0 | 0 | 0.00% |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 73 | 102 | 0.23% |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 77 | 102 | 0.02% |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Tsunami inundation zones data provided by CA Department of Conservation.

(4) Percent of residential buildings exposed multiplied by the Estimated Population.

(5) Supervisorial Districts exclude the incorporated areas.

| Jurisdiction (5) | Tsunami Zone (3) | | | |
|----------------------------|--|---|---|-----------------------------------|
| | Estimated Exposure | | | |
| | <u>Value Structure in \$</u> <u>Exposed (2)</u> | <u>Value Contents in \$</u> <u>Exposed (2)</u> | <u>Value (Structure</u> <u>and contents in \$)</u> <u>Exposed (2)</u> | <u>% of Total</u> <u>Value</u> |
| Cloverdale | 0 | 0 | 0 | 0.00% |
| Cotati | 0 | 0 | 0 | 0.00% |
| Healdsburg | 0 | 0 | 0 | 0.00% |
| Petaluma | 0 | 0 | 0 | 0.00% |
| Rohnert Park | 0 | 0 | 0 | 0.00% |
| Santa Rosa | 0 | 0 | 0 | 0.00% |
| Sebastopol | 0 | 0 | 0 | 0.00% |
| Sonoma | 0 | 0 | 0 | 0.00% |
| Windsor | 0 | 0 | 0 | 0.00% |
| 1st Supervisorial District | 0 | 0 | 0 | 0.00% |
| 2nd Supervisorial District | 8,667,759 | 9,316,564 | 17,984,323 | 0.11% |
| 3rd Supervisorial District | 0 | 0 | 0 | 0.00% |
| 4th Supervisorial District | 0 | 0 | 0 | 0.00% |
| 5th Supervisorial District | 33,226,385 | 35,393,712 | 68,620,097 | 0.14% |
| Total | 41,894,144 | 44,710,276 | 86,604,420 | 0.04% |

| Jurisdiction (5) | Number of Structures in Hazard Area (2) | | | | | | | |
|----------------------------|---|------------|------------|-------------|----------|------------|-----------|-----------|
| | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education | Total |
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2nd Supervisorial District | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 4 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5th Supervisorial District | 51 | 8 | 1 | 1 | 0 | 11 | 1 | 73 |
| Total | 51 | 9 | 2 | 2 | 0 | 12 | 1 | 77 |

Wildfire

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Wildfire - Very High Rel | | | |
|----------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|-----------------------------------|
| | | | | | Estimated Exp | | | |
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed | Value Structure in \$ Exposed (2) |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 0 | 0 | 0.0% | \$0 |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 1 | 3 | 0.0% | \$125,413 |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 0 | 0 | 0.0% | \$0 |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 0 | 0 | 0.0% | \$0 |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.0% | \$0 |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 18 | 41 | 0.0% | \$23,263,731 |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 0 | 0 | 0.0% | \$0 |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 3 | 3 | 0.0% | \$5,525,689 |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 0 | 0 | 0.0% | \$0 |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 504 | 635 | 1.8% | \$1,441,378,135 |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 12 | 17 | 0.1% | \$28,536,793 |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 0 | 0 | 0.0% | \$0 |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 278 | 238 | 1.0% | \$1,012,231,311 |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 359 | 220 | 0.5% | \$1,291,396,384 |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 1,175 | 1,158 | 0.2% | \$3,802,457,456 |

Wildfire

| Jurisdiction (5) | Relative Hazard (3) | | | Number of Structures in Very High Relative Hazard (2) | | | | | | |
|----------------------------|----------------------------------|--|------------------|---|------------|------------|-------------|----------|------------|-----------|
| | Exposure | | | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education |
| | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value | | | | | | | |
| Cloverdale | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | \$62,706 | \$188,119 | 0.0% | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rohnert Park | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | \$21,684,903 | \$44,948,634 | 0.1% | 12 | 1 | 0 | 3 | 0 | 2 | 0 |
| Sebastopol | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | \$5,416,105 | \$10,941,794 | 0.3% | 1 | 0 | 0 | 2 | 0 | 0 | 0 |
| Windsor | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | \$1,406,899,298 | \$2,848,277,432 | 11.4% | 219 | 33 | 0 | 250 | 0 | 2 | 0 |
| 2nd Supervisorial District | \$27,682,883 | \$56,219,676 | 0.3% | 5 | 1 | 0 | 6 | 0 | 0 | 0 |
| 3rd Supervisorial District | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | \$999,841,184 | \$2,012,072,496 | 6.8% | 64 | 5 | 0 | 205 | 2 | 2 | 0 |
| 5th Supervisorial District | \$1,285,285,169 | \$2,576,681,553 | 5.1% | 110 | 11 | 2 | 229 | 1 | 5 | 1 |
| Total | \$3,746,872,248 | \$7,549,329,704 | 3.5% | 412 | 51 | 2 | 695 | 3 | 11 | 1 |

Wildfire

| Jurisdiction (5) | |
|----------------------------|--------------|
| | Total |
| Cloverdale | 0 |
| Cotati | 1 |
| Healdsburg | 0 |
| Petaluma | 0 |
| Rohnert Park | 0 |
| Santa Rosa | 18 |
| Sebastopol | 0 |
| Sonoma | 3 |
| Windsor | 0 |
| 1st Supervisorial District | 504 |
| 2nd Supervisorial District | 12 |
| 3rd Supervisorial District | 0 |
| 4th Supervisorial District | 278 |
| 5th Supervisorial District | 359 |
| Total | 1,175 |

Wildfire

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Wildfire - High Relative | | | |
|-----------------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|-----------------------------------|
| | | | | | Estimated Exposed | | | |
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed | Value Structure in \$ Exposed (2) |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 26 | 66 | 0.7% | \$33,322,165 |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 8 | 22 | 0.3% | \$2,692,664 |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 20 | 48 | 0.4% | \$21,390,895 |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 28 | 68 | 0.1% | \$97,424,188 |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 0 | 0 | 0.0% | \$0 |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 354 | 1,106 | 0.6% | \$241,082,248 |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 13 | 40 | 0.5% | \$3,494,923 |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 54 | 126 | 1.1% | \$36,035,283 |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 11 | 32 | 0.1% | \$12,813,103 |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 1,666 | 3,520 | 9.7% | \$2,304,080,769 |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 127 | 259 | 1.3% | \$218,852,782 |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 16 | 106 | 1.5% | \$20,885,839 |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 831 | 1,240 | 5.1% | \$2,219,788,994 |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 1,644 | 1,734 | 4.0% | \$3,846,977,512 |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 4,798 | 8,368 | 1.7% | \$9,058,841,363 |

Wildfire

| Jurisdiction (5) | Relative Hazard (3) | | | Number of Structures in High Relative Hazard (2) | | | | | | |
|----------------------------|----------------------------------|--|------------------|--|------------|------------|--------------|-----------|------------|-----------|
| | Exposure | | | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education |
| | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value | | | | | | | |
| Cloverdale | \$31,013,567 | \$64,335,733 | 2.6% | 21 | 2 | 0 | 2 | 0 | 1 | 0 |
| Cotati | \$1,497,536 | \$4,190,200 | 0.2% | 7 | 0 | 0 | 1 | 0 | 0 | 0 |
| Healdsburg | \$18,588,752 | \$39,979,647 | 0.8% | 16 | 0 | 0 | 4 | 0 | 0 | 0 |
| Petaluma | \$94,268,053 | \$191,692,241 | 1.0% | 20 | 2 | 0 | 1 | 0 | 3 | 2 |
| Rohnert Park | \$0 | \$0 | 0.0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | \$195,205,102 | \$436,287,350 | 1.0% | 321 | 14 | 0 | 6 | 0 | 13 | 0 |
| Sebastopol | \$1,747,461 | \$5,242,384 | 0.2% | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | \$29,126,092 | \$65,161,375 | 1.8% | 47 | 0 | 0 | 3 | 1 | 3 | 0 |
| Windsor | \$11,641,011 | \$24,454,114 | 0.4% | 9 | 0 | 0 | 2 | 0 | 0 | 0 |
| 1st Supervisorial District | \$2,088,708,180 | \$4,392,788,949 | 17.6% | 1,213 | 53 | 2 | 383 | 1 | 14 | 0 |
| 2nd Supervisorial District | \$205,505,416 | \$424,358,198 | 2.6% | 75 | 1 | 0 | 46 | 1 | 4 | 0 |
| 3rd Supervisorial District | \$18,558,241 | \$39,444,080 | 2.0% | 11 | 0 | 0 | 3 | 0 | 2 | 0 |
| 4th Supervisorial District | \$2,171,397,397 | \$4,391,186,391 | 14.8% | 334 | 13 | 4 | 467 | 4 | 9 | 0 |
| 5th Supervisorial District | \$3,746,343,631 | \$7,593,321,142 | 15.0% | 867 | 45 | 4 | 699 | 5 | 23 | 1 |
| Total | \$8,613,600,440 | \$17,672,441,803 | 8.1% | 2,954 | 130 | 10 | 1,617 | 12 | 72 | 3 |

Wildfire

| Jurisdiction (5) | |
|----------------------------|--------------|
| | Total |
| Cloverdale | 26 |
| Cotati | 8 |
| Healdsburg | 20 |
| Petaluma | 28 |
| Rohnert Park | 0 |
| Santa Rosa | 354 |
| Sebastopol | 13 |
| Sonoma | 54 |
| Windsor | 11 |
| 1st Supervisorial District | 1,666 |
| 2nd Supervisorial District | 127 |
| 3rd Supervisorial District | 16 |
| 4th Supervisorial District | 831 |
| 5th Supervisorial District | 1,644 |
| Total | 4,798 |

| Jurisdiction (5) | Estimated Population (1) | Total Number of Buildings (2) | Total Number of Residential Buildings (2) | Total Building Value (Structure and contents in \$) (2) | Wildfire - Moderate Rel | | | |
|----------------------------|--------------------------|-------------------------------|---|---|---------------------------------|------------------------|-------------------------|-----------------------------------|
| | | | | | Estimated Exp | | | |
| | | | | | Estimated Buildings Exposed (2) | Population Exposed (4) | % of Population Exposed | Value Structure in \$ Exposed (2) |
| Cloverdale | 9,213 | 3,158 | 2,914 | \$2,499,664,593 | 117 | 338 | 3.7% | \$62,405,333 |
| Cotati | 7,533 | 2,682 | 2,450 | \$2,163,132,258 | 359 | 1,048 | 13.9% | \$137,063,621 |
| Healdsburg | 12,089 | 4,552 | 4,047 | \$4,803,401,892 | 264 | 696 | 5.8% | \$136,877,365 |
| Petaluma | 61,873 | 19,609 | 18,275 | \$18,679,915,783 | 1,396 | 4,506 | 7.3% | \$655,813,939 |
| Rohnert Park | 43,069 | 11,790 | 11,284 | \$9,749,459,659 | 433 | 1,622 | 3.8% | \$154,132,790 |
| Santa Rosa | 173,628 | 53,547 | 50,372 | \$44,098,486,212 | 6,624 | 21,960 | 12.6% | \$2,817,112,382 |
| Sebastopol | 7,745 | 2,832 | 2,489 | \$2,676,395,901 | 390 | 1,154 | 14.9% | \$171,287,057 |
| Sonoma | 11,050 | 4,605 | 4,109 | \$3,658,235,342 | 1,405 | 3,579 | 32.4% | \$474,702,889 |
| Windsor | 28,248 | 8,444 | 8,017 | \$6,407,101,168 | 743 | 2,509 | 8.9% | \$280,415,475 |
| 1st Supervisorial District | 36,194 | 15,141 | 12,473 | \$24,979,542,737 | 5,668 | 14,100 | 39.0% | \$4,231,435,846 |
| 2nd Supervisorial District | 19,634 | 7,529 | 5,684 | \$16,492,697,080 | 1,120 | 2,580 | 13.1% | \$1,670,041,905 |
| 3rd Supervisorial District | 7,192 | 986 | 745 | \$2,021,097,760 | 109 | 772 | 10.7% | \$147,740,719 |
| 4th Supervisorial District | 24,507 | 11,044 | 6,601 | \$29,660,322,569 | 2,394 | 5,829 | 23.8% | \$2,925,881,264 |
| 5th Supervisorial District | 43,484 | 27,565 | 21,736 | \$50,685,118,028 | 5,223 | 7,670 | 17.6% | \$6,278,814,926 |
| Total | 485,459 | 173,484 | 151,196 | 218,574,570,981 | 26,245 | 68,365 | 14.1% | \$20,143,725,511 |

(1) Incorporated Areas: 2020 population from State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Census Benchmark. Sacramento, California, May 2020.

Supervisorial Districts: Growth rate of -4.7% applied to 2010 Census population for each district. Growth rate determined from change in population (in the unincorporated county) from 2010 to 2020 as indicated in E-4 Population Estimates document.

(2) Values based off of 2020 tax assessor data provided by Sonoma County.

(3) Wildfire hazard data provided by Sonoma County.

(4) Percent of residential buildings exposed multiplied by the Estimated Population.

(5) Supervisorial Districts exclude the incorporated areas.

Wildfire

| Jurisdiction (5) | Relative Hazard (3) | | | Number of Structures in Moderate Relative Hazard (2) | | | | | | |
|----------------------------|----------------------------------|--|------------------|--|------------|------------|--------------|-----------|------------|-----------|
| | Exposure | | | Residential | Commercial | Industrial | Agriculture | Religion | Government | Education |
| | Value Contents in \$ Exposed (2) | Value (Structure and contents in \$) Exposed (2) | % of Total Value | | | | | | | |
| Cloverdale | \$48,774,799 | \$111,180,132 | 4.4% | 107 | 3 | 0 | 6 | 0 | 1 | 0 |
| Cotati | \$93,336,857 | \$230,400,478 | 10.7% | 341 | 6 | 0 | 3 | 0 | 8 | 1 |
| Healdsburg | \$105,930,387 | \$242,807,753 | 5.1% | 233 | 13 | 3 | 12 | 0 | 2 | 1 |
| Petaluma | \$470,400,034 | \$1,126,213,972 | 6.0% | 1,331 | 29 | 4 | 13 | 0 | 19 | 0 |
| Rohnert Park | \$97,874,655 | \$252,007,446 | 2.6% | 425 | 7 | 0 | 0 | 0 | 1 | 0 |
| Santa Rosa | \$1,759,187,049 | \$4,576,299,431 | 10.4% | 6,371 | 103 | 1 | 41 | 6 | 92 | 10 |
| Sebastopol | \$109,507,390 | \$280,794,447 | 10.5% | 371 | 14 | 0 | 2 | 0 | 3 | 0 |
| Sonoma | \$277,313,129 | \$752,016,018 | 20.6% | 1,331 | 42 | 1 | 4 | 6 | 20 | 1 |
| Windsor | \$169,051,423 | \$449,466,898 | 7.0% | 712 | 12 | 1 | 6 | 1 | 10 | 1 |
| 1st Supervisorial District | \$3,373,212,645 | \$7,604,648,491 | 30.4% | 4,859 | 112 | 13 | 644 | 5 | 33 | 2 |
| 2nd Supervisorial District | \$1,516,171,162 | \$3,186,213,067 | 19.3% | 747 | 34 | 5 | 319 | 3 | 11 | 1 |
| 3rd Supervisorial District | \$133,298,703 | \$281,039,422 | 13.9% | 80 | 3 | 1 | 23 | 0 | 1 | 1 |
| 4th Supervisorial District | \$2,692,511,422 | \$5,618,392,686 | 18.9% | 1,570 | 53 | 9 | 738 | 2 | 21 | 1 |
| 5th Supervisorial District | \$5,798,996,731 | \$12,077,811,657 | 23.8% | 3,834 | 111 | 4 | 1,197 | 14 | 61 | 2 |
| Total | \$16,645,566,386 | \$36,789,291,897 | 16.8% | 22,312 | 542 | 42 | 3,008 | 37 | 283 | 21 |

Wildfire

| Jurisdiction (5) | |
|----------------------------|---------------|
| | Total |
| Cloverdale | 117 |
| Cotati | 359 |
| Healdsburg | 264 |
| Petaluma | 1,396 |
| Rohnert Park | 433 |
| Santa Rosa | 6,624 |
| Sebastopol | 390 |
| Sonoma | 1,405 |
| Windsor | 743 |
| 1st Supervisorial District | 5,668 |
| 2nd Supervisorial District | 1,120 |
| 3rd Supervisorial District | 109 |
| 4th Supervisorial District | 2,394 |
| 5th Supervisorial District | 5,223 |
| Total | 26,245 |

**RISK RATING RESULTS BY
JURISDICTION**

| RI | | | | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| Probability | | Impact on People | | | | |
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 0.00% | None | 0 | 0 |
| Cotati | Medium | 2 | 0.04% | Low | 1 | 3 |
| Healdsburg | Medium | 2 | 87.74% | High | 3 | 9 |
| Petaluma | Medium | 2 | 0.00% | None | 0 | 0 |
| Rohnert Park | Medium | 2 | 0.22% | Low | 1 | 3 |
| Santa Rosa | Medium | 2 | 17.66% | Medium | 2 | 6 |
| Sebastopol | Medium | 2 | 5.75% | Low | 1 | 3 |
| Sonoma | Medium | 2 | 0.00% | None | 0 | 0 |
| Windsor | Medium | 2 | 56.49% | High | 3 | 9 |
| 1st Supervisorial District | Medium | 2 | 1.08% | Low | 1 | 3 |
| 2nd Supervisorial District | Medium | 2 | 4.31% | Low | 1 | 3 |
| 3rd Supervisorial District | Medium | 2 | 0.81% | Low | 1 | 3 |
| 4th Supervisorial District | Medium | 2 | 16.07% | Medium | 2 | 6 |
| 5th Supervisorial District | Medium | 2 | 22.88% | Medium | 2 | 6 |
| Total | Medium | 2 | 15.03% | Medium | 2 | 6 |

SK RANKING-Combined Dam Failure Inundation Areas

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 0.00% | None | 0 | 0 |
| Cotati | 6.58% | Low | 1 | 2 |
| Healdsburg | 90.26% | High | 3 | 6 |
| Petaluma | 0.00% | None | 0 | 0 |
| Rohnert Park | 10.76% | Medium | 2 | 4 |
| Santa Rosa | 27.48% | High | 3 | 6 |
| Sebastopol | 28.63% | High | 3 | 6 |
| Sonoma | 0.00% | None | 0 | 0 |
| Windsor | 44.52% | High | 3 | 6 |
| 1st Supervisorial District | 0.86% | Low | 1 | 2 |
| 2nd Supervisorial District | 10.09% | Medium | 2 | 4 |
| 3rd Supervisorial District | 6.14% | Low | 1 | 2 |
| 4th Supervisorial District | 19.10% | Medium | 2 | 4 |
| 5th Supervisorial District | 16.40% | Medium | 2 | 4 |
| Total | 17.04% | Medium | 2 | 4 |

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 0.00% | None | 0 | 0 | 0 | Low |
| Cotati | 0.18% | Low | 1 | 1 | 12 | Low |
| Healdsburg | 70.42% | High | 3 | 3 | 36 | High |
| Petaluma | 0.00% | None | 0 | 0 | 0 | Low |
| Rohnert Park | 0.78% | Low | 1 | 1 | 16 | Medium |
| Santa Rosa | 3.74% | Low | 1 | 1 | 26 | Medium |
| Sebastopol | 18.08% | High | 3 | 3 | 24 | Medium |
| Sonoma | 0.00% | None | 0 | 0 | 0 | Low |
| Windsor | 11.97% | High | 3 | 3 | 36 | High |
| 1st Supervisorial District | 0.11% | Low | 1 | 1 | 12 | Low |
| 2nd Supervisorial District | 2.49% | Low | 1 | 1 | 16 | Medium |
| 3rd Supervisorial District | 0.32% | Low | 1 | 1 | 12 | Low |
| 4th Supervisorial District | 13.64% | High | 3 | 3 | 26 | Medium |
| 5th Supervisorial District | 9.11% | Medium | 2 | 2 | 24 | Medium |
| Total | 7.08% | Medium | 2 | 2 | 24 | Medium |

| | Probability | | Impact on People | | | |
|-----------------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 100.00% | High | 3 | 9 |
| Cotati | Medium | 2 | 100.00% | High | 3 | 9 |
| Healdsburg | Medium | 2 | 100.00% | High | 3 | 9 |
| Petaluma | Medium | 2 | 100.00% | High | 3 | 9 |
| Rohnert Park | Medium | 2 | 100.00% | High | 3 | 9 |
| Santa Rosa | Medium | 2 | 100.00% | High | 3 | 9 |
| Sebastopol | Medium | 2 | 100.00% | High | 3 | 9 |
| Sonoma | Medium | 2 | 100.00% | High | 3 | 9 |
| Windsor | Medium | 2 | 100.00% | High | 3 | 9 |
| 1st Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 2nd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 3rd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 4th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 5th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| TOTAL | Medium | 2 | 100.00% | High | 3 | 9 |

RISK RANKING

| Impact on Property | | | | |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | 100.00% | High | 3 | 6 |
| Cotati | 100.00% | High | 3 | 6 |
| Healdsburg | 100.00% | High | 3 | 6 |
| Petaluma | 100.00% | High | 3 | 6 |
| Rohnert Park | 100.00% | High | 3 | 6 |
| Santa Rosa | 100.00% | High | 3 | 6 |
| Sebastopol | 100.00% | High | 3 | 6 |
| Sonoma | 100.00% | High | 3 | 6 |
| Windsor | 100.00% | High | 3 | 6 |
| 1st Supervisorial District | 100.00% | High | 3 | 6 |
| 2nd Supervisorial District | 100.00% | High | 3 | 6 |
| 3rd Supervisorial District | 100.00% | High | 3 | 6 |
| 4th Supervisorial District | 100.00% | High | 3 | 6 |
| 5th Supervisorial District | 100.00% | High | 3 | 6 |
| TOTAL | 100.00% | High | 3 | 6 |

Earthquake Hayward M7.57

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 21.77% | High | 3 | 3 | 36 | High |
| Cotati | 13.75% | High | 3 | 3 | 36 | High |
| Healdsburg | 22.93% | High | 3 | 3 | 36 | High |
| Petaluma | 16.24% | High | 3 | 3 | 36 | High |
| Rohnert Park | 17.03% | High | 3 | 3 | 36 | High |
| Santa Rosa | 21.30% | High | 3 | 3 | 36 | High |
| Sebastopol | 6.41% | Medium | 2 | 2 | 34 | High |
| Sonoma | 12.31% | High | 3 | 3 | 36 | High |
| Windsor | 14.62% | High | 3 | 3 | 36 | High |
| 1st Supervisorial District | 13.50% | High | 3 | 3 | 36 | High |
| 2nd Supervisorial District | 10.46% | High | 3 | 3 | 36 | High |
| 3rd Supervisorial District | 20.32% | High | 3 | 3 | 36 | High |
| 4th Supervisorial District | 14.49% | High | 3 | 3 | 36 | High |
| 5th Supervisorial District | 7.65% | Medium | 2 | 2 | 34 | High |
| TOTAL | 14.31% | High | 3 | 3 | 36 | High |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 100.00% | High | 3 | 9 |
| Cotati | Medium | 2 | 100.00% | High | 3 | 9 |
| Healdsburg | Medium | 2 | 100.00% | High | 3 | 9 |
| Petaluma | Medium | 2 | 100.00% | High | 3 | 9 |
| Rohnert Park | Medium | 2 | 100.00% | High | 3 | 9 |
| Santa Rosa | Medium | 2 | 100.00% | High | 3 | 9 |
| Sebastopol | Medium | 2 | 100.00% | High | 3 | 9 |
| Sonoma | Medium | 2 | 100.00% | High | 3 | 9 |
| Windsor | Medium | 2 | 100.00% | High | 3 | 9 |
| 1st Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 2nd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 3rd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 4th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 5th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| TOTAL | Medium | 2 | 100.00% | High | 3 | 9 |

| Impact on Property | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|
| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | 100.00% | High | 3 | 6 |
| Cotati | 100.00% | High | 3 | 6 |
| Healdsburg | 100.00% | High | 3 | 6 |
| Petaluma | 100.00% | High | 3 | 6 |
| Rohnert Park | 100.00% | High | 3 | 6 |
| Santa Rosa | 100.00% | High | 3 | 6 |
| Sebastopol | 100.00% | High | 3 | 6 |
| Sonoma | 100.00% | High | 3 | 6 |
| Windsor | 100.00% | High | 3 | 6 |
| 1st Supervisorial District | 100.00% | High | 3 | 6 |
| 2nd Supervisorial District | 100.00% | High | 3 | 6 |
| 3rd Supervisorial District | 100.00% | High | 3 | 6 |
| 4th Supervisorial District | 100.00% | High | 3 | 6 |
| 5th Supervisorial District | 100.00% | High | 3 | 6 |
| TOTAL | 100.00% | High | 3 | 6 |

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 17.26% | High | 3 | 3 | 36 | High |
| Cotati | 5.85% | Medium | 2 | 2 | 34 | High |
| Healdsburg | 14.58% | High | 3 | 3 | 36 | High |
| Petaluma | 4.99% | Low | 1 | 1 | 32 | Medium |
| Rohnert Park | 10.36% | High | 3 | 3 | 36 | High |
| Santa Rosa | 14.40% | High | 3 | 3 | 36 | High |
| Sebastopol | 3.31% | Low | 1 | 1 | 32 | Medium |
| Sonoma | 1.64% | Low | 1 | 1 | 32 | Medium |
| Windsor | 9.70% | Medium | 2 | 2 | 34 | High |
| 1st Supervisorial District | 6.52% | Medium | 2 | 2 | 34 | High |
| 2nd Supervisorial District | 3.25% | Low | 1 | 1 | 32 | Medium |
| 3rd Supervisorial District | 8.98% | Medium | 2 | 2 | 34 | High |
| 4th Supervisorial District | 12.12% | High | 3 | 3 | 36 | High |
| 5th Supervisorial District | 4.49% | Low | 1 | 1 | 32 | Medium |
| TOTAL | 8.48% | Medium | 2 | 2 | 34 | High |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 100.00% | High | 3 | 9 |
| Cotati | Medium | 2 | 100.00% | High | 3 | 9 |
| Healdsburg | Medium | 2 | 100.00% | High | 3 | 9 |
| Petaluma | Medium | 2 | 100.00% | High | 3 | 9 |
| Rohnert Park | Medium | 2 | 100.00% | High | 3 | 9 |
| Santa Rosa | Medium | 2 | 100.00% | High | 3 | 9 |
| Sebastopol | Medium | 2 | 100.00% | High | 3 | 9 |
| Sonoma | Medium | 2 | 100.00% | High | 3 | 9 |
| Windsor | Medium | 2 | 100.00% | High | 3 | 9 |
| 1st Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 2nd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 3rd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 4th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 5th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| TOTAL | Medium | 2 | 100.00% | High | 3 | 9 |

| Impact on Property | | | | |
|----------------------------|--------------------------|----------------------------------|---------------|------------------------|
| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | 100.00% | High | 3 | 6 |
| Cotati | 100.00% | High | 3 | 6 |
| Healdsburg | 100.00% | High | 3 | 6 |
| Petaluma | 100.00% | High | 3 | 6 |
| Rohnert Park | 100.00% | High | 3 | 6 |
| Santa Rosa | 100.00% | High | 3 | 6 |
| Sebastopol | 100.00% | High | 3 | 6 |
| Sonoma | 100.00% | High | 3 | 6 |
| Windsor | 100.00% | High | 3 | 6 |
| 1st Supervisorial District | 100.00% | High | 3 | 6 |
| 2nd Supervisorial District | 100.00% | High | 3 | 6 |
| 3rd Supervisorial District | 100.00% | High | 3 | 6 |
| 4th Supervisorial District | 100.00% | High | 3 | 6 |
| 5th Supervisorial District | 100.00% | High | 3 | 6 |
| TOTAL | 100.00% | High | 3 | 6 |

| Impact on Economy | | | | | | |
|----------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------|--------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 14.98% | High | 3 | 3 | 36 | High |
| Cotati | 9.83% | Medium | 2 | 2 | 34 | High |
| Healdsburg | 17.19% | High | 3 | 3 | 36 | High |
| Petaluma | 12.62% | High | 3 | 3 | 36 | High |
| Rohnert Park | 13.86% | High | 3 | 3 | 36 | High |
| Santa Rosa | 16.66% | High | 3 | 3 | 36 | High |
| Sebastopol | 4.07% | Low | 1 | 1 | 32 | Medium |
| Sonoma | 9.05% | Medium | 2 | 2 | 34 | High |
| Windsor | 11.50% | High | 3 | 3 | 36 | High |
| 1st Supervisorial District | 11.44% | High | 3 | 3 | 36 | High |
| 2nd Supervisorial District | 7.68% | Medium | 2 | 2 | 34 | High |
| 3rd Supervisorial District | 13.83% | High | 3 | 3 | 36 | High |
| 4th Supervisorial District | 12.26% | High | 3 | 3 | 36 | High |
| 5th Supervisorial District | 5.45% | Medium | 2 | 2 | 34 | High |
| TOTAL | 11.19% | High | 3 | 3 | 36 | High |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 100.00% | High | 3 | 9 |
| Cotati | Medium | 2 | 100.00% | High | 3 | 9 |
| Healdsburg | Medium | 2 | 100.00% | High | 3 | 9 |
| Petaluma | Medium | 2 | 100.00% | High | 3 | 9 |
| Rohnert Park | Medium | 2 | 100.00% | High | 3 | 9 |
| Santa Rosa | Medium | 2 | 100.00% | High | 3 | 9 |
| Sebastopol | Medium | 2 | 100.00% | High | 3 | 9 |
| Sonoma | Medium | 2 | 100.00% | High | 3 | 9 |
| Windsor | Medium | 2 | 100.00% | High | 3 | 9 |
| 1st Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 2nd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 3rd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 4th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 5th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| TOTAL | Medium | 2 | 100.00% | High | 3 | 9 |

RISK RANKING-Earth

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 100.00% | High | 3 | 6 |
| Cotati | 100.00% | High | 3 | 6 |
| Healdsburg | 100.00% | High | 3 | 6 |
| Petaluma | 100.00% | High | 3 | 6 |
| Rohnert Park | 100.00% | High | 3 | 6 |
| Santa Rosa | 100.00% | High | 3 | 6 |
| Sebastopol | 100.00% | High | 3 | 6 |
| Sonoma | 100.00% | High | 3 | 6 |
| Windsor | 100.00% | High | 3 | 6 |
| 1st Supervisorial District | 100.00% | High | 3 | 6 |
| 2nd Supervisorial District | 100.00% | High | 3 | 6 |
| 3rd Supervisorial District | 100.00% | High | 3 | 6 |
| 4th Supervisorial District | 100.00% | High | 3 | 6 |
| 5th Supervisorial District | 100.00% | High | 3 | 6 |
| TOTAL | 100.00% | High | 3 | 6 |

quake San Andreas M8.04

| Impact on Economy | | | | | | |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 3.74% | Low | 1 | 1 | 32 | Medium |
| Cotati | 6.38% | Medium | 2 | 2 | 34 | High |
| Healdsburg | 4.71% | Low | 1 | 1 | 32 | Medium |
| Petaluma | 9.85% | Medium | 2 | 2 | 34 | High |
| Rohnert Park | 9.93% | Medium | 2 | 2 | 34 | High |
| Santa Rosa | 5.41% | Medium | 2 | 2 | 34 | High |
| Sebastopol | 4.32% | Low | 1 | 1 | 32 | Medium |
| Sonoma | 1.79% | Low | 1 | 1 | 32 | Medium |
| Windsor | 3.72% | Low | 1 | 1 | 32 | Medium |
| 1st Supervisorial District | 3.07% | Low | 1 | 1 | 32 | Medium |
| 2nd Supervisorial District | 5.52% | Medium | 2 | 2 | 34 | High |
| 3rd Supervisorial District | 4.77% | Low | 1 | 1 | 32 | Medium |
| 4th Supervisorial District | 5.01% | Medium | 2 | 2 | 34 | High |
| 5th Supervisorial District | 10.21% | High | 3 | 3 | 36 | High |
| TOTAL | 6.64% | Medium | 2 | 2 | 34 | High |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 100.00% | High | 3 | 9 |
| Cotati | Medium | 2 | 100.00% | High | 3 | 9 |
| Healdsburg | Medium | 2 | 100.00% | High | 3 | 9 |
| Petaluma | Medium | 2 | 100.00% | High | 3 | 9 |
| Rohnert Park | Medium | 2 | 100.00% | High | 3 | 9 |
| Santa Rosa | Medium | 2 | 100.00% | High | 3 | 9 |
| Sebastopol | Medium | 2 | 100.00% | High | 3 | 9 |
| Sonoma | Medium | 2 | 100.00% | High | 3 | 9 |
| Windsor | Medium | 2 | 100.00% | High | 3 | 9 |
| 1st Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 2nd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 3rd Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 4th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| 5th Supervisorial District | Medium | 2 | 100.00% | High | 3 | 9 |
| TOTAL | Medium | 2 | 100.00% | High | 3 | 9 |

RISK RANKING-Earth

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 100.00% | High | 3 | 6 |
| Cotati | 100.00% | High | 3 | 6 |
| Healdsburg | 100.00% | High | 3 | 6 |
| Petaluma | 100.00% | High | 3 | 6 |
| Rohnert Park | 100.00% | High | 3 | 6 |
| Santa Rosa | 100.00% | High | 3 | 6 |
| Sebastopol | 100.00% | High | 3 | 6 |
| Sonoma | 100.00% | High | 3 | 6 |
| Windsor | 100.00% | High | 3 | 6 |
| 1st Supervisorial District | 100.00% | High | 3 | 6 |
| 2nd Supervisorial District | 100.00% | High | 3 | 6 |
| 3rd Supervisorial District | 100.00% | High | 3 | 6 |
| 4th Supervisorial District | 100.00% | High | 3 | 6 |
| 5th Supervisorial District | 100.00% | High | 3 | 6 |
| TOTAL | 100.00% | High | 3 | 6 |

quake 100-yr Probabilistic

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 4.83% | Low | 1 | 1 | 32 | Medium |
| Cotati | 6.31% | Medium | 2 | 2 | 34 | High |
| Healdsburg | 5.93% | Medium | 2 | 2 | 34 | High |
| Petaluma | 8.31% | Medium | 2 | 2 | 34 | High |
| Rohnert Park | 10.45% | High | 3 | 3 | 36 | High |
| Santa Rosa | 7.80% | Medium | 2 | 2 | 34 | High |
| Sebastopol | 3.16% | Low | 1 | 1 | 32 | Medium |
| Sonoma | 3.13% | Low | 1 | 1 | 32 | Medium |
| Windsor | 5.55% | Medium | 2 | 2 | 34 | High |
| 1st Supervisorial District | 6.59% | Medium | 2 | 2 | 34 | High |
| 2nd Supervisorial District | 4.18% | Low | 1 | 1 | 32 | Medium |
| 3rd Supervisorial District | 4.77% | Low | 1 | 1 | 32 | Medium |
| 4th Supervisorial District | 7.03% | Medium | 2 | 2 | 34 | High |
| 5th Supervisorial District | 5.46% | Medium | 2 | 2 | 34 | High |
| TOTAL | 6.58% | Medium | 2 | 2 | 34 | High |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | High | 3 | 1.44% | Low | 1 | 3 |
| Cotati | High | 3 | 8.16% | Low | 1 | 3 |
| Healdsburg | High | 3 | 0.02% | Low | 1 | 3 |
| Petaluma | High | 3 | 0.44% | Low | 1 | 3 |
| Rohnert Park | High | 3 | 0.32% | Low | 1 | 3 |
| Santa Rosa | High | 3 | 0.16% | Low | 1 | 3 |
| Sebastopol | High | 3 | 2.21% | Low | 1 | 3 |
| Sonoma | High | 3 | 0.78% | Low | 1 | 3 |
| Windsor | High | 3 | 0.76% | Low | 1 | 3 |
| 1st Supervisorial District | High | 3 | 1.16% | Low | 1 | 3 |
| 2nd Supervisorial District | High | 3 | 1.23% | Low | 1 | 3 |
| 3rd Supervisorial District | High | 3 | 6.98% | Low | 1 | 3 |
| 4th Supervisorial District | High | 3 | 0.80% | Low | 1 | 3 |
| 5th Supervisorial District | High | 3 | 10.33% | Medium | 2 | 6 |
| Total | High | 3 | 1.60% | Low | 1 | 3 |

RISK RANKING-100-yr Flood

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 0.93% | Low | 1 | 2 |
| Cotati | 7.47% | Low | 1 | 2 |
| Healdsburg | 2.96% | Low | 1 | 2 |
| Petaluma | 9.57% | Low | 1 | 2 |
| Rohnert Park | 2.74% | Low | 1 | 2 |
| Santa Rosa | 1.30% | Low | 1 | 2 |
| Sebastopol | 12.49% | Medium | 2 | 4 |
| Sonoma | 1.57% | Low | 1 | 2 |
| Windsor | 1.21% | Low | 1 | 2 |
| 1st Supervisorial District | 3.86% | Low | 1 | 2 |
| 2nd Supervisorial District | 8.93% | Low | 1 | 2 |
| 3rd Supervisorial District | 12.29% | Medium | 2 | 4 |
| 4th Supervisorial District | 7.42% | Low | 1 | 2 |
| 5th Supervisorial District | 7.96% | Low | 1 | 2 |
| Total | 5.65% | Low | 1 | 2 |

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 0.23% | Low | 1 | 1 | 18 | Medium |
| Cotati | 0.12% | Low | 1 | 1 | 18 | Medium |
| Healdsburg | 1.21% | Low | 1 | 1 | 18 | Medium |
| Petaluma | 0.48% | Low | 1 | 1 | 18 | Medium |
| Rohnert Park | 0.14% | Low | 1 | 1 | 18 | Medium |
| Santa Rosa | 0.43% | Low | 1 | 1 | 18 | Medium |
| Sebastopol | 1.27% | Low | 1 | 1 | 24 | Medium |
| Sonoma | 0.11% | Low | 1 | 1 | 18 | Medium |
| Windsor | 0.04% | Low | 1 | 1 | 18 | Medium |
| 1st Supervisorial District | 1.16% | Low | 1 | 1 | 18 | Medium |
| 2nd Supervisorial District | 1.99% | Low | 1 | 1 | 18 | Medium |
| 3rd Supervisorial District | 0.73% | Low | 1 | 1 | 24 | Medium |
| 4th Supervisorial District | 3.21% | Low | 1 | 1 | 18 | Medium |
| 5th Supervisorial District | 3.76% | Low | 1 | 1 | 27 | Medium |
| Total | 1.78% | Low | 1 | 1 | 18 | Medium |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Medium | 2 | 1.44% | Low | 1 | 3 |
| Cotati | Medium | 2 | 20.12% | Medium | 2 | 6 |
| Healdsburg | Medium | 2 | 0.02% | Low | 1 | 3 |
| Petaluma | Medium | 2 | 3.37% | Low | 1 | 3 |
| Rohnert Park | Medium | 2 | 1.33% | Low | 1 | 3 |
| Santa Rosa | Medium | 2 | 0.89% | Low | 1 | 3 |
| Sebastopol | Medium | 2 | 2.73% | Low | 1 | 3 |
| Sonoma | Medium | 2 | 20.20% | Medium | 2 | 6 |
| Windsor | Medium | 2 | 6.87% | Low | 1 | 3 |
| 1st Supervisorial District | Medium | 2 | 1.74% | Low | 1 | 3 |
| 2nd Supervisorial District | Medium | 2 | 1.88% | Low | 1 | 3 |
| 3rd Supervisorial District | Medium | 2 | 12.08% | Medium | 2 | 6 |
| 4th Supervisorial District | Medium | 2 | 2.44% | Low | 1 | 3 |
| 5th Supervisorial District | Medium | 2 | 11.87% | Medium | 2 | 6 |
| Total | Medium | 2 | 3.68% | Low | 1 | 3 |

RISK RANKING-500-yr Flood

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 2.28% | Low | 1 | 2 |
| Cotati | 19.59% | Medium | 2 | 4 |
| Healdsburg | 3.23% | Low | 1 | 2 |
| Petaluma | 16.27% | Medium | 2 | 4 |
| Rohnert Park | 3.46% | Low | 1 | 2 |
| Santa Rosa | 2.30% | Low | 1 | 2 |
| Sebastopol | 15.74% | Medium | 2 | 4 |
| Sonoma | 16.28% | Medium | 2 | 4 |
| Windsor | 7.41% | Low | 1 | 2 |
| 1st Supervisorial District | 4.18% | Low | 1 | 2 |
| 2nd Supervisorial District | 11.01% | Medium | 2 | 4 |
| 3rd Supervisorial District | 25.74% | High | 3 | 6 |
| 4th Supervisorial District | 10.48% | Medium | 2 | 4 |
| 5th Supervisorial District | 9.04% | Low | 1 | 2 |
| Total | 8.05% | Low | 1 | 2 |

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 0.24% | Low | 1 | 1 | 12 | Low |
| Cotati | 0.58% | Low | 1 | 1 | 22 | Medium |
| Healdsburg | 1.28% | Low | 1 | 1 | 12 | Low |
| Petaluma | 0.86% | Low | 1 | 1 | 16 | Medium |
| Rohnert Park | 0.14% | Low | 1 | 1 | 12 | Low |
| Santa Rosa | 0.49% | Low | 1 | 1 | 12 | Low |
| Sebastopol | 1.68% | Low | 1 | 1 | 16 | Medium |
| Sonoma | 0.66% | Low | 1 | 1 | 22 | Medium |
| Windsor | 0.14% | Low | 1 | 1 | 12 | Low |
| 1st Supervisorial District | 1.20% | Low | 1 | 1 | 12 | Low |
| 2nd Supervisorial District | 2.13% | Low | 1 | 1 | 16 | Medium |
| 3rd Supervisorial District | 1.50% | Low | 1 | 1 | 26 | Medium |
| 4th Supervisorial District | 3.61% | Low | 1 | 1 | 16 | Medium |
| 5th Supervisorial District | 4.30% | Low | 1 | 1 | 18 | Medium |
| Total | 2.05% | Low | 1 | 1 | 12 | Low |

Flood Awareness Areas

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | High | 3 | 0.89% | Low | 1 | 3 |
| Cotati | High | 3 | 0.00% | None | 0 | 0 |
| Healdsburg | High | 3 | 0.05% | Low | 1 | 3 |
| Petaluma | High | 3 | 0.15% | Low | 1 | 3 |
| Rohnert Park | High | 3 | 0.00% | None | 0 | 0 |
| Santa Rosa | High | 3 | 0.01% | None | 0 | 0 |
| Sebastopol | High | 3 | 1.04% | Low | 1 | 3 |
| Sonoma | High | 3 | 0.10% | Low | 1 | 3 |
| Windsor | High | 3 | 0.05% | Low | 1 | 3 |
| 1st Supervisorial District | High | 3 | 1.55% | Low | 1 | 3 |
| 2nd Supervisorial District | High | 3 | 0.56% | Low | 1 | 3 |
| 3rd Supervisorial District | High | 3 | 0.00% | None | 0 | 0 |
| 4th Supervisorial District | High | 3 | 4.20% | Low | 1 | 3 |
| 5th Supervisorial District | High | 3 | 12.71% | Medium | 2 | 6 |
| Total | High | 3 | 1.55% | Low | 1 | 3 |

RISK RANKING - Flood Awareness Areas (3)

| | Impact on Property | | | | Impact on Economy | | | | Risk Ranking Score | Hazard Risk Rating |
|----------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------|--------------------|
| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | | |
| Cloverdale | 5.16% | Low | 1 | 2 | 5.16% | Medium | 2 | 2 | 21 | Medium |
| Cotati | 0.00% | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Healdsburg | 1.39% | Low | 1 | 2 | 1.39% | Low | 1 | 1 | 18 | Medium |
| Petaluma | 1.19% | Low | 1 | 2 | 1.19% | Low | 1 | 1 | 18 | Medium |
| Rohnert Park | 0.00% | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Santa Rosa | 0.81% | Low | 1 | 2 | 0.81% | Low | 1 | 1 | 9 | Low |
| Sebastopol | 9.92% | Low | 1 | 2 | 9.92% | Medium | 2 | 2 | 21 | Medium |
| Sonoma | 0.03% | Low | 1 | 2 | 0.03% | Low | 1 | 1 | 18 | Medium |
| Windsor | 0.40% | Low | 1 | 2 | 0.40% | Low | 1 | 1 | 18 | Medium |
| 1st Supervisorial District | 2.31% | Low | 1 | 2 | 2.31% | Low | 1 | 1 | 18 | Medium |
| 2nd Supervisorial District | 4.50% | Low | 1 | 2 | 4.50% | Low | 1 | 1 | 18 | Medium |
| 3rd Supervisorial District | 0.00% | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| 4th Supervisorial District | 9.52% | Low | 1 | 2 | 9.52% | Medium | 2 | 2 | 21 | Medium |
| 5th Supervisorial District | 9.88% | Low | 1 | 2 | 9.88% | Medium | 2 | 2 | 30 | Medium |
| Total | 4.68% | Low | 1 | 2 | 4.68% | Low | 1 | 1 | 18 | Medium |

| | | | | | | RISK |
|-----------------------------------|--|-------------------------------------|-----------------------------|---|----------------------|-------------------------------|
| | | Probability | | Impact on People | | |
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | High | 3 | 20.18% | Medium | 2 | 6 |
| Cotati | High | 3 | 2.57% | Low | 1 | 3 |
| Healdsburg | High | 3 | 10.97% | Medium | 2 | 6 |
| Petaluma | High | 3 | 12.28% | Medium | 2 | 6 |
| Rohnert Park | High | 3 | 0.14% | Low | 1 | 3 |
| Santa Rosa | High | 3 | 7.08% | Low | 1 | 3 |
| Sebastopol | High | 3 | 4.42% | Low | 1 | 3 |
| Sonoma | High | 3 | 2.94% | Low | 1 | 3 |
| Windsor | High | 3 | 2.56% | Low | 1 | 3 |
| 1st Supervisorial District | High | 3 | 22.26% | Medium | 2 | 6 |
| 2nd Supervisorial District | High | 3 | 7.62% | Low | 1 | 3 |
| 3rd Supervisorial District | High | 3 | 8.46% | Low | 1 | 3 |
| 4th Supervisorial District | High | 3 | 23.81% | Medium | 2 | 6 |
| 5th Supervisorial District | High | 3 | 41.39% | High | 3 | 9 |
| Total | High | 3 | 12.09% | Medium | 2 | 6 |

RANKING- Landslide Hazard (Categories Very High & High)

| | Impact on Property | | | | Impact on Economy | | | | Risk Ranking Score | Hazard Risk Rating |
|----------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------|--------------------|
| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | | |
| Cloverdale | 17.79% | Medium | 2 | 4 | 4.45% | Low | 1 | 1 | 33 | High |
| Cotati | 4.50% | Low | 1 | 2 | 1.13% | Low | 1 | 1 | 18 | Medium |
| Healdsburg | 8.63% | Low | 1 | 2 | 2.16% | Low | 1 | 1 | 27 | Medium |
| Petaluma | 9.97% | Low | 1 | 2 | 2.49% | Low | 1 | 1 | 27 | Medium |
| Rohnert Park | 0.08% | Low | 1 | 2 | 0.02% | Low | 1 | 1 | 18 | Medium |
| Santa Rosa | 8.16% | Low | 1 | 2 | 2.04% | Low | 1 | 1 | 18 | Medium |
| Sebastopol | 4.47% | Low | 1 | 2 | 1.12% | Low | 1 | 1 | 18 | Medium |
| Sonoma | 4.65% | Low | 1 | 2 | 1.16% | Low | 1 | 1 | 18 | Medium |
| Windsor | 2.06% | Low | 1 | 2 | 0.51% | Low | 1 | 1 | 18 | Medium |
| 1st Supervisorial District | 36.39% | High | 3 | 6 | 9.10% | Medium | 2 | 2 | 42 | High |
| 2nd Supervisorial District | 15.10% | Medium | 2 | 4 | 3.78% | Low | 1 | 1 | 24 | Medium |
| 3rd Supervisorial District | 4.45% | Low | 1 | 2 | 1.11% | Low | 1 | 1 | 18 | Medium |
| 4th Supervisorial District | 39.95% | High | 3 | 6 | 9.99% | Medium | 2 | 2 | 42 | High |
| 5th Supervisorial District | 55.21% | High | 3 | 6 | 13.80% | High | 3 | 3 | 54 | High |
| Total | 26.70% | High | 3 | 6 | 6.67% | Medium | 2 | 2 | 42 | High |

| | | | | | | | RISK RA |
|-----------------------------------|--|-------------------------------------|-----------------------------|---|----------------------|-------------------------------|---------------------------------|
| Probability | | Impact on People | | | | Impact on P | |
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | % of Total Value Exposed |
| Cloverdale | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Cotati | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Healdsburg | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Petaluma | High | 3 | 0.34% | Low | 1 | 3 | 2.66% |
| Rohnert Park | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Santa Rosa | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Sebastopol | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Sonoma | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| Windsor | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| 1st Supervisorial District | High | 3 | 0.06% | Low | 1 | 3 | 2.12% |
| 2nd Supervisorial District | High | 3 | 0.12% | Low | 1 | 3 | 3.02% |
| 3rd Supervisorial District | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| 4th Supervisorial District | High | 3 | 0.00% | None | 0 | 0 | 0.00% |
| 5th Supervisorial District | High | 3 | 0.23% | Low | 1 | 3 | 0.36% |
| Total | High | 3 | 0.07% | Low | 1 | 3 | 0.78% |

WINNING - Sea Level Rise 200cm No Storm (3)

| Property | Impact on Economy | | | | | | | | |
|----------------------------|----------------------------------|---------------|------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------|--------------------|
| | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Cotati | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Healdsburg | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Petaluma | Low | 1 | 2 | 0.27% | Low | 1 | 1 | 18 | Medium |
| Rohnert Park | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Santa Rosa | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Sebastopol | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Sonoma | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| Windsor | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| 1st Supervisorial District | Low | 1 | 2 | 0.21% | Low | 1 | 1 | 18 | Medium |
| 2nd Supervisorial District | Low | 1 | 2 | 0.30% | Low | 1 | 1 | 18 | Medium |
| 3rd Supervisorial District | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| 4th Supervisorial District | None | 0 | 0 | 0.00% | None | 0 | 0 | 0 | Low |
| 5th Supervisorial District | Low | 1 | 2 | 0.04% | Low | 1 | 1 | 18 | Medium |
| Total | Low | 1 | 2 | 0.08% | Low | 1 | 1 | 18 | Medium |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | High | 3 | 0.00% | None | 0 | 0 |
| Cotati | High | 3 | 0.00% | None | 0 | 0 |
| Healdsburg | High | 3 | 0.00% | None | 0 | 0 |
| Petaluma | High | 3 | 1.42% | Low | 1 | 3 |
| Rohnert Park | High | 3 | 0.00% | None | 0 | 0 |
| Santa Rosa | High | 3 | 0.00% | None | 0 | 0 |
| Sebastopol | High | 3 | 0.00% | None | 0 | 0 |
| Sonoma | High | 3 | 0.00% | None | 0 | 0 |
| Windsor | High | 3 | 0.00% | None | 0 | 0 |
| 1st Supervisorial District | High | 3 | 0.09% | Low | 1 | 3 |
| 2nd Supervisorial District | High | 3 | 0.12% | Low | 1 | 3 |
| 3rd Supervisorial District | High | 3 | 0.00% | None | 0 | 0 |
| 4th Supervisorial District | High | 3 | 0.00% | None | 0 | 0 |
| 5th Supervisorial District | High | 3 | 0.39% | Low | 1 | 3 |
| Total | High | 3 | 0.23% | Low | 1 | 3 |

RISK RANKING - Sea Level Rise 200cm 100-yr Storm (3

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 0.00% | None | 0 | 0 |
| Cotati | 0.00% | None | 0 | 0 |
| Healdsburg | 0.00% | None | 0 | 0 |
| Petaluma | 7.64% | Low | 1 | 2 |
| Rohnert Park | 0.00% | None | 0 | 0 |
| Santa Rosa | 0.00% | None | 0 | 0 |
| Sebastopol | 0.00% | None | 0 | 0 |
| Sonoma | 0.00% | None | 0 | 0 |
| Windsor | 0.00% | None | 0 | 0 |
| 1st Supervisorial District | 2.53% | Low | 1 | 2 |
| 2nd Supervisorial District | 3.38% | Low | 1 | 2 |
| 3rd Supervisorial District | 0.00% | None | 0 | 0 |
| 4th Supervisorial District | 0.00% | None | 0 | 0 |
| 5th Supervisorial District | 0.60% | Low | 1 | 2 |
| Total | 1.34% | Low | 1 | 2 |

| Impact on Economy | | | | | | |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 0.00% | None | 0 | 0 | 0 | Low |
| Cotati | 0.00% | None | 0 | 0 | 0 | Low |
| Healdsburg | 0.00% | None | 0 | 0 | 0 | Low |
| Petaluma | 0.76% | Low | 1 | 1 | 18 | Medium |
| Rohnert Park | 0.00% | None | 0 | 0 | 0 | Low |
| Santa Rosa | 0.00% | None | 0 | 0 | 0 | Low |
| Sebastopol | 0.00% | None | 0 | 0 | 0 | Low |
| Sonoma | 0.00% | None | 0 | 0 | 0 | Low |
| Windsor | 0.00% | None | 0 | 0 | 0 | Low |
| 1st Supervisorial District | 0.25% | Low | 1 | 1 | 18 | Medium |
| 2nd Supervisorial District | 0.34% | Low | 1 | 1 | 18 | Medium |
| 3rd Supervisorial District | 0.00% | None | 0 | 0 | 0 | Low |
| 4th Supervisorial District | 0.00% | None | 0 | 0 | 0 | Low |
| 5th Supervisorial District | 0.06% | Low | 1 | 1 | 18 | Medium |
| Total | 0.13% | Low | 1 | 1 | 18 | Medium |

| | Probability | | Impact on People | | | |
|----------------------------|---------------------------------------|------------------------------|----------------------|----------------------------------|---------------|------------------------|
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | Low | 1 | 0.00% | None | 0 | 0 |
| Cotati | Low | 1 | 0.00% | None | 0 | 0 |
| Healdsburg | Low | 1 | 0.00% | None | 0 | 0 |
| Petaluma | Low | 1 | 0.00% | None | 0 | 0 |
| Rohnert Park | Low | 1 | 0.00% | None | 0 | 0 |
| Santa Rosa | Low | 1 | 0.00% | None | 0 | 0 |
| Sebastopol | Low | 1 | 0.00% | None | 0 | 0 |
| Sonoma | Low | 1 | 0.00% | None | 0 | 0 |
| Windsor | Low | 1 | 0.00% | None | 0 | 0 |
| 1st Supervisorial District | Low | 1 | 0.00% | None | 0 | 0 |
| 2nd Supervisorial District | Low | 1 | 0.00% | None | 0 | 0 |
| 3rd Supervisorial District | Low | 1 | 0.00% | None | 0 | 0 |
| 4th Supervisorial District | Low | 1 | 0.00% | None | 0 | 0 |
| 5th Supervisorial District | Low | 1 | 0.23% | Low | 1 | 3 |
| Total | Low | 1 | 0.02% | Low | 1 | 3 |

RISK RANKING - Tsunami Zone (3)

Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|--------------------------|----------------------------------|---------------|------------------------|
| Cloverdale | 0.00% | None | 0 | 0 |
| Cotati | 0.00% | None | 0 | 0 |
| Healdsburg | 0.00% | None | 0 | 0 |
| Petaluma | 0.00% | None | 0 | 0 |
| Rohnert Park | 0.00% | None | 0 | 0 |
| Santa Rosa | 0.00% | None | 0 | 0 |
| Sebastopol | 0.00% | None | 0 | 0 |
| Sonoma | 0.00% | None | 0 | 0 |
| Windsor | 0.00% | None | 0 | 0 |
| 1st Supervisorial District | 0.00% | None | 0 | 0 |
| 2nd Supervisorial District | 0.11% | Low | 1 | 2 |
| 3rd Supervisorial District | 0.00% | None | 0 | 0 |
| 4th Supervisorial District | 0.00% | None | 0 | 0 |
| 5th Supervisorial District | 0.14% | Low | 1 | 2 |
| Total | 0.04% | Low | 1 | 2 |

| Impact on Economy | | | | | | |
|-----------------------------------|---------------------------------|---|----------------------|-------------------------------|---------------------------|---------------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 0.00% | None | 0 | 0 | 0 | Low |
| Cotati | 0.00% | None | 0 | 0 | 0 | Low |
| Healdsburg | 0.00% | None | 0 | 0 | 0 | Low |
| Petaluma | 0.00% | None | 0 | 0 | 0 | Low |
| Rohnert Park | 0.00% | None | 0 | 0 | 0 | Low |
| Santa Rosa | 0.00% | None | 0 | 0 | 0 | Low |
| Sebastopol | 0.00% | None | 0 | 0 | 0 | Low |
| Sonoma | 0.00% | None | 0 | 0 | 0 | Low |
| Windsor | 0.00% | None | 0 | 0 | 0 | Low |
| 1st Supervisorial District | 0.00% | None | 0 | 0 | 0 | Low |
| 2nd Supervisorial District | 0.01% | Low | 1 | 1 | 3 | Low |
| 3rd Supervisorial District | 0.00% | None | 0 | 0 | 0 | Low |
| 4th Supervisorial District | 0.00% | None | 0 | 0 | 0 | Low |
| 5th Supervisorial District | 0.01% | Low | 1 | 1 | 6 | Low |
| Total | 0.00% | None | 0 | 0 | 5 | Low |

| RISK I | | | | | | |
|-----------------------------------|--|-------------------------------------|-----------------------------|---|----------------------|-------------------------------|
| | Probability | | Impact on People | | | |
| | Probability (High, Medium, Low, None) | Probability Factor (3,2,1,0) | % Population Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
| Cloverdale | High | 3 | 0.72% | Low | 1 | 3 |
| Cotati | High | 3 | 0.33% | Low | 1 | 3 |
| Healdsburg | High | 3 | 0.40% | Low | 1 | 3 |
| Petaluma | High | 3 | 0.11% | Low | 1 | 3 |
| Rohnert Park | High | 3 | 0.00% | None | 0 | 0 |
| Santa Rosa | High | 3 | 0.66% | Low | 1 | 3 |
| Sebastopol | High | 3 | 0.52% | Low | 1 | 3 |
| Sonoma | High | 3 | 1.17% | Low | 1 | 3 |
| Windsor | High | 3 | 0.11% | Low | 1 | 3 |
| 1st Supervisorial District | High | 3 | 11.48% | Medium | 2 | 6 |
| 2nd Supervisorial District | High | 3 | 1.41% | Low | 1 | 3 |
| 3rd Supervisorial District | High | 3 | 1.48% | Low | 1 | 3 |
| 4th Supervisorial District | High | 3 | 6.03% | Low | 1 | 3 |
| 5th Supervisorial District | High | 3 | 4.49% | Low | 1 | 3 |
| Total | High | 3 | 1.96% | Low | 1 | 3 |

RANKING- Wildfire Hazard (Very High & High Relative F
Impact on Property

| | % of Total Value Exposed | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor |
|----------------------------|---------------------------------|---|----------------------|-------------------------------|
| Cloverdale | 2.57% | Low | 1 | 2 |
| Cotati | 0.20% | Low | 1 | 2 |
| Healdsburg | 0.83% | Low | 1 | 2 |
| Petaluma | 1.03% | Low | 1 | 2 |
| Rohnert Park | 0.00% | None | 0 | 0 |
| Santa Rosa | 1.09% | Low | 1 | 2 |
| Sebastopol | 0.20% | Low | 1 | 2 |
| Sonoma | 2.08% | Low | 1 | 2 |
| Windsor | 0.38% | Low | 1 | 2 |
| 1st Supervisorial District | 28.99% | High | 3 | 6 |
| 2nd Supervisorial District | 2.91% | Low | 1 | 2 |
| 3rd Supervisorial District | 1.95% | Low | 1 | 2 |
| 4th Supervisorial District | 21.59% | Medium | 2 | 4 |
| 5th Supervisorial District | 20.07% | Medium | 2 | 4 |
| Total | 11.54% | Medium | 2 | 4 |

Hazard)

| Impact on Economy | | | | | | |
|----------------------------|--------------------------|----------------------------------|---------------|------------------------|--------------------|--------------------|
| | % of Total Value Damaged | Impact (High, Medium, Low, None) | Impact Factor | Weighted Impact Factor | Risk Ranking Score | Hazard Risk Rating |
| Cloverdale | 1.29% | Low | 1 | 1 | 18 | Medium |
| Cotati | 0.10% | Low | 1 | 1 | 18 | Medium |
| Healdsburg | 0.42% | Low | 1 | 1 | 18 | Medium |
| Petaluma | 0.51% | Low | 1 | 1 | 18 | Medium |
| Rohnert Park | 0.00% | None | 0 | 0 | 0 | Low |
| Santa Rosa | 0.55% | Low | 1 | 1 | 18 | Medium |
| Sebastopol | 0.10% | Low | 1 | 1 | 18 | Medium |
| Sonoma | 1.04% | Low | 1 | 1 | 18 | Medium |
| Windsor | 0.19% | Low | 1 | 1 | 18 | Medium |
| 1st Supervisorial District | 14.49% | High | 3 | 3 | 45 | High |
| 2nd Supervisorial District | 1.46% | Low | 1 | 1 | 18 | Medium |
| 3rd Supervisorial District | 0.98% | Low | 1 | 1 | 18 | Medium |
| 4th Supervisorial District | 10.79% | High | 3 | 3 | 30 | Medium |
| 5th Supervisorial District | 10.03% | High | 3 | 3 | 30 | Medium |
| Total | 5.77% | Medium | 2 | 2 | 27 | Medium |

**CRITICAL FACILITY EXPOSURE
RESULTS BY JURISDICTION**

Total Count

All Facilities

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|-----------|----------------------|--------------------|------------------|-------------------|----------------|--------------|
| Cloverdale | 2 | 1 | 5 | 29 | 4 | 15 | 2 | 58 |
| Cotati | 1 | 0 | 0 | 45 | 4 | 17 | 1 | 68 |
| Healdsburg | 10 | 0 | 5 | 45 | 10 | 20 | 2 | 92 |
| Petaluma | 20 | 2 | 11 | 128 | 22 | 70 | 6 | 259 |
| Rohnert Park | 10 | 2 | 4 | 191 | 9 | 34 | 1 | 251 |
| Santa Rosa | 55 | 3 | 37 | 354 | 93 | 209 | 5 | 756 |
| Sebastopol | 7 | 0 | 3 | 27 | 13 | 19 | 0 | 69 |
| Sonoma | 11 | 1 | 3 | 65 | 11 | 19 | 0 | 110 |
| Windsor | 6 | 0 | 6 | 105 | 9 | 16 | 1 | 143 |
| 1st Supervisorial District | 25 | 5 | 11 | 431 | 10 | 45 | 63 | 590 |
| 2nd Supervisorial District | 7 | 8 | 7 | 340 | 4 | 31 | 45 | 442 |
| 3rd Supervisorial District | 3 | 1 | 1 | 65 | 1 | 5 | 1 | 77 |
| 4th Supervisorial District | 17 | 44 | 16 | 703 | 10 | 48 | 89 | 927 |
| 5th Supervisorial District | 17 | 7 | 22 | 581 | 19 | 102 | 169 | 917 |
| Total | 191 | 74 | 131 | 3,109 | 219 | 650 | 385 | 4,759 |

Dam Failure Combined Count

Dam Failure Combined

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|-----------|----------------------|--------------------|------------------|-------------------|----------------|--------------|
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 10 | 0 | 4 | 43 | 10 | 19 | 1 | 87 |
| Petaluma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rohnert Park | 0 | 0 | 1 | 43 | 0 | 0 | 0 | 44 |
| Santa Rosa | 24 | 3 | 11 | 143 | 35 | 68 | 2 | 286 |
| Sebastopol | 5 | 0 | 2 | 18 | 3 | 8 | 0 | 36 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 5 | 0 | 5 | 36 | 4 | 13 | 1 | 64 |
| 1st Supervisorial District | 0 | 0 | 1 | 4 | 0 | 1 | 7 | 13 |
| 2nd Supervisorial District | 1 | 1 | 0 | 5 | 0 | 0 | 5 | 12 |
| 3rd Supervisorial District | 0 | 0 | 0 | 7 | 0 | 0 | 1 | 8 |
| 4th Supervisorial District | 1 | 4 | 3 | 251 | 1 | 3 | 42 | 305 |
| 5th Supervisorial District | 2 | 2 | 7 | 110 | 8 | 19 | 56 | 204 |
| Total | 48 | 10 | 34 | 660 | 61 | 131 | 115 | 1,059 |

NEHRP Soils D & E Count

NEHRP Soils D & E

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|-----------|----------------------|--------------------|------------------|-------------------|----------------|--------------|
| Cloverdale | 2 | 1 | 4 | 19 | 3 | 13 | 2 | 44 |
| Cotati | 0 | 0 | 0 | 25 | 1 | 2 | 1 | 29 |
| Healdsburg | 8 | 0 | 2 | 21 | 4 | 8 | 0 | 43 |
| Petaluma | 19 | 2 | 7 | 111 | 15 | 53 | 6 | 213 |
| Rohnert Park | 10 | 2 | 4 | 191 | 9 | 34 | 1 | 251 |
| Santa Rosa | 48 | 3 | 20 | 313 | 74 | 178 | 4 | 640 |
| Sebastopol | 0 | 0 | 1 | 8 | 1 | 1 | 0 | 11 |
| Sonoma | 0 | 1 | 0 | 18 | 2 | 9 | 0 | 30 |
| Windsor | 6 | 0 | 5 | 56 | 6 | 8 | 0 | 81 |
| 1st Supervisorial District | 2 | 2 | 6 | 236 | 5 | 22 | 53 | 326 |
| 2nd Supervisorial District | 1 | 5 | 3 | 153 | 3 | 7 | 40 | 212 |
| 3rd Supervisorial District | 0 | 1 | 1 | 64 | 1 | 5 | 1 | 73 |
| 4th Supervisorial District | 1 | 10 | 9 | 313 | 7 | 28 | 61 | 429 |
| 5th Supervisorial District | 2 | 1 | 6 | 169 | 12 | 39 | 84 | 313 |
| Total | 99 | 28 | 68 | 1,697 | 143 | 407 | 253 | 2,695 |

Flood 100-yr Count

Flood 100-yr

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|------------|
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Petaluma | 1 | 1 | 0 | 25 | 2 | 2 | 2 | 33 |
| Rohnert Park | 0 | 0 | 0 | 5 | 3 | 1 | 0 | 9 |
| Santa Rosa | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 6 |
| Sebastopol | 0 | 0 | 1 | 11 | 1 | 2 | 0 | 15 |
| Sonoma | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Windsor | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 1st Supervisorial District | 1 | 2 | 0 | 34 | 0 | 1 | 26 | 64 |
| 2nd Supervisorial District | 0 | 0 | 1 | 43 | 0 | 2 | 22 | 68 |
| 3rd Supervisorial District | 0 | 1 | 0 | 14 | 0 | 1 | 1 | 17 |
| 4th Supervisorial District | 0 | 0 | 2 | 13 | 0 | 0 | 27 | 42 |
| 5th Supervisorial District | 0 | 1 | 3 | 40 | 5 | 11 | 52 | 112 |
| Total | 2 | 7 | 8 | 199 | 11 | 20 | 130 | 377 |

Flood 500-yr Count

Flood 500-yr

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|------------|
| Cloverdale | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Cotati | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 6 |
| Healdsburg | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Petaluma | 7 | 1 | 0 | 35 | 5 | 5 | 3 | 56 |
| Rohnert Park | 0 | 0 | 0 | 5 | 3 | 1 | 0 | 9 |
| Santa Rosa | 0 | 1 | 3 | 7 | 0 | 1 | 0 | 12 |
| Sebastopol | 0 | 0 | 1 | 13 | 1 | 4 | 0 | 19 |
| Sonoma | 2 | 1 | 0 | 10 | 1 | 4 | 0 | 18 |
| Windsor | 3 | 0 | 0 | 16 | 0 | 0 | 0 | 19 |
| 1st Supervisorial District | 1 | 2 | 0 | 35 | 0 | 1 | 26 | 65 |
| 2nd Supervisorial District | 1 | 1 | 1 | 52 | 0 | 3 | 22 | 80 |
| 3rd Supervisorial District | 0 | 1 | 0 | 29 | 0 | 1 | 1 | 32 |
| 4th Supervisorial District | 0 | | 2 | 64 | 1 | 2 | 28 | 97 |
| 5th Supervisorial District | 2 | 1 | 5 | 47 | 7 | 13 | 57 | 132 |
| Total | 16 | 8 | 12 | 322 | 20 | 35 | 137 | 550 |

Flood Awareness Areas Count

Flood Awareness Areas

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|------------|
| Cloverdale | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 4 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Petaluma | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 8 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 |
| Sebastopol | 0 | 0 | 1 | 10 | 1 | 1 | 0 | 13 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 0 | 0 | 1 | 21 | 0 | 0 | 48 | 70 |
| 2nd Supervisorial District | 0 | 1 | 0 | 5 | 0 | 0 | 33 | 39 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 2 | 37 | 0 | 0 | 61 | 100 |
| 5th Supervisorial District | 2 | 1 | 4 | 59 | 7 | 14 | 93 | 180 |
| Total | 2 | 3 | 10 | 142 | 8 | 15 | 238 | 418 |

Landslide Count

Landslide Very High & High

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|-----------|----------------------|--------------------|------------------|-------------------|----------------|------------|
| Cloverdale | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 4 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| Petaluma | 1 | 0 | 0 | 9 | 2 | 11 | 1 | 24 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 1 | 0 | 6 | 11 | 6 | 7 | 0 | 31 |
| Sebastopol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Sonoma | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 14 | 1 | 3 | 70 | 0 | 9 | 32 | 129 |
| 2nd Supervisorial District | 1 | 2 | 1 | 27 | 1 | 1 | 8 | 41 |
| 3rd Supervisorial District | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 6 |
| 4th Supervisorial District | 6 | 12 | 4 | 168 | 0 | 6 | 39 | 235 |
| 5th Supervisorial District | 6 | 2 | 11 | 91 | 5 | 35 | 93 | 243 |
| Total | 32 | 17 | 26 | 386 | 15 | 71 | 173 | 720 |

SLR 200cm No Storm Count

Sea Level Rise 200 cm No Storm

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|-----------|
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 2 | 0 | 0 | 6 | 1 | 2 | 0 | 11 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 1 | 1 | 0 | 4 | 0 | 0 | 3 | 9 |
| 2nd Supervisorial District | 0 | 0 | 1 | 12 | 0 | 1 | 5 | 19 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5th Supervisorial District | 0 | 0 | 0 | 2 | 0 | 1 | 14 | 17 |
| Total | 3 | 1 | 1 | 24 | 1 | 4 | 22 | 56 |

SLR 200cm 100-yr Storm Count

Sea Level Rise 200cm with 100-yr Storm

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|------------|
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 5 | 0 | 0 | 19 | 5 | 7 | 0 | 36 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 1 | 2 | 0 | 10 | 0 | 0 | 3 | 16 |
| 2nd Supervisorial District | 0 | 0 | 1 | 42 | 0 | 1 | 5 | 49 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5th Supervisorial District | 0 | 0 | 1 | 2 | 1 | 3 | 17 | 24 |
| Total | 6 | 2 | 2 | 73 | 6 | 11 | 25 | 125 |

Tsunami Count

Tsunami Inundation Area

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|-----------|
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Petaluma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rohnert Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Rosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sebastopol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sonoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Windsor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1st Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 2nd Supervisorial District | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 6 |
| 3rd Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4th Supervisorial District | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5th Supervisorial District | 0 | 0 | 1 | 2 | 0 | 3 | 9 | 15 |
| Total | 0 | 0 | 2 | 2 | 0 | 3 | 15 | 22 |

Wildfire Count

Wildfire Very High & High Relative Hazard

| Jurisdiction | Communications | Energy | Food, Water, Shelter | Hazardous Material | Health & Medical | Safety & Security | Transportation | Total |
|----------------------------|----------------|----------|----------------------|--------------------|------------------|-------------------|----------------|------------|
| Cloverdale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cotati | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Healdsburg | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Petaluma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rohnert Park | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Santa Rosa | 0 | 0 | 1 | 6 | 1 | 1 | 0 | 9 |
| Sebastopol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Sonoma | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| Windsor | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1st Supervisorial District | 18 | 0 | 1 | 41 | 0 | 3 | 3 | 66 |
| 2nd Supervisorial District | 2 | 0 | 0 | 3 | 0 | 0 | 1 | 6 |
| 3rd Supervisorial District | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4th Supervisorial District | 6 | 1 | 0 | 26 | 2 | 1 | 6 | 42 |
| 5th Supervisorial District | 3 | 0 | 1 | 10 | 0 | 1 | 9 | 24 |
| Total | 32 | 1 | 3 | 92 | 3 | 7 | 19 | 157 |

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix E. Peak Riverine Discharges in the Planning Area

E. PEAK RIVERINE DISCHARGES IN THE PLANNING AREA

| Source/Location | Discharge (cubic feet/second) | | | |
|---|-------------------------------|-------------------------|-------------------------|---------------------------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance |
| Adobe Creek | | | | |
| Above Petaluma River | 1,410 | 2,033 | 2,226 | 2,417 |
| Upstream of Ely Road | 1,383 | 2,084 | 2,364 | 2,993 |
| Upstream of confluence of Adobe Creek | * | * | * | * |
| Diversion Channel | 1,084 | 1,290 | 1,342 | 1,372 |
| Airport Creek | | | | |
| Upstream of confluence of Windsor Creek | 943 | 1,262 | 1,379 | 1,678 |
| Upstream of confluence of Redwood Creek | 425 | 562 | 617 | 745 |
| Arroyo Seco | | | | |
| At Cross Section B | 1,250 | 1,910 | 2,140 | 2,660 |
| At Cross Section W | 725 | 1,070 | 1,200 | 1,470 |
| Austin Creek | | | | |
| Upstream of confluence of Russian River | 14,900 | 22,100 | 24,600 | 30,400 |
| Upstream of confluence of East Austin Creek | 8,500 | 12,400 | 13,500 | 16,600 |
| Bloomfield Creek | | | | |
| Upstream of confluence of Estero Americano | 1,000 | 1,300 | 1,444 | 1,720 |
| Cameron Creek | | | | |
| Upstream of confluence of Fulton Creek | 266 | 345 | 377 | 460 |
| Capri Creek | | | | |
| At Southern Pacific Railroad | 247 | 303 | 345 | 393 |
| At Maria Drive | 324 | 466 | 546 | 685 |
| At Sonoma Mountain | 276 | 410 | 463 | 583 |
| Champlin Creek | | | | |
| At Cross Section B | 325 | 520 | 585 | 725 |
| At Cross Section J | 195 | 315 | 350 | 435 |
| Cloverdale Creek | | | | |
| At confluence of Russian River | * | * | 835 | * |
| Colgan Creek | | | | |
| At Mouth | 1,220 | 1,780 | 2,019 | 2,504 |
| At Stony Point Road | 1,011 | 1,340 | 1,444 | 1,931 |
| At Bellevue Avenue | 777 | 1,017 | 1,102 | 1,312 |

| Source/Location | Discharge (cubic feet/second) | | | | |
|--|-------------------------------|-------------------------|-------------------------|---------------------------|--------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance | |
| At Hearn Avenue | 673 | 867 | 908 | 1,003 | |
| At Highway 101 | 558 | 787 | 787 | 787 | |
| At Petaluma Hill Road | 157 | 252 | 304 | 452 | |
| Corona Creek | | | | | |
| Downstream of confluence with Capri Creek | 576 | 736 | 765 | 908 | |
| At Highway 101 | 525 | 592 | 610 | 635 | |
| At Ely Road | 462 | 662 | 727 | 825 | |
| Cotati Creek | | | | | |
| Upstream of confluence of Laguna de Santa Rosa | 210 | 360 | 405 | * | |
| Upstream of Hillview Drive | 210 | 360 | 440 | 610 | |
| Upstream of Water Avenue | 110 | 180 | 220 | 310 | |
| Dry Creek | | | | | |
| Upstream of confluence with Russian River | 12,500 | 18,000 | 21,000 | 25,000 | |
| Upstream of confluence of Mill Creek | 8,700 | 13,000 | 15,000 | 18,000 | |
| Upstream of confluence of Pena Creek | 6,200 | 6,500 | 6,900 | 8,800 | |
| Upstream of confluence of Dutcher Creek (Warm Springs Dam Outflow) | 6,000 | 6,000 | 6,000 | 7,400 | |
| Dutch Bill Creek | | | | | |
| Upstream of confluence of Russian River | 2,100 | 3,400 | 4,200 | 5,900 | |
| Upstream of confluence of Tyrone Creek | 1,900 | 3,200 | 3,900 | 5,600 | |
| Downstream of confluence of Duvoul Creek | 1,500 | 2,500 | 3,000 | 4,400 | |
| Upstream of confluence of Duvoul Creek | 1,250 | 2,080 | 2,500 | 3,670 | |
| East Austin Creek | | | | | |
| Upstream of confluence with Austin Creek | 7,400 | 11,000 | 12,300 | 15,300 | |
| East Washington Creek | | | | | |
| Above Washington Creek | 515 | 635 | 671 | 692 | |
| At Ely Road | 479 | 599 | 636 | 710 | |
| East Windsor Creek | | | | | |
| Upstream of confluence with Windsor Creek | 929 | 1,223 | 1,339 | 1,616 | |
| At Highway 101 | 669 | 879 | 963 | 1,173 | |
| At Lakewood Drive | 218 | 286 | 313 | 377 | |
| Fife Creek | | | | | |
| Upstream of confluence with Russian River | 1,600 | | 2,400 | 2,800 | 3,900 |
| Downstream of confluence of Sweetwater Creek | 1,400 | | 2,100 | 2,400 | 3,400 |
| Upstream of confluence of Sweetwater Creek | 700 | | 1,100 | 1,300 | 1,800 |
| Fowler Creek | | | | | |
| At Cross Section C | 9,590 | | 11,200 | 11,450 | 12,210 |
| At Cross Section J | 2,340 | | 5,800 | 6,570 | 10,070 |
| At Cross Section O | 2,340 | | 4,660 | 5,420 | 8,920 |
| At Cross Section R | 2,340 | | 3,880 | 4,160 | 6,490 |
| At Cross Section AB | 1,500 | | 2,400 | 2,580 | 3,310 |
| Fryer Creek | | | | | |

| Source/Location | Discharge (cubic feet/second) | | | |
|--|-------------------------------|-------------------------|-------------------------|---------------------------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance |
| At Leveroni Road | * | | 846 | * |
| At confluence of West Fork Fryer Creek | * | | 818 | * |
| At confluence of East Fork Fryer Creek | * | | 407 | * |
| At Andrieux Street | * | | 395 | * |
| North of Andrieux Street | * | | 380 | * |
| North of Napa Street | * | | 360 | * |
| North of Church Street | * | | 350 | * |
| North of Spain Street | * | | 340 | * |
| West of Fifth Street West | * | | 130 | * |
| North of San Joaquin Drive | * | | 110 | * |
| Fulton Creek | | | | |
| Upstream of confluence with Mark West Creek | 592 | | 800 | 1,060 |
| Gibson Creek | | | | |
| Upstream of confluence with Marin Creek | 185 | | 240 | 322 |
| Hulbert Creek | | | | |
| Upstream of confluence with Russian River | 3,300 | | 4,420 | 5,830 |
| Downstream of confluence of Mission Creek | 2,910 | | 3,890 | 5,120 |
| Upstream of confluence of Mission Creek | 2,170 | | 2,910 | 3,840 |
| Hulbert Creek Tributary | | | | |
| Upstream of confluence with Hulbert Creek | 650 | | 900 | 1,240 |
| Kelly Creek | | | | |
| Above Thompson Creek | 210 | | 325 | 520 |
| Kizer Creek | | | | |
| Upstream of confluence with Petaluma Creek | 322 | | 420 | 555 |
| At Middle Two Rock Road | 170 | | 220 | 290 |
| Laguna de Santa Rosa | | | | |
| Upstream of confluence with Mark West Creek | 21,100 | | 30,300 | 44,900 |
| Downstream of confluence of Santa Rosa Flood Control Channel | 16,800 | | 23,900 | 35,700 |
| Upstream of confluence of Santa Rosa Flood Control Channel | 14,000 | | 20,100 | 30,800 |
| Upstream of confluence of Irwin Creek | 13,200 | | 19,100 | 29,200 |
| Upstream of confluence of Gravenstein Creek | 12,300 | | 18,000 | 27,200 |
| Upstream of confluence of Pleasant Hill Creek | 11,600 | | 16,900 | 25,600 |
| Upstream of confluence of Roseland Creek | 10,800 | | 15,800 | 23,900 |
| Upstream of confluence of Blucher Creek | 9,570 | | 14,000 | 21,200 |
| Upstream of confluence of Colgan Creek | 7,710 | | 11,200 | 17,100 |
| At Stony Point Road | 7,170 | | 10,400 | 15,900 |
| Downstream of confluence of Hinebaugh Creek | 5,550 | | 7,900 | 12,000 |
| Upstream of confluence of Hinebaugh Creek | 2,280 | | 3,250 | 5,000 |
| Upstream of confluence with Copeland Creek | 977 | | 1,410 | 2,120 |
| At U.S. Highway 101 | 720 | | 1,250 | 2,100 |

| Source/Location | Discharge (cubic feet/second) | | | | |
|--|-------------------------------|-------------------------|-------------------------|---------------------------|--------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance | |
| Upstream of confluence of Cotati Creek | 320 | | 540 | 660 | 930 |
| Liberty Creek | | | | | |
| Upstream of confluence with Marin Creek | 490 | | 640 | 710 | 820 |
| At Pepper Road | 180 | | 240 | 260 | 320 |
| Lichau Creek | | | | | |
| Upstream of confluence with Willow Brook | 1,738 | | 2,310 | 2,543 | 3,140 |
| Upstream of confluence of Penngrove Creek | 1,480 | | 1,970 | 2,160 | 2,700 |
| Upstream of confluence of Meacham Creek | 1,280 | | 1,700 | 1,870 | 2,300 |
| Upstream of confluence of Highlands Creek | 1,030 | | 1,390 | 1,510 | 1,890 |
| Lynch Creek | | | | | |
| At Highway 101 | 902 | | 1,269 | 1,323 | 1,440 |
| At Sonoma Mountain | 890 | | 1,643 | 1,994 | 2,739 |
| Marin Creek | | | | | |
| Upstream of confluence with Petaluma River | 1,829 | | 2,400 | 2,659 | 3,200 |
| Upstream of confluence of Wiggins Creek | 1,040 | | 1,360 | 1,510 | 1,815 |
| Upstream of confluence of Wilson Creek | 684 | | 906 | 988 | 1,209 |
| Upstream of confluence of Gibson Creek | 310 | | 410 | 450 | 548 |
| Mark West Creek | | | | | |
| Upstream of confluence with Russian River | 32,885 | | 46,481 | 52,700 | 68,563 |
| Upstream of confluence of Windsor Creek | 29,602 | | 42,248 | 47,900 | 62,318 |
| Upstream of confluence of Laguna de Santa Rosa | 8,172 | | 11,000 | 12,085 | 15,000 |
| Downstream of confluence of Wikiup Creek | 8,340 | | 11,300 | 12,430 | 15,500 |
| Downstream of confluence of Leslie Creek | 8,260 | | 11,100 | 12,300 | 15,500 |
| Upstream of confluence of Leslie Creek | 7,530 | | 10,100 | 11,200 | 14,000 |
| McBrown Creek | | | | | |
| Upstream of confluence with Wiggins Creek | 175 | | 228 | 251 | 305 |
| Mount Hood Creek | | | | | |
| At Cross Section A | 1,430 | | 2,090 | 2,330 | 2,850 |
| At Cross Section C & M | 270 | | 390 | 440 | 540 |
| At Cross Section D | 1,100 | | 1,390 | 1,490 | 1,765 |
| At Cross Section E | 375 | | 520 | 565 | 665 |
| Nathanson Creek | | | | | |
| At Cross Section A | 1,760 | | 2,470 | 2,780 | 3,450 |
| At Cross Section G | 1,480 | | 2,070 | 2,320 | 2,870 |
| At Cross Section O | 835 | | 1,260 | 1,410 | 1,750 |
| At Napa Road | 835 | | 1,250 | 1,400 | 1,740 |
| At MacArthur Street | 835 | | 1,240 | 1,390 | 1,700 |
| At Fourth Street East | 840 | | 1,220 | 1,370 | 1,670 |
| At Cross Section BZ | 835 | | 1,220 | 1,360 | 1,650 |
| At Lovall Valley Road | 710 | | 1,030 | 1,150 | 1,400 |
| Naval Creek | | | | | |
| At Mouth | 297 | | 462 | 555 | 813 |

| Source/Location | Discharge (cubic feet/second) | | | | |
|--|-------------------------------|-------------------------|-------------------------|---------------------------|--------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance | |
| At Llano Road | 269 | | 424 | 509 | 748 |
| North Kenwood Creek | | | | | |
| At Mervin Avenue | 310 | | 440 | 490 | 600 |
| At Cross Section F | 290 | | 460 | 460 | 565 |
| At Cross Section G | 180 | | 230 | 250 | 300 |
| At Chateau St. Jean | 140 | | 200 | 220 | 270 |
| Petaluma River | | | | | |
| Downstream of confluence with Adobe Creek | 8,672 | | 11,034 | 11,910 | 15,044 |
| At Highway 101 bridge | 6,675 | | 9,149 | 10,494 | 13,694 |
| Downstream of confluence of Washington Creek | 5,758 | | 8,459 | 9,757 | 13,056 |
| Downstream of confluence of Lynch Creek | 5,246 | | 7,492 | 8,671 | 11,563 |
| Downstream of confluence of Capri Creek | 4,653 | | 6,583 | 7,728 | 10,523 |
| Downstream of confluence of Willow Brook | 3,587 | | 4,825 | 5,360 | 6,733 |
| Upstream of confluence of Willow Brook | 1,701 | | 2,947 | 3,529 | 4,801 |
| Pocket Canyon | | | | | |
| Upstream of confluence with Russian River | 1,790 | | 2,650 | 3,050 | 3,880 |
| Downstream of confluence of Mays Canyon | 1,390 | | 2,050 | 2,360 | 2,990 |
| Downstream of confluence of Oregon Canyon | 840 | | 1,230 | 1,400 | 1,780 |
| Upstream of confluence of Oregon Canyon | 580 | | 850 | 970 | 1,230 |
| Pool Creek | | | | | |
| Upstream of confluence with Windsor Creek | 2,283 | | 2,970 | 3,258 | 3,815 |
| Upstream of confluence of Pruitt Creek | 1,358 | | 1,874 | 1,906 | 2,165 |
| At Highway 101 | 1,152 | | 1,520 | 1,677 | 2,030 |
| At Chalk Hill Road | 684 | | 895 | 987 | 1,200 |
| Pruitt Creek | | | | | |
| Upstream of confluence with Pool Creek | 925 | | 1,210 | 1,311 | 1,540 |
| At Shiloh Road (upstream crossing) | 876 | | 1,146 | 1,240 | 1,455 |
| At Fought Road | 535 | | 618 | 767 | 930 |
| Redwood Creek | | | | | |
| Upstream of confluence with Airport Creek | 490 | | 640 | 715 | 880 |
| At NWPER | 115 | | 150 | 160 | 205 |
| Rodgers Creek | | | | | |
| At Cross Section F | 2,340 | | 5,820 | 6,570 | 10,000 |
| At Cross Section K | 2,340 | | 4,660 | 5,420 | 8,920 |
| At Cross Section N | 2,340 | | 3,880 | 4,160 | 6,490 |
| At Cross Section O | 815 | | 1,400 | 1,490 | 1,910 |
| At Cross Section S | 435 | | 740 | 790 | 1,030 |
| At Cross Section T | 385 | | 655 | 700 | 910 |
| Roseland Creek | | | | | |
| At Mouth | 622 | | 944 | 1,106 | 1,537 |
| At Fresno Avenue | 527 | | 781 | 917 | 1,294 |
| At Stony Point Road | 254 | | 383 | 452 | 648 |

| Source/Location | Discharge (cubic feet/second) | | | | |
|--|-------------------------------|-------------------------|-------------------------|---------------------------|---------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance | |
| At Burbank Avenue | 171 | | 249 | 290 | 406 |
| Russian River | | | | | |
| At Pacific Ocean | 76,000 | | 102,000 | 114,000 | 135,000 |
| Upstream of Duncan Mills | 75,000 | | 100,000 | 112,000 | 133,000 |
| Upstream of confluence of Austin Creek | 74,000 | | 98,000 | 107,000 | 131,000 |
| Upstream of Summerhome Gage | 73,000 | | 97,000 | 106,000 | 130,000 |
| Downstream of confluence of Mark West Creek | 67,000 | | 92,000 | 97,000 | 126,000 |
| Upstream of confluence of Mark West Creek | 60,000 | | 88,000 | 103,000 | 140,000 |
| Upstream of confluence of Dry Creek | 56,000 | | 79,000 | 90,000 | 129,000 |
| Upstream of confluence of Brooks Creek | 55,000 | | 78,000 | 88,000 | 127,000 |
| Upstream of confluence of Maacama Canal | 51,000 | | 73,000 | 82,000 | 115,000 |
| Upstream of confluence of Sausal Creek | 50,000 | | 71,000 | 81,000 | 111,000 |
| Upstream of confluence of Lytton Creek | 50,000 | | 70,000 | 80,000 | 110,000 |
| Upstream of confluence of Miller Creek | 48,000 | | 68,000 | 79,000 | 106,000 |
| Upstream of confluence of Gill Creek | 47,000 | | 67,000 | 76,000 | 105,000 |
| Upstream of confluence of Big Sulphur Creek | 46,000 | | 58,000 | 73,000 | 100,000 |
| Upstream of confluence of Oat Valley Creek | 40,000 | | 56,000 | 64,000 | 85,000 |
| Russian River Split Flow | | | | | |
| At Healdsburg Avenue | * | | 215 | 640 | 9,140 |
| Salmon Creek | | | | | |
| Upstream of Bodega Bay | * | | * | * | * |
| Santa Rosa Flood Control Channel | | | | | |
| Downstream of Guerneville Road | 21,000 | | 30,300 | 35,100 | 44,000 |
| Upstream of confluence of Laguna de Santa Rosa | 9,900 | | 14,500 | 16,500 | 22,000 |
| Upstream of confluence of Channel No. 3 | 9,120 | | 13,500 | 15,200 | 19,000 |
| Schell Creek | | | | | |
| At Cross Section A | 2,710 | | 4,300 | 4,880 | 6,140 |
| At Cross Section B | 2,650 | | 4,180 | 4,730 | 5,940 |
| At Cross Section K | 1,830 | | 2,610 | 2,950 | 3,680 |
| At Southern Pacific Railroad | 1,750 | | 2,470 | 2,780 | 3,450 |
| At Cross Section X | 1,750 | | 4,400 | 5,190 | 8,100 |
| At Cross Section AC | 1,750 | | 2,470 | 2,780 | 3,450 |
| At Cross Section AI | 1,750 | | 2,470 | 2,780 | 3,450 |
| At Cross Section AO | 205 | | 325 | 365 | 455 |
| Sonoma Creek | | | | | |
| At State Route 121 | 10,590 | | 17,200 | 18,500 | 24,200 |
| At Watmaugh Road | 9,820 | | 15,500 | 16,700 | 21,500 |
| At Cross Section AL | 9,720 | | 15,200 | 16,400 | 21,000 |
| At Cross Section BB | 9,280 | | 14,500 | 15,600 | 20,000 |
| At Cross Section BL | 9,050 | | 14,100 | 15,000 | 19,200 |
| At Madrone Road | 7,900 | | 12,200 | 13,100 | 16,800 |
| At Harney Road | 7,770 | | 12,000 | 12,800 | 16,400 |

| Source/Location | Discharge (cubic feet/second) | | | | |
|---|-------------------------------|-------------------------|-------------------------|---------------------------|--------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance | |
| At Cross Section BY | 7,640 | | 11,700 | 12,500 | 16,000 |
| At Cross Section BZ | 5,790 | | 8,780 | 9,420 | 11,900 |
| At Cross Section CG | 5,500 | | 8,320 | 8,950 | 11,300 |
| At Cross Section CL | 5,270 | | 7,960 | 8,550 | 10,800 |
| At Cross Section CN | 4,260 | | 6,400 | 6,890 | 8,620 |
| At Cross Section CY | 3,860 | | 5,505 | 5,930 | 7,385 |
| At Cross Section DD | 3,295 | | 4,910 | 5,300 | 6,575 |
| At Cross Section DF | 2,015 | | 2,985 | 3,220 | 3,995 |
| Spring Creek | | | | | |
| Upstream of confluence of Matanzas Creek | 700 | | 1,170 | 1,350 | 1,730 |
| At Franquette Avenue | 580 | | 970 | 1,120 | 1,440 |
| Upstream of Yulupa Avenue | 400 | | 660 | 770 | 990 |
| Upstream of confluence of Sierra Creek | 200 | | 360 | 420 | 540 |
| Downstream of Summerfield Road | 120 | | 200 | 230 | 300 |
| Starr Creek | | | | | |
| Upstream of confluence with Windsor Creek | 771 | | 1,010 | 1,122 | 1,340 |
| Upstream of confluence of Gumview Creek | 494 | | 650 | 717 | 870 |
| At Windsor Road | 236 | | 310 | 341 | 415 |
| Upstream of confluence of Wilson Creek | 80 | | 102 | 115135 | |
| Thompson Creek | | | | | |
| At F Street Outfall | 490 | | 790 | 960 | 1,290 |
| Above Kelly Creek | 305 | | 510 | 600 | 830 |
| Washington Creek | | | | | |
| At Holly Band Lane | 1,249 | | 1,558 | 1,611 | 2,161 |

| Source/Location | Discharge (cubic feet/second) | | | | |
|--|-------------------------------|-------------------------|-------------------------|---------------------------|--------|
| | 10-Percent Annual Chance | 2-Percent Annual Chance | 1-Percent Annual Chance | 0.2-Percent Annual Chance | |
| Downstream of Maria Drive | 682 | | 941 | 984 | 1,110 |
| Wiggins Creek | | | | | |
| Upstream of confluence with Marin Creek | 1,073 | | 1,405 | 1,559 | 1,910 |
| Upstream of confluence of Kizer Creek | 768 | | 1,010 | 1,108 | 1,385 |
| Upstream of confluence of McBrown Creek | 508 | | 660 | 730 | 875 |
| At King Road | 438 | | 570 | 627 | 755 |
| Willow Brook | | | | | |
| At Ely Road | 5,749 | | 8,291 | 9,372 | 11,656 |
| Upstream of confluence of Lichau Creek | 5,691 | | 8,230 | 9,292 | 11,541 |
| Wilson Creek | | | | | |
| Upstream of confluence with Marin Creek | 413 | | 537 | 596 | 715 |
| At Petaluma Valley Ford Road | 365 | | 470 | 525 | 630 |
| Upstream of confluence of Stark Creek | 205 | | 270 | 295 | 355 |
| Windsor Creek | | | | | |
| Upstream of confluence with Mark West Creek | 5,148 | | 6,860 | 7,571 | 9,290 |
| Upstream of confluence of Airport Creek | 4,377 | | 5,896 | 6,436 | 7,942 |
| Upstream of confluence of Pool Creek | 2,472 | | 3,280 | 3,632 | 4,497 |
| Upstream of confluence of Starr Creek | 1,854 | | 2,461 | 2,723 | 3,346 |
| Upstream of confluence of East Windsor Creek | 964 | | 1,293 | 1,415 | 1,747 |
| At Brooks Road | 850 | | 1,120 | 1,240 | 1,530 |
| Woolsey Creek | | | | | |
| Upstream of confluence with Mark West Creek | 210 | | 290 | 319 | 405 |

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix F. Plan Adoption Resolutions from Planning Partners

F. PLAN ADOPTION RESOLUTIONS FROM PLANNING PARTNERS

To Be Provided With Final Draft

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix G. Progress Report Template

G. PROGRESS REPORT TEMPLATE

Reporting Period: *(Insert reporting period)*

Background: A planning partnership of Sonoma County and cities and special districts within the county developed a hazard mitigation plan to reduce risk from hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. To prepare the plan, the planning partnership organized resources, assessed risks from hazards, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from natural hazards. By completing this process, the participating partners maintained compliance with the Disaster Mitigation Act, achieving eligibility for mitigation grant funding opportunities afforded under the Robert T. Stafford Act. The plan can be viewed on-line at: [\[website address\]](#)

Summary Overview of the Plan's Progress: The performance period for the hazard mitigation plan became effective on [\[date\]](#), with the final approval of the plan by FEMA. The performance period for this plan will be 5 years, with an anticipated update to the plan to occur before [\[date\]](#). As of this reporting period, the performance period for this plan is considered to be [%](#) complete. The hazard mitigation plan has targeted [\[number\]](#) hazard mitigation actions to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

- out of actions ([%](#)) reported ongoing action toward completion.
- out of actions ([%](#)) were reported as being complete.
- out of actions ([%](#)) reported no action taken.

Purpose: The purpose of this report is to provide an annual update on the implementation of the action plan identified in the hazard mitigation plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the hazard mitigation plan dynamic and responsive to the needs and capabilities of the planning partners. This report discusses the following:

- Hazard events that have occurred within the last year
- Changes in risk exposure within the planning area
- Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- Recommendations for changes/enhancement

New Actions to Include in the Plan: *(List any new actions added to the action plan; see Chapter 21 of the hazard mitigation plan for description of the information to be provided).*

Table 3. New Actions to Add to Action Plan

| Lead Agency | Support Agency | Estimated Cost | Sources of Funding | Timeline | Implementation Priority | Grant Pursuit Priority |
|--|----------------|----------------|--------------------|------------|-------------------------|------------------------|
| Action #: Action Title—Action Description | | | | | | |
| <i>Hazards Mitigated:</i> [Redacted] | | | | | | |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |
| Action #: Action Title—Action Description | | | | | | |
| <i>Hazards Mitigated:</i> [Redacted] | | | | | | |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |
| Action #: Action Title—Action Description | | | | | | |
| <i>Hazards Mitigated:</i> [Redacted] | | | | | | |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |
| Action #: Action Title—Action Description | | | | | | |
| <i>Hazards Mitigated:</i> [Redacted] | | | | | | |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] | [Redacted] |

Changes That May Impact Implementation of the Plan: *(Insert brief overview of any significant changes in the planning area that would have a profound impact on the implementation of the plan. Specify any changes in technical, regulatory, and financial capabilities identified during the plan’s development)*

Recommendations for Changes or Enhancements: Based on the review of this report by the plan maintenance oversight committee, the following recommendations will be noted for future updates or revisions to the plan:

- _____
- _____
- _____
- _____
- _____

Public review notice: *The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report have been provided to the planning partner governing bodies and to local media outlets. The report is posted on the hazard mitigation plan website. Any questions or comments regarding the contents of this report should be directed to:*

Insert Contact Info Here