RESOLUTION NO. 3707-21

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF WINDSOR ADOPTING SONOMA COUNTY MUTLI-JURISDICTIONAL HAZARD MITIGATION PLAN VOLUME 1, THE WINDSOR ANNEX, AND APPENDICES OF VOLUME II

WHEREAS, the Disaster Mitigation Act of 2000 requires state and local governments to develop and adopt a Local Hazard Mitigation Plan (LHMP) in order to be eligible to receive federal grants pertaining to disaster preparedness; and

WHEREAS, on September 21, 2011, the Town Council adopted the Plan "Taming Natural Disasters" as the Town of Windsor Annex to the 2010 Association of Bay Area Governments Local Hazard Mitigation Plan; and

WHEREAS, on February 21, 2018, the Town Council adopted the current Local Hazard Mitigation Plan, which is a 5-year plan; and

WHEREAS, in April 2018, the Town Council adopted the 2040 General Plan which calls for the Town to prepare and maintain the LHMP and supports the implementation of the Local Hazard Mitigation Plan actions; and

WHEREAS, in 2019 Permit Sonoma, the County of Sonoma's land use planning and permitting department, applied for and the County of Sonoma received a FEMA Hazard Mitigation Assistance grant for the preparation of a Multi-Jurisdictional Hazard Mitigation Plan ("MJHMP"), which includes a Windsor Annex that is specific to the hazards facing the Town of Windsor; and

WHEREAS, all of Sonoma County has exposure to natural hazards that increase the risk to life, property, environment, and the County's economy; and

WHEREAS, pro-active mitigation of known hazards before a disaster event can reduce or eliminate long-term risk to life and property; and

WHEREAS, recognizing the benefits of a multi-jurisdictional approach to hazard mitigation, which include: the ability to pool resources and eliminate redundant activities within a planning area that has uniform risk exposure and vulnerabilities; creating opportunities for coordination and collaboration; and the ability to create stronger grant applications by joining with other agencies in applying for grants. The Town Council chose to participate in the MJHMP; and

WHEREAS, a coalition of Sonoma County stakeholders with like planning objectives has been formed to pool resources and create consistent mitigation strategies to be implemented within each partners identified capabilities, within the Sonoma County Planning Area; and

WHEREAS, the coalition has completed a planning process that engages the public, assesses the risk and vulnerability to the impacts of natural hazards, develops a mitigation strategy consistent with a set of uniform goals and objectives, and creates a plan for implementing, evaluating, and

revising this strategy;

WHEREAS, on June 16, 2021, the Town Council reviewed the draft Windsor Annex and authorized submittal of the Windsor Annex to the California Office of Emergency Services (Cal OES) and the Federal Management Agency (FEMA) for review and approval; and

WHEREAS, the draft MJHMP and Windsor Annex were available for public review and comment from July 14 through July 30, 2021 and a community webinar was held on July 21, 2021; and

WHEREAS, the draft MJHMP and Windsor Annex were revised as necessary based on public comment and submitted to Cal OES and FEMA for review and approval; and

WHEREAS, on September 27, 2021, FEMA approved the MJHMP, including the Windsor Annex, pending Town Council adoption of a resolution adopting MJHMP Volume 1 and the Windsor Annex at a public hearing; and

WHEREAS, on October 20, 2021, the Town Council held a duly noticed public hearing for consideration of the adoption of the MJHMP and Windsor Annex, which was publicly noticed in compliance with State law and the Town Council public notice policy; and

WHEREAS, the MJHMP and Windsor Annex has been determined to be exempt from CEQA, pursuant to CEQA Guidelines Section 15306: Information Collection; and

WHEREAS, the Town Council authorizes Town staff to make minor typographical and editorial changes to the MJHMP, consistent with this resolution.

NOW, THEREFORE BE IT RESOLVED that the Town Council of the Town of Windsor:

1. Adopts in its entirety, Volume I, the Windsor Annex included in Volume II, and appendices of Volume II of the Sonoma County Local Multijurisdictional Hazard Mitigation Plan, attached hereto as exhibits A, and B, respectively.

2. Will use the adopted and approved portions of the Hazard Mitigation Plan to guide pre- and post- disaster mitigation of the hazards identified.

3. Will coordinate the strategies identified in the Hazard Mitigation Plan with other planning programs and mechanisms under its jurisdictional authority.

4. Will continue its support of the on-going countywide mitigation efforts and continue to participate in the Planning Partnership as described by the Hazard Mitigation Plan.

5. Will help to promote and support the mitigation successes of all Planning Partners.

PASSED, APPROVED AND ADOPTED this 20th day of October 2021, by the following vote:

AYES:	**COUNCILMEMBERS FUDGE, LEMUS, VICE MAYOR REYNOZA AND MAYOR SALMON**
NOES:	**NONE**
ABSTAIN:	**NONE**
ABSENT:	**NONE**

SAM SALMON, MAYOR

ATTEST:

IRENE CAMACHO-WERBY, TOWN CLERK

Attachments:

- **Exhibit A** - Windsor Annex
- **Exhibit B** - Sonoma County Multi-Jurisdictional Hazard Mitigation Plan Volume II Appendices

5. TOWN OF WINDSOR

5.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Kimberly Jordan, Planner III
Community Development Department
9291 Old Redwood Hwy
Windsor, CA 95492
Telephone: 707-838-5331
e-mail Address: kjordan@townofwindsor.com

Alternate Point of Contact
Jessica Jones, Community Development Director
Community Development Department
9291 Old Redwood Hwy
Windsor, CA 95492
Telephone: 707-838-5313
e-mail Address: jjones@townofwindsor.com

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 5-1.

Table 5-1. Local Mitigation Planning Team Members

Name	Title	Name	Title
Jessica Jones	Community Development Director	**Kimberly Jordan**	Planner III
Cynthia Foreman	Fire Marshal	**Olivia Lemen**	Parks and Facilities Manager
Ruben Martinez	Police Chief	**Jeneen Peterson**	Administrative Services Director
Doug Hughes	Building Official	**James Leon**	Human Resources Director
Mike Cave	Public Works Deputy Director of Operations	**Tim Ricard**	Economic Development Manager
Mickie Tagle	Senior Management Analyst, Town Manager's Office		

5.2 JURISDICTION PROFILE

5.2.1 Location and Features

Windsor is located approximately 58 miles north of San Francisco and 72 miles west of Sacramento, in Sonoma County, approximately five miles north of Santa Rosa and five miles south of Healdsburg. It is located on mostly flat land, bordered by hills to the north, east, and west. US Highway 101 runs through the middle of the Town along its north–south axis. Windsor is approximately 20 miles from the Pacific Ocean and two miles east of the Russian River, although a range of small hills divides the river from the Town itself.

The Town's boundaries generally extend from Sotoyome Creek, Arata Lane, and Foothill Regional Park in the north, Windsor Road and Starr Road to the west, Shiloh Road to the South, encompassing an area of 7.4 square miles. An additional 0.1 square miles is located outside of Town limits and within the Town's Urban Growth Boundary.

climate of Windsor is semi-arid Mediterranean, characterized by dry, mild summers and moderately moist, cool winters. Over 90 percent of the rainfall occurs between October and May. Average summer temperatures are in the low 80s (degrees Fahrenheit) with highs in the upper 80s. Average temperatures in the winter are in the 50s. Temperature variations between night and day tend to be relatively large during summer with a difference of up to 35 degrees and limited during winter with an average difference of 19 degrees. Precipitation generally occurs between October and May and the average rainfall is approximately 40 inches per year.

5.2.2 History

The area that is now Windsor was originally occupied by the Pomo people, who covered large sections of modern-day Sonoma, Mendocino, and Humboldt Counties. The Pomo hunted, fished, and foraged for a variety of food, including acorns, which were the primary plant staple. The Pomo lived in villages of grass-thatched homes during the winter and built temporary camps along streams in the summer. Prior to the arrival of Europeans in the area, the Pomo population is estimated at approximately 8,000.

The first known European expedition to the area occurred in 1810 by the Spanish army officer Gabriel Moraga. In 1812, Russia established Fort Ross as an outpost for fur hunting activities on the coast, approximately 24 miles from modern-day Windsor but ignored much of the interior. After the discovery of gold in 1848, California became part of the United States. Following the Mexican-American War, settlers began to arrive in the area in earnest. The first permanent settlers in modern-day Windsor came in 1851, when Henry Bell purchased 160 acres of land and founded a store that became the center of the new settlement. The first postmaster of the Town, Hiram Lewis, named the Town Windsor as it reminded him of the grounds around Windsor Castle in England. A rail line connected Windsor to San Francisco in 1872, spurring a rapid growth in agriculture. A U.S. Army air base (now Charles M. Schultz Sonoma County Airport) was established a short distance outside of the Town during World War II. New housing developments and the increasing popularity of Sonoma County's wine industry brought growth to Windsor in the 1980s, leading to incorporation of the Town in July 1992.

5.2.3 The Governing Body Format

The Town of Windsor is governed by the Town Council, which is comprised of the mayor and four council members. Beginning with the November 3, 2020 election, Windsor began the transition to a district-based election system for Town council members and the mayor. The Town is divided into four council districts. The council member for each district is elected to serve a four-year term. The mayor is elected at large to serve a two-year term. The daily administration of the Town is overseen by the Town Manager, who is appointed by the Town Council.

The Windsor Town Council assumes responsibility for the adoption of this plan; the Town Manager will oversee its implementation.

5.3 CURRENT TRENDS

5.3.1 Population

According to the California Department of Finance, the population of Windsor as of January 2020 was 28,248. Since 1995, the population has grown at an average annual rate of 1.9 percent.

5.3.2 Development

The primary land use in Windsor is single-family residential. Commercial uses include local-serving commercial uses located in the Town Green area and in small commercial centers. Regional-serving retail is located the southeast part of Windsor proximate to Highway 101. Larger single-family developments are planned for the northernmost part of Town, in the area north of Arata Lane that was annexed to the Town in 2018. Higher density multi-family development is located in the Station Area/Downtown Specific Plan area, which is close the SMART station which will open in 2021 and the bus depot. The Station Area/Downtown Specific Plan supports higher density mixed-use development in the downtown core. Additional mixed-use and higher density residential development is focused along Old Redwood Hwy and the eastern part of Shiloh Road, between Highway 101 and Old Redwood Hwy. Existing and new industrial development is located in the southwestern part of the Town, south of Shiloh Road and west of Highway 101 and in the Conde Lane/Mitchell Road/ Bell Road area.

Table 5-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

5.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning and regulatory capabilities is presented in Table 5-3.
- Development and permitting capabilities are presented in Table 5-4.
- An assessment of fiscal capabilities is presented in Table 5-5.
- An assessment of administrative and technical capabilities is presented in Table 5-6.
- An assessment of education and outreach capabilities is presented in Table 5-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 5-8.
- Classifications under various community mitigation programs are presented in Table 5-9.
- The community's adaptive capacity for the impacts of climate change is presented in Table 5-10.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions.

Table 5-2. Recent and Expected Future Development Trends

Criterion	Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	18 parcels totaling 112 acres
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes
If yes, describe land areas and dominant uses.	3 parcels totaling 22 acres: two parcels are developed with one single-family home each and the third parcel is used for agriculture and includes one single-family home.
If yes, who currently has permitting authority over these areas?	County of Sonoma
Are any areas targeted for development or major redevelopment in the next five years?	Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Development of parcels within the Station Area/Downtown Specific Plan area with higher density residential, mixed use, and hotel. The only hazard risks in this area are those that are area wide (e.g. drought, extreme heat, earthquake) The area north of Arata Lane east of Hwy 101 and west of Marcella Drive would be developed with approximately 300 residential units. The only hazard risks identified for this area are those that would be area wide that were noted above. The North of Arata area was affected by the 2019 Kincade Fire. 150 Affordable housing units are planned along Old Redwood Hwy. 225 residential as part of mixed-use development on Shiloh Road, with a portion of the site located in a Special Flood Hazard area (100-year flood plain).
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	

	2015	2016	2017	2018	2019
Single Family	1	1	0	9	14
Accessory Dwelling Unit	0	2	5	9	9
Multi-Family	54	0	0	0	60
Other (commercial, mixed use, etc.)	9	2	3	2	0
Total	64	5	8	20	83

Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: 4 commercial projects partially in 100-year flood plain • Landslide: 0 • High Liquefaction Areas: 0 • Tsunami Inundation Area: N/A • Wildfire Risk Areas: 0
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Vacant and underutilized land totals 362 acres (8%) of land within the Town limits and 422 acres (9%) within the Urban Growth Boundary (UGB) (2040 General Plan Environmental Impact Report, Table 19).

Table 5-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
Comment: *Windsor Municipal Code*				
Zoning Code	Yes	No	Yes	Yes
Comment: *Windsor Zoning Ordinance*				
Subdivisions	Yes	No	No	Yes
Comment: *Windsor Subdivision Ordinance, Municipal Code Article XVI, Chapter 8*				
Stormwater Management	Yes	No	Yes	Yes
Comment: *Public Works Department oversees the Stormwater Resources Management Plan*				
Post-Disaster Recovery	No	No	No	No
Comment:				
Real Estate Disclosure	No	No	No	No
Comment:				
Growth Management	Yes	No	No	Yes
Comment: *The Town's Municipal Code includes a Growth Control Ordinance (Article XVI, Chapter 4) that limits growth rate to an average of 1.4% per year. The Town also has a voter approved Urban Growth Boundary that is in place until 2040.*				
Site Plan Review	Yes	No	No	Yes
Comment: *Zoning Ordinance Article 4—Land Use and Development Permit requires Site Plan and Design Review approval for all development, except single-family homes.*				
Environmental Protection	Yes	No	No	Yes
Comment: *The Zoning Ordinance includes requirements for Creekside development and preservation and protection of some species of oaks, as well as California Bay trees and Buckeyes. There is an opportunity to include other requirements for environmental protection. The 2040 General Plan includes polices to protect public health and safety in the Health and Safety Element and for the protection of natural resources and the environment in the Environmental Resources Element.*				
Flood Damage Prevention	Yes	No	No	Yes
Comment: *Windsor Municipal Code Title IX—Flood Damage, Flood Control and Drainage is the Town's Flood Plain Management Ordinance. The Zoning Ordinance includes a Flood Hazard Overlay District that generally corresponds with the 100-year floodplain with specific requirements for development in the 100-year flood plain. The 2040 General Plan Health and Safety Element includes policies that address flooding.*				
Emergency Management	Yes	Yes	Yes	Yes
Comment: *The County of Sonoma oversees emergency management.*				
Climate Change	Yes	No	No	Yes
Comment: *The 2040 General Plan Health and Safety Element includes policies that address Climate Change Adaptation. The Town Council adopted a Climate Emergency Resolution (Resolution 3548-19) that identifies specific measures that are currently being undertaken to address climate change and additional measures that the Town should implement. The 2040 General Plan includes a Qualified Greenhouse Gas Emissions Reduction Plan. The Town does not have a town-wide Climate Action Plan. The Town has a Greenhouse Gas Reduction Plan for Town operations. The Town is in the process of preparing a Climate Adaptation (Windsor Ready) Plan that is expected to be completed in January 2022.*				
Other	No	No	No	No
Comment:				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan compliant with Assembly Bill 2140? *Yes*				
Comment: *2040 Windsor General Plan*				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? *2 years*				
Comment: *The CIP is a 5-year plan that is reviewed and updated every 2 years as part of the Town's biennial budget process. Each year the budget is reviewed and adjusted as needed, including CIP projects to be undertaken in that budget year. Town departments review the hazard mitigation measures included in the hazard mitigation plan as part of the CIP and budget process and identify measures to include the budget.*				
Disaster Debris Management Plan	No	No	No	No
Comment: *The Town does not have a plan. Debris management as part of a disaster or hazard is overseen by the County as part of the Local Enforcement Agency (LEA).*				
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: *(Sonoma Water) Flood Management design Manual, March 2020*				
Stormwater Plan	Yes	No	Yes	Yes
Comment: River Stormwater Resource Management Plan (July 2018) and Storm Drain Mater Plan (Phase 1 Sept 2017) (Phase 2 Feb 2020)				
Urban Water Management Plan	Yes	No	Yes	Yes
Comment: *2015 UWMP, finalized June 2016 (State regulations require an updated UWMP every 5 years). The 2020 UWMP is being updated now.*				
Habitat Conservation Plan	No	No	No	No
Comment: *The Town does not have a Habitat Conservation Plan. Parts of the Town are located within the Santa Rosa Plain Habitat Conservation Plan.*				
Economic Development Plan	No	No	No	Yes
Comment: *The Town does not have a standalone Economic Development Plan. The 2040 General Plan includes an Economic Development Element. There is an opportunity to include/integrate measures into the Economic Development Element of the General Plan.*				
Shoreline Management Plan	No	No	No	No
Comment: *Not Applicable—No shoreline*				
Community Wildfire Protection Plan	No	Yes	No	Yes
Comment: *The 2040 General Plan Health and Safety Element includes policies that address wildfire. The Town's Local Hazard Mitigation Plan includes mitigation measures for Wildfire. Additional measures were adopted by Town Council in 2019 in response to the October 2017 Nuns and Tubbs fires. The Town and Sonoma County Fire Protection District prepared the Riparian Corridor Wildfire Fuel Management Plan which was accepted by Town Council in June 2020. The County of Sonoma is preparing a Community Wildfire Protection Plan.*				
Forest Management Plan	No	No	No	No
Comment:				
Climate Action Plan	No	No	Yes	Yes
Comment: *The 2040 General Plan Health and Safety Element includes policies that address Climate Change Adaptation. The Town Council adopted a Climate Emergency Resolution (Resolution 3548-19) that identifies specific measures that are currently being undertaken to address climate change and additional measures that the Town should implement. The 2040 General Plan includes a Qualified Greenhouse Gas Emissions Reduction Plan. The Town does not have a town-wide Climate Action Plan. The Town has a Greenhouse Gas Reduction Plan for Town operations. The Town is in the process of preparing a Climate Adaptation (Windsor Ready) Plan that is expected to be completed in January 2022.*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Emergency Management Plan	Yes	No	No	Yes
Comment:				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	No
Comment: *Bay Area Urban Areas Security Initiative*				
Post-Disaster Recovery Plan	No	No	No	No
Comment:				
Continuity of Operations Plan	No	Yes	No	Yes
Comment: *The County has a Continuity of Operations Plan (COOP).*				
Public Health Plan	No	Yes	No	No
Comment: *Public Health is the responsibility of the County of Sonoma.*				
Other	No	No	No	No
Comment: *N/A*				

Table 5-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? ***If no, who does? If yes, which department?***	Yes Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Yes—for housing sites

Table 5-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes (water and sewer)
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 5-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planners, Community Development Department Engineers, Public Works Department.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Official and Building Inspectors, Community Development Department Engineers and Inspectors, Public Works Department
Planners or engineers with an understanding of natural hazards	Yes	Planners, Community Development Department Deputy Director of Water and Environment, Environmental Program Manager, Public Works Department
Staff with training in benefit/cost analysis	Yes	Administrative Services Department
Surveyors	Yes	Consultant Services Public Works Department
Personnel skilled or trained in GIS applications	Yes	IT Manager and Management Analyst, Administrative Services Department Engineer 1, Public Works Department
Scientist familiar with natural hazards in local area	Yes	Deputy Director of Water and Environmental, Public Works Department
Emergency manager	Yes	Town Manager
Grant writers	Yes	Consultant Services to all Town Departments
Other	No	N/A

Table 5-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes A staff person in the Town Manager's Office serves in this role as needed.
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? ***If yes, briefly describe.***	Yes The Town's current Local Hazard Mitigation Plan is available on the Town's website.
Do you use social media for hazard mitigation education and outreach? ***If yes, briefly describe.***	Yes Facebook, Next Door
Do you have any citizen boards or commissions that address issues related to hazard mitigation? ***If yes, briefly describe.***	No
Do you have any other programs already in place that could be used to communicate hazard-related information? ***If yes, briefly describe.***	Yes Press Release, Town website, Town email list
Do you have any established warning systems for hazard events? ***If yes, briefly describe.***	Yes SoCo Alerts, Nixle, reverse 911 On Red Flag days, Red Flags are flown outside fire stations. During evacuations, Hi-Lo sirens are used by the Police Department to notify residents of the need to evacuate.

Table 5-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Community Development
Who is your floodplain administrator? (department/position)	Building Official
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2016
Does your floodplain management program meet or exceed minimum requirements? ***If exceeds, in what ways?***	Exceeds Development in the floodway is prohibited.
When was the most recent Community Assistance Visit or Community Assistance Contact?	2019
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? ***If so, state what they are.***	No
Are any RiskMAP projects currently underway in your jurisdiction? ***If so, state what they are.***	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? ***If no, state why.***	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? ***If so, what type of assistance/training is needed? It would be helpful to have a certified floodplain manager on staff,***	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? ***If yes, is your jurisdiction interested in improving its CRS Classification?*** ***If no, is your jurisdiction interested in joining the CRS program?***	No No Potentially
How many flood insurance policies are in force in your jurisdiction?[a] ***What is the insurance in force?*** ***What is the premium in force?***	66 $20,538,100 $84,580
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?***	3 $45,252

a. According to FEMA statistics as of November 30, 2020

Table 5-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608185922	N/A
DUNS #	Yes	094865953	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	3	December 23, 2019
Public Protection	Yes	2	December 1, 2015
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 5-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating[a]
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
Comment: *Windsor is a small jurisdiction with limited resources that have been further constrained due to recent wildfires and the Covid-19 pandemic. T*	
Jurisdiction-level monitoring of climate change impacts	Low
Comment: *Windsor is a small jurisdiction with limited resources. We lack staff and financial resources for jurisdiction-level monitoring.*	
Technical resources to assess proposed strategies for feasibility and externalities	Low
Comment: *The Town lacks the staff and financial resources and would need to rely on federal and State grant funding.*	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Comment: *The Town does not have the resources or staff with the appropriate technical skills to prepare this. The Town has used a consultant in the past to prepare the Town's municipal-operations GHG inventory, but a Town-wide inventory has not been prepared.*	
Capital planning and land use decisions informed by potential climate impacts	High
Comment: *Resources are limited. When considering capital projects, the projects included in the Local Hazard Mitigation Plan are considered. The 2040 General Plan includes GHG reduction and Climate Resiliency policies. The Town's adopted Building Code exceeds minimum requirements. The Town has historically required compliance Cal Green Tier 1 standards.*	
Participation in regional groups addressing climate risks	High
Comment: *The Town participates in the Regional Climate Protection Authority and the Town Council adopted a Climate Emergency Resolution in 2019 that includes measures to reduce GHG emissions in order to reduce climate change impacts.*	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	High
Comment: *The Town Council adopted a Climate Emergency resolution that identifies existing GHG reduction measures and new measures to reduce climate change impacts. The 2040 General Plan includes a qualified GHG reduction plan that includes policies that apply to public and private projects.*	
Identified strategies for greenhouse gas mitigation efforts	Medium
Comment: *The 2040 General Plan includes a Qualified GHG Reduction Plan. The Town's adopted 2019 Building Code requires Tier 1 for construction projects. Additional resources to find and implement strategies would be helpful.*	
Identified strategies for adaptation to impacts	Medium
Comment: *The 2040 General Plan Health and Safety Element includes policies that address Climate Change Adaptation. The Town Council adopted a Climate Emergency Resolution (Resolution3548-19) that identifies specific measures that are currently being undertaken to address climate change and additional measures that the Town should implement. The 2040 General Plan includes a Qualified Greenhouse Gas Emissions Reduction Plan. The Town is in the process of preparing a Climate Adaptation (Windsor Ready) Plan that is expected to be completed in January 2022.*	
Champions for climate action in local government departments	High
Comment: *The Town has staff members in all departments and at all levels of the organization that support climate action initiatives.*	
Political support for implementing climate change adaptation strategies	High
Comment: *The Town Council has adopted an Emergency Climate Resolution and the Town has had a GHG Reduction Plan for Town-operations since approximately 2006. The Town Council considers climate impacts in its decision-making.*	
Financial resources devoted to climate change adaptation	Low
Comment: *Windsor is a small jurisdiction with limited resources, especially in light of the recent wildfires and the current Covid-19 pandemic. The Town does not have the resources for a full-time staff position to be devoted to this. The Town does have a consultant that identifies grant opportunities and the preparation of grant applications.*	
Local authority over sectors likely to be negative impacted	High
Comment: *Windsor is a small jurisdiction with limited resources, especially in light of the recent wildfires and the current Covid-19 pandemic. However, there are staff in all departments, especially Public Works, Parks and Facilities, and Community Development with authority over areas likely to be impacted by hazards.*	

Criterion	Jurisdiction Rating[a]
Public Capacity	
Local residents knowledge of and understanding of climate risk	Medium
Comment: *Additional education of the general public would be helpful. There are a few members of the general public that are involved and aware of climate risk. The Town is preparing a Climate Adaptation (Windsor Ready) Plan that should be completed in January 2022. The community engagement that will be done as part of the Windsor Ready Plan will help educate more members of the public.*	
Local residents support of adaptation efforts	Medium
Comment: *The Town Council strongly supports adaptation efforts and the Town is currently preparing a Climate Adaptation (Windsor Ready) Plan. There are representatives of the business community and general public that are highly interested in climate adaptation efforts.*	
Local residents' capacity to adapt to climate impacts	Medium
Comment: *The Town and County have been impacted recently by a series of wildfires, drought, and the Covid-19 pandemic. The residents have become more resilient and better prepared for hazards and better understand the effects of climate on wildfires and drought.*	
Local economy current capacity to adapt to climate impacts	Low
Comment: *The Town and County have been impacted recently by a series of wildfires, drought, and the Covid-19 pandemic. The wildfires and pandemic have taken a substantial financial toll on the local business community.*	
Local ecosystems capacity to adapt to climate impacts	Unsure
Comment:	

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

5.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

5.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **2040 Town of Windsor General Plan**—The Windsor 2040 General Plan includes a Public Health and Safety Element that addresses hazards, as well as a GHG section and Climate Change and Resiliency section.
- **2019 Building Code**—Windsor's 2019 Building Code requires certain Fire (7A) building materials and methods for all new construction, including additions.
- **Town of Windsor Capital Improvement Program**—Four different Capital Improvement Programs (CIP) include hazard mitigation related projects: 1) Water (Potable) CIP, which includes projects for the treatment and delivery of water; 2) Water Reclamation CIP, which includes sewer, recycled water, and water treatment projects; 3) Drainage CIP, which includes projects for the conveyance and detention of

stormwater to prevent flooding; and 4) Traffic, which includes traffic and circulation improvements for pedestrians, bicycles, and vehicles, including sidewalks, trails, and roadways.

- **Water Master Plan** –The latest plan was adopted in November 2019
- **Riparian Corridor Wildfire Fuel Management Plan**—The Plan was accepted by the Town Council in June 2020 and implements one of the actions listed in the Town's local hazard mitigation plan.

5.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Zoning Ordinance**—The Zoning Ordinance includes land uses and development standards for private property. The Town is in the process of preparing an update to the Zoning Ordinance. The intent is to include requirements related to reducing the spread of wildfire due to ember-cast by including landscaping, fencing, and porch/deck requirements.
- **Regional Water Resiliency Plan**—The Regional Water Resiliency Plan is expected to be completed in Spring 2022.
- **Water Risk and Resiliency Assessment (As Required by The American Water Infrastructure Act/Plan)**—The Water Risk and Resiliency Assessment is due June 30, 2021 (1st submittal due) and December 31, 2021 (2nd submittal due).
- **Windsor Climate Adaptation Plan**—The Windsor Climate Adaptation Plan (Windsor Ready) is currently being prepared and will include measures that Windsor can take to adapt to climate change and will assist in the implementation of the Hazard Mitigation Plan. The Plan is expected to be completed in January 2022.
- **Water Shortage Contingency Plan Update** –The Water Shortage contingency Plan Update is due June 30, 2021.
- **Drought Contingency Ordinance Update** –The Drought Contingency Ordinance update will begin after adoption of the Water Shortage Contingency Plan Update.

5.6 RISK ASSESSMENT

5.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 5-11 lists past occurrences of natural hazards for which specific damage was recorded in Windsor. Other hazard events that broadly affected the entire planning area, including Sonoma County are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 5-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Drought	Unknown	2021 to present	Unknown
Wildfire (Glass)	Unknown	September 27 to October 20, 2020	Unknown
Wildfire (Walbridge)	Unknown	August 17 to October 20, 2020	Unknown
Covid-19 Pandemic	Unknown	February 2020 to present	Unknown
Wildfire (Kincade)	Unknown	October 23 – November 7, 2019	Unknown
PG&E Power Shutoff	Unknown	October 2019	Unknown
PG&E Power Shutoff	Unknown	October 2018	Unknown
Severe Weather, Flooding	Unknown	February 4 to March 1, 2019	Unknown
Drought	Unknown	2012 to 2016	Unknown
Severe Weather, Flooding, Power Outages	Unknown	March 29 to April 16, 2006	Unknown
Severe Weather, Flooding, Power Outages	Unknown	December 31, 2005 to January 3, 2006	Unknown
Landslide (Eastern Hills)	Unknown	January 1980	Unknown

5.6.2 Hazard Risk Ranking

Table 5-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 5-12. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Dam Failure	36	High
1	Earthquake	36	High
2	Wildfire[a]	35	High
3	Severe Weather	30	Medium
4	Flood	18	Medium
5	Drought[a]	18	Medium
6	Landslide	18	Low
7	Seal Level Rise	0	None
8	Tsunami	0	None

a. Quantitative rankings have been qualitatively adjusted based on local experience and knowledge.

Windsor's Hazard Mitigation Planning Team modified the following rankings: Wildfire changed from "Medium" to "High"; Landslide changed from "Medium" to "Low,"; and Drought changed from "Low" to "Medium."" The basis for the changing in the ranking of these hazards if provided below.

- **Wildfire.** The ranking for Wildfire was changed from medium to high based on: (1) the Kincade Fire in October 2019 resulted in the evacuation of all of Windsor and was expected to engulf the entire Town. The Town was spared due to a change in wind direction and the preparation, staging, and actions of firefighters; (2) the Walbridge Fire, which started on August 17, 2020, resulted the northwestern area of Windsor being under an evacuation warning; and (3) based on the risk assessment prepared for the Climate Adaptation Plan, there are two types of wildfire risk facing the Town, traditional wildfire risk

focused on buildings and people in the WUI, which creates a gradient of risk from the edges of Town and the emerging firestorm storm risk fueled by climate change that creates ember-cast that spreads wildfire to areas that not adjacent to the WUI. The map prepared for the Climate Adaptation Plan supports a risk ranking of High and is included as an attachment to this Annex.

- **Landslide.** The ranking for Landslide was changed to low from medium based on: (1) Windsor's topography being generally flat, with slopes limited to the northeastern hills which is less densely developed; (2) this hazard is less likely to occur than most of the other hazards; and (3) the extent and severity of the risk is more limited than the other hazards facing the Town.
- **Drought.** The ranking for Drought was changed from Low to Medium is based on: (1) the Town is currently experiencing a drought; (2) the Town experienced a prolonged drought from 2012 to 2017; (2) the likelihood of droughts becoming more frequent, longer in duration, and more severe; and (3) the potential impact on people and businesses depending on the measures enacted at the State and local level to ensure adequate water quantity and quality.

5.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for the jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Windsor's Hazard Mitigation Planning Team identified the following jurisdiction-specific vulnerabilities: (1) localized flooding; (2) spread of wildfire along riparian corridors; (3), narrow bridges that could impede emergency access and evacuation during hazard events; and (4) neighborhoods with one point of access. Each of these vulnerabilities is described in greater detail below.

- **Localized Flooding**: During rain and storm events, localized flooding occurs in several areas throughout Windsor, including Pool Creek at Windsor Road, Dawn Way near the intersection with Old Redwood Hwy, and the intersections of Arata Lane/Highway 101, Shiloh Road/Caletti Avenue, and Shiloh Road/Hwy 101 southbound on-ramp.
- **Wildfire Spread Along Riparian Corridors**: Based on experience with recent fires in our area, riparian corridors have been identified as areas that can provide a pathway for the spread of wildfire through Windsor, especially if regular fuel management is not occurring in these areas. Windsor is in the process of developing a climate adaptation plan (Windsor Ready Plan), which identifies creek corridors as areas that could result in the spread of wildfire throughout the Windsor. Most of the creeks in Windsor are bordered by residential development on both sides, placing people and homes at risk. The Town and Sonoma County Fire District have prepared the Riparian Corridor Wildfire Management Plan and is currently seeking funding to implement the plan.
- **Narrow Bridges**: Narrow two-lane bridges are located in several areas in Windsor, including Caletti Lane, Hembree Lane, Conde Lane, and Old Redwood Hwy between Billington Lane and Deanna Place. The bridge on Caletti Avenue is a wooden bridge that serves as the access point for the Town's industrial area. Hembree Lane and Old Redwood Hwy are primary crosstown streets that provide access to Hwy 101. Impeded access in these areas would limit emergency access and evacuation. Conde Lane is also a crosstown street that provides access to Hwy 101 via Shiloh Road.
- **Single-Point of Access Areas:** A climate adaptation plan is currently being developed for the Town, which has identified neighborhoods with a single-point of access. Much of Windsor was developed when it was standard practice to develop neighborhoods with a curvilinear street design with cul-de-sacs, rather than on a grid system that provides multiple points of access and better connectivity. For some areas, due

to the number of homes and served by the single-point of access, this could impede emergency access to these locations and evacuation if the access is blocked.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: None as of 3/28/2021
- Number of FEMA-identified Severe-Repetitive-Loss Properties: None as of 3/28/2021
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: None as of 3/28/2021

Other Noted Vulnerabilities

No other jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources.

5.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 5-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan (Town of Windsor Local Hazard Mitigation Plan) and their implementation status at the time this update was prepared.

Table 5-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Measure 1.1 Develop a community education/outreach program that widely distributes information to community members about the hazards that may affect Windsor and ways to mitigate those hazards, improving the Town's resiliency. Use print, broadcast, digital, and social media to reach community members, as well as in-person training sessions and events. Emphasize solutions that are cost-effective and widely applicable. Conduct Spanish-language outreach as part of this effort. Potential topics for the program may include: • Drought hazards and the ways to reduce water use and conserve in times of need. • Earthquake hazards and the activities that residents and businesses can do to reduce damage from shaking • Flood hazards and activities that residents and businesses can take to reduce impacts • Extreme Heat hazards and ways to prevent heat stroke and exhaustion • Wildfire impacts and ways to secure properties from wildfire threats.			✓	WIN-43

Comment: This measure has been revised. See Action WIN-43 in Table 1.14 below.

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Measure 1.2 Improve the resiliency of key roadways leading out of Windsor, particularly those connecting to hospital facilities by working with the City of Santa Rosa, Sonoma County, and Caltrans.			✓	WIN-52
Comment: Climate adaptation plan currently in progress that will address this measure. Included as Action WIN-52 in Table 1.14 below.				
Measure 1.3 Establish a resident-based emergency response program (Community Emergency Response Team [CERT], Citizen Corps, and others) in Windsor, and encourage participation among residents and employees.			✓	WIN-39 and WIN-42
Comment: Revised measures carried over to Plan Update. CERT and COPE will be separate into two actions. See actions WIN-39 and WIN-42 in Table 1.14 below.				
Measure 1.4 Distribute emergency notifications, through multiple forms of media and in both English and Spanish, about potential, imminent, and ongoing emergency situations. Ensure that all notifications are available to socially isolated persons and individuals with disabilities and that the notification network has sufficient redundancy in the event some communication systems are disrupted. (Continue Current Practice)	✓			
Comment: This has been implemented through the Town Manager's Office. Move to EOC team for continued implementation.				
Measure 1.5 Encourage private employers in Windsor to develop continuity of operations plans and conduct regular employee training sessions.		✓		
Comment: Removing from the HMP and moving to EOC team for implementation. The Town wants to focus on other measures.				
Measure 1.6 Conduct regular inspections of Town-owned critical facilities, especially water and wastewater systems and facilities, and retrofit facilities to reduce vulnerabilities to current and projected hazard conditions.			✓	WIN-2
Comment: Revised as Action WIN-2 in Table 1.14 below.				
Measure 1.7 To the extent possible, avoid siting new Town-owned facilities in hazard zones, and work with other organizations to encourage similar siting standards for critical facilities not owned by the Town.	✓			
Comment: This is required by policies in the Public Health and Safety Element of the Windsor 2040 General Plan and part of the Town's practice, so it is addressed by other plans.				
Measure 1.8 Perform an annual inventory of emergency supply storage locations and identify retrofit needs to be more resilient to natural hazards, if necessary. During this process inventory emergency supplies and modify inventories to meet changing community needs.	✓			WIN-2
Comment: An inventory of supplies is conducted by Facilities. This measure is partly covered by Action WIN-2 in Table 1.14 below.				
Measure 1.9 Construct new Town facilities to remain usable and operable following emergency conditions as feasible.	✓			
Comment: This is required by policies in the Public Health and Safety Element of the Windsor 2040 General Plan and part of the Town's practice, so it is addressed by other plans. Water and Wastewater facilities are constructed to seismic Zone 4 requirements as a standard practice.				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Measure 1.10 Evaluate the resiliency of utility infrastructure in the Town, and repair or replace vulnerable components by working closely with utility companies and other service providers. **Comment:** This is ongoing and will be addressed in the Climate Adaptation (Windsor Ready) Plan that should be completed in January 2022.. The Town would like to focus on other actions that it has more control over implementing.		✓		
Measure 1.11 Construct on-site renewable energy generation and storage systems at Town-owned facilities to support continued operations in the event of a power outage. Encourage residents and businesses to install energy generation and storage systems on their properties. **Comment:** Included as Action WIN-53 in Table 1.14 below.			✓	WIN-53
Measure 1.12 Regularly review and apply for available funding opportunities to implement hazard mitigation activities. Prioritize hazard mitigation retrofits and other construction activities in Windsor's Capital Improvement Program (CIP). **Comment:** Ongoing. It is the Town's practice as part of the development of its CIP and bi-annual budget to provide funding for mitigation actions. The Town has a consultant that helps identify and apply for grant funding to implement hazard mitigation actions.			✓	WIN-56
Measure 1.13 Conduct periodic hazard mitigation activity coordination with Sonoma County, nearby cities, and special districts to allow for a more unified County-wide mitigation approach. **Comment:** This measure will be replaced with measure WIN 5 & WIN 6 in Table 1.14 below.		✓		
Measure 1.14 Develop programs in coordination with community organizations, assisted care centers, and medical facilities to support emergency awareness and mitigation among elderly and disabled persons, including providing transportation to evacuation and cooling centers as needed. ***Comment:*** Remove. This can be shifted to EOC measures, since it does not prevent or mitigate hazards.		✓		
Measure 1.15 Monitor emerging information about how hazards may change in the future, particularly hazards related to climate change. Refine estimates of damage from hazard scenarios. Incorporate new and updated information into future planning efforts. WIN 5 and WIN 6 **Comment:** This measure will be replaced by measure WIN 5 & WIN 6 in Table 1.14 below.			✓	WIN-5 WIN-6
Measure 1.16 Establish a vulnerable population support network, working closely with community organizations and assisted care centers to foster informal support networks through a program to encourage people to check in with and provide assistance to elderly and disabled neighbors. ***Comment:*** Remove. This can be shifted to EOC measures, since it does not prevent or mitigate hazards. The Town Manager's Office and Senior Center have begun a program to do check-in calls during the Covid-19 pandemic. This program will continue to be developed and expanded.	✓			
Dam Failure 2.1 Support efforts by the US Army Corps of Engineers and other dam owners/operators to conduct dam safety inspections and retrofits as needed. **Comment:** Since Windsor does not own any dams and new actions included in this plan would have more of an impact in responding in the event of a dam failure, this action is being removed.		✓		

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Dam Failure 2.2 Support dam inundation map and dam emergency action plan updates in coordination with Sonoma County.		✓		
Comment: Since Windsor does not own any dams and new actions included in this plan would have more of an impact in responding to a dam failure, this action is being removed.				
Drought 3.1 Expand opportunities to use recycled water and graywater in Windsor, including supporting the use of dual-pipe systems in new and substantially retrofitted structures.			✓	WIN-18
Comment: Included as Action WIN-18 in Table1.14 below.				
Drought 3.2 Increase redundancy in the Town's water distribution network through multiple backup connections, particularly across fault lines.			✓	WIN-19
Comment: Included as Action WIN-19 in Table1.14 below.				
Drought 3.3 Expand use of xeriscaping or drought-tolerant native plants in Town-maintained landscaped areas to the extent possible. (Continue Current Practice)	✓			
Comment: This is the Town's practice and is implemented through the Parks and Recreation Department. It does not need to be included as a mitigation action, since it is already Town practice and the Town wants to focus on other actions.				
Drought 3.4 Encourage all new landscaping projects to exceed minimum state water efficiency requirements.		✓		
Comment: The Town's Water Efficiency Ordinance requires compliance with State requirements. The Town wants to focus on other actions that would better address drought.				
Drought 3.5 Incorporate drought frequency (i.e., multiple-dry year hydrologic conditions) into Town's urban water management planning efforts.	✓			
Comment: The Town's Urban Water Management Plan (UWMP) is required to include this information. The Town is updating its UWMP at this time and the update includes this information as required.				
Drought 3.6 Offer incentives for water efficiency retrofits to existing homes and businesses, and explore ways to expand incentive opportunities.	✓			
Comment: The Town's PAYS program, a program that allows property owners to finance improvements and repay installments on their utility bills, is an ongoing program. The County of Sonoma allows improvements to be made and repaid through installments as part of their property tax bill. This program is open to property owners in Sonoma County.				
Earthquake 4.1 Require new development in a seismic hazard area, or in an area of extreme or heavy ground shaking, to prepare a geotechnical hazard report and to implement earthquake seismic safety measures as appropriate. (Continue Current Practice)	✓			
Comment: This is required by policies in the Public Health and Safety Element of the Windsor 2040 General Plan and part of the Town's practice, so it is addressed by other plans. It is also required by the Building Code since the Town is an area of seismic activity.				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Earthquake 4.2 Develop incentives or requirements for property owners to retrofit seismically vulnerable structures.		✓		
Comment: Most buildings in Windsor were built in the mid-1980s or later, so the buildings are consistent with modern seismic requirements. The Building Code requires water heaters to be strapped down to address seismic hazards. Since water heaters last approximately 10 years, it is likely that water heaters in Windsor are consistent with this requirement. Due to the above, retrofits would likely be cost prohibitive.				
Earthquake 4.3 Identify incentives to encourage residential project applicants to build new residential structures so they remain safely habitable following a substantial earthquake.	✓			
Comment: Since the Town is in an area of seismic activity, the Building Code requires buildings to be constructed to meet specific seismic requirements.				
Extreme Heat 5.1 Designate community facilities to operate as cooling centers when temperatures reach an established threshold, and ensure designated facilities are adequately stocked with necessary supplies. Widely distribute information about cooling centers to Windsor residents. Ensure that there is sufficient staffing and other resources to allow cooling centers to operate on all days, including weekends and holidays if needed. (Continue Current Practice and Preparedness Related Activity)	✓			
Comment: This item has been moved to the EOC team for ongoing implementation.				
Extreme Heat 5.2 Encourage property owners to weatherize homes and businesses in Windsor, particularly older structures, including the planting of shade trees.		✓		
Comment: Since this action does not include a project or program, the Town has decided it would like to focus on other actions.				
Extreme Heat 5.3 Educate Town employees, particularly employees who frequently work outdoors, about extreme heat hazards. Encourage other employers in Windsor to provide extreme heat training to their employees. (Preparedness Related)	✓			
Comment: This is done by the Human Resources, which also provides alerts Town employees on extreme heat/weather days and days with unhealthy air quality.				
Extreme Heat 5.4 Provide shade structures at bus stops, and in public parks and other landscaped areas.	✓			WIN-29
Comment: The Parks and Recreation Department plants trees in public parks that provide shade. This action has been revised as action WIN-29 in Table 1.14 below.				
Flooding 6.1 Identify areas that frequently flood during intense precipitation events. Upgrade storm drains in these areas, including expanding capacity or installing additional drains, to reduce localized flooding.				WIN-24 and WIN-25
Comment: This action has been revised. See Actions WIN-24 and WIN-25 in Table 1.14 below.				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Flooding 6.2 Conduct storm drain maintenance regularly to ensure systems are operating at peak capacity, especially in advance of and during the rainy season. (Preparedness Related)			✓	WIN-25
Comment: This is ongoing standard practice for the Public Works Department before and during rain events. Included as Action WIN-25 in Table 1.14 below.				
Flooding 6.3 Retrofit public surfaces and landscapes, including plazas, parking lots, and parks, to use low-impact development strategies such as permeable paving, rain gardens, and bioswales. (Continue Current Practice)		✓		
Comment: This action, since it implements low impact development (LID), has a nominal effect on flooding or severe weather events. The use of LID is also a Town requirement and standard practice. Other actions have been included that better mitigate flooding and severe weather events.				
Flooding 6.4 Restrict land uses in floodways to uses that are compatible with occasional flooding, including agricultural operations, open space, and natural conservation land. Discourage new development within the 100-year floodplain. (Continue Current Practice)	✓			
Comment: The Town's Floodplain Management Ordinance restricts development in the floodway and discourages development in the 100-year floodplain by requiring development to be elevated above the base flood level and allowing "no net runoff" from the site.				
Flooding 6.5 Explore requiring all new development in the 100-year and 500-year floodplains to implement flood mitigation strategies, emphasizing the use of low-impact development and "soft" strategies.		✓		
Comment: This action has been determined to be infeasible. There are few areas in Windsor that are in the 500-year floodplain and they have already been developed.				
Flooding 6.6 Require that new development projects, including infrastructure, will not change local hydrology and cause an increase in flood risks for surrounding properties.			✓	WIN-26
Comment: This is required by the Town's Municipal Code and Building Code. Continue current practice. Included as Action WIN-26 in Table 1.14 below.				
Flooding 6.7 Develop passive detention basins to better collect and manage stormwater flows, designing and building the basins to be consistent with low-impact development strategies.			✓	WIN-27
Comment: Low impact development and detention are different types of actions and should not have been included in the same action. Revised this action to delete the reference to low impact development. See Action WIN-27 in Table 1.14 below.				
Landslide 7.1 Require any development in landslide hazard zones to use minimal grading and to site development in locations with the least exposure to unstable slopes, to the greatest extent feasible.			✓	WIN-30
Comment:				
Landslide 7.2 Work with Sonoma County and CAL FIRE to replant and stabilize recently burned slopes from wildfires.			✓	WIN-49
Comment:				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Landslide 7.3 Support the use of vegetation with strong root systems, natural drainage swales, and other "soft" solutions to improve slope stability.		✓		
Comment: This action has been determined to have a nominal effect on mitigating landslide hazards.				
Liquefaction 8.1 Require new development in liquefaction-prone areas to conduct a geotechnical analysis and to include features that decrease the risk of damage from liquefaction events.			✓	WIN-47
Comment:				
Wildfire 9.1 Ensure compliance with vegetation management standards and other County fire safe standards to reduce wildfire risk in the area surrounding Windsor, working with Sonoma County, and the Sonoma County Fire Protection District.			✓	WIN-50
Comment: Measure revised to change Windsor Fire District and Rincon Valley Fire District to Sonoma County Fire Protection District, since the two fire districts consolidated in 2020. Included as Action WIN-50.				
Wildfire 9.2 Participate in mutual aid agreements to provide wildfire protection services in Foothill Regional Park. (Continue Current Practice)			✓	WIN-49
Comment:				
Wildfire 9.3 Provide air quality alerts through the Town's notification system about smoke exposure, wildfire particulate matter, and other risks from regional wildfires, in concert with the Bay Area Air Quality Management District and the Northern Sonoma County Air Pollution Control District. (Preparedness Related)	✓			
Comment: Remove since this is occurring through the Town Manager's Office as part of EOC operations. Information is provided to Town employees and to the community on the Town's website and through social media.				
Wildfire 1 added in 2019 Identify and map areas located within and proximate to a moderate or high fire severity zone and require fire-wise building design and materials, and fire-wise landscaping materials and design in these areas for new construction, additions and retrofits.	✓			WIN-33
Comment: The Town and Sonoma County Fire Protection District have decided to take a Town-wide approach to these actions. Completed the Fire-Wise building requirements as amendments to the adopted 2019 Building Code. The landscaping requirements will be completed with the Town's Zoning Ordinance Update, which should be completed by the end of 2022. Landscaping part of this measure is included as Action WIN-33 in Table 1.14 below.				
Wildfire 2 added in 2019 Identify and map primary and secondary evacuation routes for wildfire fire-related evacuation and educate residents and businesses of their evacuation route(s).			✓	WIN-44
Comment: The Town has prepared and posted on its website an evacuation zone map. The map identifies primary evacuation routes for each evacuation zone. The Town is preparing a Climate Adaptation Plan that will include this information. The Plan should be completed in January 2022. This action was revised and is included as Action WIN-44 in Table 1.14 below.				
Wildfire 3 added in 2019 Design and construct extension of Los Amigos Road and northbound ramp to US101 to provide an evacuation route to US 101 and provide fire break to limit the spread of the fire.		✓		WIN-31
Comment: This action has been revised. See Action WIN-31 in the Table 1.14 below.				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Wildfire 4 added in 2019 Identify and map priority locations for the undergrounding of utilities and consider proximity to an evacuation route, moderate and high fire severity zones, and critical facilities when determining priorities.		✓		WIN-45
Comment: Undergrounding utilities is also required by the Town's Municipal Code. This action has been revised. See Action WIN-45 in Table 1.14 below.				
Wildfire 5 added in 2019 Require the undergrounding of utilities as part of development projects. (Continue current practice)			✓	WIN-45
Comment: Undergrounding utilities is required by the Town's Municipal Code. This action has been revised. See Action WIN-45 in Table 1.14 below.				
Wildfire 6 added in 2019 Identify and map Town-owned and operated critical facilities, identify critical facilities with backup power sources, and prioritize acquisition of backup power sources for those facilities without backup power.		✓		WIN-9 and WIN-10
Comment: Since the Town now has a better understanding of the backup power needed, this action is being replaced with Actions WIN-9 and WIN-10 in Table 1.14 below.				
Wildfire 7 added in 2019 Work with other agencies, residents, and homeowner associations to reduce fuel loads, such as the removal of vegetation in Foothill and Shiloh Ridge parks.			✓	WIN-46
Comment:				
Wildfire 8 added in 2019 Identify and map areas most at risk of Wildfire based on proximity to the Wildland Urban Interface (WUI) and moderate/high fire severity, prevailing winds, and age of construction and focus initial outreach and education on areas and populations identified as most at risk.		✓		
Comment: Based on the Town's experience with the Kincade Fire, which threatened the entire Town, the Town has decided to focus measures Town-wide.				
Wildfire 9 added in 2019 Identify and map neighborhoods in Windsor, especially neighborhoods or areas comprised of vulnerable populations and individuals, who may need assistance in the event of a disaster (elderly, disabled, limited mobility, lack of transportation, non-English speaking) and establish a vulnerable population support network, working closely with community organizations and assisted care centers to foster informal support networks through a program to encourage people to check in with and provide assistance to elderly and disabled neighbors.			✓	WIN-34
Comment:				
Wildfire 10 added in 2019 Educate the community on the use of fire-wise building and landscape design and materials to prevent the spread of wildfire, including providing materials on the Town's website.		✓		WIN-43
Comment: Revised this measure to a "general" community outreach and education action for all hazards. See Action WIN-43 in Table 1.14 below.				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Wildfire 11 added in 2019 Identify and map the location of alternate water sources, as part of the Town's Water Master Plan, to provide backup water sources in case primary source(s) fail or are unavailable and make these sources available. ***Comment:*** Included as Action WIN-48 in Table 1.14 below.			✓	WIN-48
Wildfire 12 added in 2019 Identify and map properties owned or operated by the Town, Water District, Windsor Unified School District, other public agencies, and religious and service organizations that can be used for RVs, trailers, etc. and large animals in the event of an evacuation and establish relationships and enter into MOA or MOU with these entities for the use of these properties in the event of an evacuation. ***Comment:*** Action carried forward. See Action WIN-35 in Table 1.14 below.			✓	WIN-35
Wildfire 13 added in 2019 Identify and map potential shelter locations and the features of each location (e.g. type of parking, singles, families, large animal, small animal, etc.) on properties owned or operated by the Town, Water District, Windsor Unified School District, other public agencies, and religious and service organizations and establish partnerships with these entities to educate and distribute this information to residents and businesses prior to and during an emergency requiring evacuation and to provide assistance in the event of an emergency. Enter MOAs or MOUs as applicable. ***Comment:*** Action carried forward. See Action WIN-36 in Table 1.14 below.			✓	WIN-36
Wildfire 14 added in 2019 Establish and provide training for a staff-based emergency response program (Community Emergency Response Team [CERT]). and establish and provide training for residents through Citizen Corps, *Citizens Organized to Prepare for Emergencies* [COPE], or other) in Windsor, and encourage participation among residents and employees. ***Comment:*** Action carried forward as two separate measures. COPE has been established. Need to implement CERT training. In updated Plan, CERT and COPE will be separate actions. See Actions WIN-39 and WIN-42 in Table 1.14 below.		✓		WIN-39 and WIN-42
Wildfire 15 added in 2019 Expand community education and outreach through community meetings, social media, website, etc. ***Comment:*** This action has been completed. Since this will be an ongoing action, Action WIN-43 in Table 1.14 below.	✓			WIN-43
Wildfire 16 Added in 2019 Identify transportation options and potential ways to provide the transportation identified for people who do not drive or have limited mobility. ***Comment:*** Included as Action WIN-54 below. The Climate Adaptation Plan, which should be completed in January 2022, should include information that will assist in implementing this measure.			✓	WIN-54
Wildfire 17 Added in 2019 Identify communication methods for people with limited/no technology. ***Comment:*** Included as Action WIN-55 below. The Climate Adaptation Plan, which should be completed in January 2022, should include information that will assist in implementing this measure.			✓	WIN-55

5.8 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 5-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 5-15 identifies the priority for each action. Table 5-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 5-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-1—Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard areas.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
Existing	3, 4, 10	Windsor		High	HMGP, BRIC, FMA	Ongoing
Action WIN-2—Inspect critical facilities and infrastructure, identify those that are recommended to be retrofitted or relocated, and retrofit or relocate as appropriate, prioritizing structures and infrastructure located in high or medium ranked hazard areas.						
Hazards Mitigated: Earthquake, flooding, landslide, severe weather, wildfire						
Existing	3, 4, 6	Windsor		High	HMGP, BRIC, FMA	Ongoing
Action WIN-3—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community including the General Plan, Building Code, Zoning Ordinance, Municipal Code, Emergency Operations Plan, Climate Adaptation Plan., Riparian Corridor Wildfire Fuel Management Plan, etc.						
Hazards Mitigated: Dam failure, drought, earthquake, flooding, landslide, severe weather, wildfire						
New & Existing	1, 3, 4, 5, 7, 8, 10	Windsor		Medium	Staff Time, General Fund, BRIC	Ongoing
Action WIN-4—Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, wildfire						
New & Existing	1, 5, 8	Windsor		Low	Staff Time, General Fund, BRIC	Short-term
Action WIN-5—Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, wildfire						
New & Existing	all	Windsor	County of Sonoma	Low	Staff Time, General Fund	Ongoing
Action WIN-6—Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
Hazards Mitigated:						
New & Existing	all	Windsor	County of Sonoma	Low	Staff Time, General Fund	Ongoing
Action WIN-7—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: Enforcement of the flood damage prevention ordinance; Participate in floodplain identification and mapping updates; and Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Severe weather, flooding						
New & Existing	1, 3, 5, 7, 8, 10	Windsor		Low	Staff Time, General	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-8—Implement plans and ordinances that include measures that avoid or reduce the impacts of hazards and increase resiliency, such as the 2040 General Plan, Municipal Code, Building Code, Riparian Corridor Wildfire Fuel Management Plan, Storm Drain Master Plan, Water Master Plan, Ground Water Sustainability Plan, Windsor Resiliency Plan (Windsor Ready), Urban Water Management Plan, Collection System Master Plan.						
Hazards Mitigated: Dam failure, drought, earthquake, flooding, landslide, severe weather, wildfire						
New & Existing	1, 3, 4, 5, 6, 7, 8	Windsor		High	Staff Time, General Fund, BRIC	Ongoing
Action WIN-9—Purchase a minimum of two permanent generators for critical facilities and infrastructure that lack adequate backup power, including for the water reclamation facility and river wells that are 1 to 1.5 MW each and natural gas or diesel.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, wildfire						
Existing	2, 6, 9	Windsor		High	HMGP, BRIC, Capital Improvement Program, General Fund	Short-term
Action WIN-10—Purchase eight portable generators and ten switch gear for critical infrastructure and facilities to maintain water and wastewater services and to allow critical facilities to remain operational during hazard events.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, wildfire						
New	2, 6, 9	Windsor		High	HMGP, BRIC, Capital Improvement Program, General Fund	Short-term
Action WIN-11—Develop a post-disaster recovery plan, continuity of operations, and a debris management plan.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, wildfire						
Existing	1, 3, 6	Windsor		Medium	General Fund, BRIC	Short-term
Action WIN-12—Participate in programs such as the Community Rating System and the ISO's Building Code Effectiveness Grading Schedule and Public Protection.						
Hazards Mitigated: Earthquake, flooding, landslide, severe weather, wildfire						
	1, 6, 9, 11	Windsor		Low	General Fund, BRIC	Ongoing
Action WIN-13—Work with building officials to identify ways to improve the jurisdiction's Building Code Effectiveness Grading Schedule classification.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, wildfire						
New and Existing	1, 6, 8, 10, 11	Windsor	County of Sonoma City of Santa Rosa City of Cotati City of Sonoma	Low	Staff Time, General Fund	Ongoing
Action WIN-14—Establish protocols for regular communications with the owners/operators of dams that have the potential to impact Windsor, request current emergency response plans, and maintain communication consistent with these protocols.						
Hazards Mitigated: Dam failure						
Existing	5, 8, 10	Windsor		Medium	Staff Time, General Fund	Short-term
Action WIN-15—Create an emergency warning link between the dam's alerting system and the Town.						
Hazards Mitigated: Dam failure						
Existing	5, 8, 10	Windsor		Low	Staff Time, General Fund	Short-term
Action WIN-16—Develop a public outreach plan to educate residents on dam failure and response.						
Hazards Mitigated: Dam failure						
Existing	5, 8, 10	Windsor		Low	Staff Time, General Fund	Short-term
Action WIN-17—Incorporate a dam failure annex as part of the Town's emergency operations plan (EOP).						
Hazards Mitigated: Dam failure						
Existing	1, 6, 8, 10	Windsor		Medium	Staff Time, General Fund, BRIC	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-18—Expand opportunities to use recycled water and graywater in Windsor, including storage, supporting the use of dual-pipe systems in new and substantially retrofitted structures.						
Hazards Mitigated: Drought						
New & Existing	1, 4, 6	Windsor		High	Capital Improvement Program Funds, Grant Funding	Ongoing
Action WIN-19—Increase redundancy in the Town's water distribution network through multiple backup connections, particularly across fault lines.						
Hazards Mitigated: Drought, earthquake, flooding, severe weather, wildfire						
New & Existing	1, 4, 6	Windsor		High	Capital Improvement Program Funds, Grant Funding	Ongoing
Action WIN-20—Construct improvements that improve the supply of potable water and that provide alternative sources for potable water, including new Town wells to offset use of water from the Russian River, expansion of the recycled water system, and improvements of the distribution system.						
Hazards Mitigated: Drought, Flooding						
New and Existing	1, 6	Windsor		High	HMGP, BRIC, FMA, General Fund, Capital Improvement Program	Long-term
Action WIN-21—Implement the Storm Drain Master Plan, including the construction of improvements that reduce flooding events.						
Hazards Mitigated: Flooding, Severe Weather						
New & Existing	1, 4, 6, 10, 11	Windsor		High	HMGP, BRIC, FMA, General Fund, Funds	Long-term
Action WIN-22—Construct improvements to the wastewater system to ensure adequate sizing to prevent overflow during severe weather or flooding.						
Hazards Mitigated: Flooding, Severe Weather						
New & Existing	1, 4, 6, 10, 11	Windsor		High	Capital Improvement Funds, Grant Funds	Long-term
Action WIN-23—Identify areas that experience frequent localized flooding during intense precipitation events. In areas with frequent localized flooding construct improvements to reduce flooding, including upgrading storm drains, and installing additional drains.						
Hazards Mitigated: Flooding, Severe Weather						
New & Existing	1, 4, 10	Windsor		High	Bonds, Capital Improvement Program Funds, HMGP, BRIC, FMA	Long-term
Action WIN-24—Identify areas that experience frequent riparian flooding during intense precipitation events. In areas with frequent riparian flooding evaluate and construct improvements to reduce flooding impacts where practical, including detention areas, moving infrastructure out of flood plain or raising it above frequent flood elevation, increasing flow capacity of riparian channels to minimize upstream and downstream flood impacts.						
Hazards Mitigated: Flooding, Severe Weather						
New & Existing	1, 4, 10	Windsor		High	Bonds, Capital Improvement Program Funds, HMGP, BRIC, FMA	Long-term
Action WIN-25—Conduct storm drain maintenance regularly to ensure systems are operating at peak capacity, especially in advance of and during the rainy season.						
Hazards Mitigated: Flooding, Severe Weather						
Existing	1, 10	Windsor		Low	General Fund, Staff Time	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-26—Require that new development projects, including infrastructure, will not change local hydrology and cause an increase in flood risks for surrounding properties.						
Hazards Mitigated: Flooding, Severe Weather						
New	1, 4, 7, 9, 10, 11	Windsor	Sonoma Water	Low	Staff Time, General Fund	Ongoing
Action WIN-27—Develop passive detention basins to better collect and manage stormwater flows.						
Hazards Mitigated: Flooding, Severe Weather						
New & Existing	1, 4, 10	Windsor		High	HMGP, BRIC, FMA, Capital Improvement Program Funds	Long-term
Action WIN-28—When developing or retrofitting public spaces such as bus stops, public parks and other public landscaped areas, provide shade through the use of shade structures, sail cloth, trees, or similar methods.						
Hazards Mitigated: Severe Weather						
Existing	1, 3	Windsor	Sonoma County Transit	Low	General Fund	Ongoing
Action WIN-29—Work with Sonoma County and CAL FIRE to replant and stabilize recently burned slopes from wildfires.						
Hazards Mitigated: Landslide						
Existing	1, 2, 4	Sonoma County, CAL FIRE	Windsor Sonoma County FPD	Low	Staff Time, General Fund	Ongoing
Action WIN-30—Require any development in landslide hazard zones to use minimal grading and to site development in locations with the least exposure to unstable slopes, to the greatest extent feasible.						
Hazards Mitigated: Landslide						
New	1, 7, 11	Windsor		Low	Staff Time, General Fund	Ongoing
Action WIN-31—Design and construct roadway improvements and extensions and that improve or maintain emergency vehicle access and evacuation and that provide staging areas and fire breaks, including the Eastside Connector Road (aka North-South Jensen Lane in 2040 General Plan), the extension of Los Amigos Road, and US 101 northbound onramp.						
Hazards Mitigated: Dam Failure, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	4, 6	Windsor	Cal Trans County of Sonoma	High	HMGP, General Fund, Capital Improvement Program	Long-term
Action WIN-32—Design and construct bridge improvements, including widening, that improve or maintain emergency vehicle access and evacuation, prioritizing bridges in areas with a single point of access or that are too narrow to allow for adequate emergency access.						
Hazards Mitigated: Dam Failure, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	4, 6	Windsor	Cal Trans	High	HMGP, General Fund, Capital Improvement Program	
Action WIN-33—Adopt measures to require landscaping and fencing that meet recommendations from the Sonoma County Fire Protection District to prevent the spread of wildfire, such as the location and type of materials allowed proximate to structures.						
Hazards Mitigated: Wildfire						
New & Existing	1, 4, 7, 9, 11	Windsor	Sonoma County FPD	Low	Staff Time, General Fund, HMGP, BRIC	Short-term
Action WIN-34—Identify and map neighborhoods in Windsor, especially neighborhoods or areas comprised of vulnerable populations and individuals, who may need assistance in the event of a disaster (elderly, disabled, limited mobility, lack of transportation, non-English speaking) and establish a vulnerable population support network, working closely with community organizations and assisted care centers to foster informal support networks through a program to encourage people to check in with and provide assistance to elderly and disabled neighbors.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	5, 6	Windsor		Medium	Staff Time, General Fund	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-35—Identify and map properties owned or operated by the Town, Water District, Windsor Unified School District, other public agencies, and religious and service organizations that can be used for RVs, trailers, etc. and large animals in the event of an evacuation and establish relationships and enter into MOA or MOU with these entities for the use of these properties in the event of an evacuation.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	5, 6	Windsor		Medium	Staff Time, General Fund	Short-term
Action WIN-36—Identify and map potential shelter locations and the features of each location (e.g. type of parking, singles, families, large animal, small animal, etc.) on properties owned or operated by the Town, Water District, Windsor Unified School District, other public agencies, and religious and service organizations and establish partnerships with these entities to educate and distribute this information to residents and businesses prior to and during an emergency requiring evacuation and to provide assistance in the event of an emergency. Enter MOAs or MOUs as applicable.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	5, 6	Windsor		Medium	Staff Time, General Fund	Short-term
Action WIN-37—Develop a GIS system that includes infrastructure, critical facilities, Town assets, hazards, and land use information and train staff in the use and maintenance of the system.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	5, 6, 8, 9, 10	Windsor		High	Staff Time, General Fund, BRIC	Short-term
Action WIN-38—Develop and implement a system to track permits issued in hazard areas.						
Hazards Mitigated: Dam Failure, Flooding, Landslide, Wildfire						
New	7, 8	Windsor		Medium	Staff Time, General Fund, BRIC	Short-term
Action WIN-39—Establish and provide training for a staff-based emergency response program (Community Emergency Response Team [CERT]).						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe weather, Wildfire						
New & Existing	5, 6	Windsor	Sonoma County FPD	Medium	Staff Time, General Fund	Short-term
Action WIN-40—Have the appropriate Building Division and Public Works staff obtain certification as floodplain managers.						
Hazards Mitigated: Flooding						
New & Existing	1, 7, 8, 10, 11	Windsor		Medium	Staff Time, General Fund, BRIC	Short-term
Action WIN 41—Train the appropriate staff in post disaster safety assessment.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
Existing	6, 11	Windsor		Low	Staff Time, General Fund, HMGP, BRIC	Short-term
Action WIN-42—Support and promote the expansion of Citizens Organized to Prepare for Emergencies (COPE) and work with COPE to educate and inform the community.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	5, 6	Windsor	Sonoma County FPD	Low	Staff Time, General Fund	Ongoing
Action WIN-43—Continually expand and improve community outreach and education related to all hazards facing Windsor and climate resiliency, including through the use of the Town's website, social media platforms, COPE, community meetings, and neighborhood, business, and community groups. Conduct Spanish-language outreach as part of this effort.						
Hazards Mitigated: Dam Failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildfire						
New & Existing	5, 6, 10	Windsor	Sonoma County Sonoma County FPD	Low	Staff Time, General Fund	Ongoing
Action WIN-44—Develop and provide information on evacuation zones, evacuation routes, preparedness, and responding to hazard events.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	5, 6	Windsor		Medium	Staff Time, General Fund, Grant Funding	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-45—Continue to require the undergrounding of utilities as part of the development projects and seek funding for the undergrounding of utilities in areas where redevelopment or new development is unlikely to occur that are located on evacuation routes, in proximity to moderate or high severity zones, or critical facilities.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	1, 2, 4, 6, 7	Windsor		High	HMGP, General Fund	Long term
Action WIN-46—Work with other agencies, residents, and homeowner associations to reduce fuel loads, such as the removal of vegetation in Foothill and Shiloh Ridge parks.						
Hazards Mitigated: Wildfire						
New & Existing	1, 2, 11	Windsor	Sonoma County CAL FIRE Sonoma County FPD	Low	Staff Time, General Fund, HMGP, BRIC	Ongoing
Action WIN-47—Require new development in liquefaction-prone areas to conduct a geotechnical analysis and to include features that decrease the risk of damage from liquefaction events.						
Hazards Mitigated: Earthquake						
New	1, 7, 11	Windsor		Low	Staff Time, General Fund	Ongoing
Action WIN-48—Identify and pursue alternate water sources, as part of the Town's Water Master Plan, to provide backup water sources in case primary source(s) fail or are unavailable and make these sources available.						
Hazards Mitigated: Drought, Earthquake, Wildfire						
New & Existing	1, 4, 6	Windsor		High	Capital Improvement Program, General Fund, Staff Time	Ongoing
Action WIN-49—Participate in mutual aid agreements to provide wildfire protection services in Foothill Regional Park.						
Hazards Mitigated: Wildfire						
New & Existing	2	Sonoma County FPD	County of Sonoma Windsor	Low	Staff Time, General Fund	Ongoing
Action WIN-50—Ensure compliance with vegetation management standards and other County fire safe standards to reduce wildfire risk within Windsor and the area surrounding Windsor, working with private property owners, the County of Sonoma, and the Sonoma County Fire Protection District.						
Hazards Mitigated: Wildfire						
New & Existing	1, 2, 11	Sonoma County FPD	County of Sonoma Windsor	Low	Staff Time, General Fund	Ongoing
Action WIN-51—Work with other agencies to develop and implement a rainwater catchment program, including a program to provide rainwater barrels for existing residential development.						
Hazards Mitigated: Drought						
Existing	2, 4	County of Sonoma	Sonoma Water Windsor City of Santa Rosa	Medium	Staff Time, BRIC	Short-term
Action WIN-52—Improve the resiliency of key roadways leading out of Windsor, particularly those connecting to hospital facilities by working with the City of Santa Rosa, Sonoma County, and Caltrans.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	4, 6	County of Sonoma City of Santa Rosa	Windsor	High	Bonds, Capital Improvement Program	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action WIN-53—Construct on-site renewable energy generation and storage systems at Town-owned facilities to support continued operations in the event of a power outage. Encourage residents and businesses to install energy generation and storage systems on their properties.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	4, 6	Windsor		High	General Fund, Bonds, Capital Improvement Program, HMGP, BRIC	Short-term
Action WIN-54—Identify transportation options and potential ways to provide the transportation identified for people who do not drive or have limited mobility.						
Hazards Mitigated: Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	4, 6	Windsor	Sonoma County Transit	Medium	Staff Time, General Fund	Short-term
Action WIN-55—Identify and implement communication methods for people with limited/no technology.						
Hazards Mitigated: Dam Failure, Drought, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	6	Windsor		Medium	Staff Time, General Fund	Short-term
Action WIN-56—Regularly review and apply for available funding opportunities to implement hazard mitigation activities. Prioritize hazard mitigation retrofits and other construction activities in Windsor's Capital Improvement Program (CIP).						
Hazards Mitigated: Dam Failure, Drought, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	3, 4, 6, 10	Windsor		Low	Staff Time, General Fund	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

See the introduction to this volume for list of acronyms used here.

Table 5-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
WIN-1	3	High	High	Yes	Yes	No	Medium	High
WIN-2	3	Medium	Low	Yes	No	Yes	High	Low
WIN-3	7	Low	Low	Yes	No	Yes	High	Low
WIN-4	3	Medium	Low	Yes	No	Yes	High	Low
WIN-5	10	Medium	Low	Yes	No	Yes	High	Medium
WIN-6	10	High	Medium	Yes	Yes	No	Medium	High
WIN-7	6	Medium	Low	Yes	No	Yes	Low	Low
WIN-8	7	Medium	Low	Yes	Yes	No	Medium	Low
WIN-9	3	High	High	Yes	Yes	No	High	High
WIN-10	3	High	High	Yes	Yes	No	High	High
WIN-11	3	Medium	Medium	Yes	Yes	No	Medium	Medium
WIN-12	4	Low	Low	Yes	No	Yes	Low	Low
WIN-13	5	Low	Low	Yes	No	Yes	Low	Low
WIN-14	3	Medium	Medium	Yes	No	No	Medium	Low
WIN-15	3	Medium	Low	Yes	No	Yes	Medium	Low
WIN-16	3	Medium	Low	Yes	No	Yes	Medium	Low
WIN-17	4	Medium	High	No	Yes	No	Medium	Low
WIN-18	3	Medium	High	No	No	No	Medium	Low
WIN-19	3	High	High	Yes	No	No	Medium	Low
WIN-20	2	High	High	Yes	Yes	No	Medium	High
WIN-21	5	High	High	Yes	Yes	No	Medium	High
WIN-22	5	High	High	Yes	No	No	Medium	Low
WIN-23	3	High	High	Yes	Yes	No	Medium	High
WIN-24	3	High	High	Yes	Yes	No	Medium	High
WIN-25	2	High	Low	Yes	No	Yes	High	Low
WIN-26	7	Medium	Low	Yes	No	Yes	High	Low
WIN-27	3	Medium	High	No	Yes	No	Medium	Medium
WIN-28	2	High	Low	Yes	No	Yes	Medium	Low
WIN-29	3	Low	Medium	Yes	No	Yes	High	Low
WIN-30	3	Medium	Low	Yes	No	Yes	Medium	Low
WIN-31	2	Medium	High	No	No	No	High	Low
WIN-32	2	Medium	High	Yes	No	No	Medium	Low
WIN-33	5	Medium	Medium	Yes	Yes	No	High	High
WIN-34	2	Low	Low	Yes	No	No	Medium	Low
WIN-35	2	Low	Low	Yes	No	No	Medium	Low
WIN-36	2	Low	Low	Yes	No	No	Medium	Low
WIN-37	5	Medium	Medium	Yes	Yes	No	Medium	High
WIN-38	2	Medium	Medium	Yes	Yes	No	Low	Medium
WIN-39	2	Low	Medium	No	No	No	Low	Low
WIN-40	5	Medium	Medium	Yes	Yes	No	Medium	High
WIN-41	2	Medium	Low	Yes	Yes	Yes	Medium	High

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
WIN-42	2	Medium	Low	Yes	No	No	Medium	Low
WIN-43	3	High	Low	Yes	No	Yes	High	Low
WIN-44	2	High	Medium	Yes	No	No	High	Low
WIN-45	5	High	High	Yes	Yes	No	Medium	High
WIN-46	3	Medium	Low	Yes	No	Yes	High	Low
WIN-47	3	Low	Low	Yes	No	Yes	Low	Low
WIN-48	3	High	High	Yes	No	No	Low	Low
WIN-49	1	Medium	Low	Yes	No	Yes	Medium	Low
WIN-50	3	Medium	Low	Yes	No	Yes	Medium	Low
WIN-51	2	Medium	Medium	Yes	Yes	No	Medium	Medium
WIN-52	2	High	High	Yes	No	No	Low	Low
WIN-53	2	High	High	Yes	Yes	No	Medium	High
WIN-54	2	Medium	Medium	Yes	No	No	Medium	Low
WIN-55	1	Medium	Medium	Yes	No	No	Medium	Low
WIN-56	4	Low	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 5-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
High-Risk Hazards								
Dam Failure	WIN-3, WIN-17, WIN-45	WIN-1	WIN-15, WIN-16, WIN-37, WIN-38, WIN-42, WIN-43, WIN-44		WIN-2, WIN-9, WIN-10, WIN-14, WIN-15, WIN-16, WIN-36, WIN-37, WIN-39, WIN-41, WIN-42	WIN-31, WIN-32, WIN-45, WIN-54, WIN-56	WIN-3, WIN-53	WIN-3, WIN-4, WIN-5, WIN-6, WIN-17, WIN-34, WIN-35, WIN-36, WIN-37, WIN-38, WIN-39, WIN-41, WIN-42, WIN-54, WIN-55
Earthquake	WIN-3, WIN-12, WIN-45, WIN-48	WIN-1	WIN-37, WIN-38, WIN-42, WIN-43, WIN-44		WIN-2, WIN-9, WIN-10, WIN-36, WIN-39, WIN-41, WIN-42	WIN-19, WIN-31, WIN-32, WIN-45, WIN-49, WIN-54, WIN-56	WIN-3, WIN-53	WIN-3, WIN-4, WIN-5, WIN-6, WIN-34, WIN-35, WIN-36, WIN-37, WIN-38, WIN-39, WIN-41, WIN-42, WIN-53, WIN-54

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Wildfire	WIN-3, WIN-12, WIN-33, WIN-45, WIN-51	WIN-1	WIN-37, WIN-38, WIN-42, WIN-43, WIN-44	WIN-46	WIN-2, WIN-9, WIN-10, WIN-11, WIN-36, WIN-39, WIN-41, WIN-42	WIN-19, WIN-31, WIN-32, WIN-45, WIN-48, WIN-54, WIN-56	WIN-3, WIN-51	WIN-3, WIN-4, WIN-5, WIN-6, WIN-11, WIN-34, WIN-35, WIN-36, WIN-37, WIN-38, WIN-39, WIN-41, WIN-42, WIN-46, WIN-49, WIN-53, WIN-54, WIN-55
Medium-Risk Hazards								
Severe Weather	WIN-3, WIN-12, WIN-26, WIN-27, WIN-45	WIN-1, WIN-14	WIN-37, WIN-38, WIN-42, WIN-43, WIN-44	WIN-23, WIN-25	WIN-2, WIN-9, WIN-10, WIN-11, WIN-39, WIN-41, WIN-42	WIN-19, WIN-21, WIN-22, WIN-24, WIN-25, WIN-28, WIN-31, WIN-32, WIN-45, WIN-47, WIN-54, WIN-56	WIN-3, WIN-8, WIN-53	WIN-3, WIN-4, WIN-5, WIN-6, WIN-11, WIN-34, WIN-35, WIN-36, WIN-37, WIN-38, WIN-39, WIN-41, WIN-42, WIN-53, WIN-54
Flooding	WIN-3, WIN-7, WIN-12, WIN-26, WIN-45	WIN-1, WIN-7	WIN-7, WIN-37, WIN-38, WIN-42, WIN-43, WIN-44, WIN-55	WIN-23, WIN-25	WIN-2, WIN-9, WIN-10, WIN-11, WIN-36, WIN-39, WIN-41, WIN-42	WIN-19 WIN-20, WIN-21, WIN-22, WIN-24, WIN-25, WIN-27, WIN-28, WIN-31, WIN-32, WIN-45, WIN-46, WIN-51, WIN-56	WIN-3, WIN-50	WIN-3, WIN-4, WIN-5, WIN-6, WIN-11, WIN-14, WIN-34, WIN-35, WIN-36, WIN-37, WIN-38, WIN-39, WIN-40, WIN-41, WIN-42, WIN-53
Drought	WIN-3	WIN-52				WIN-19, WIN-20, WIN-47, WIN-49, WIN-56	WIN-3	WIN-3, WIN-5, WIN-6, WIN-52, WIN-54
Low-Risk Hazards								
Landslide	WIN-3, WIN-12, WIN-30, WIN-45	WIN-1	WIN-43, WIN-44		WIN-2, WIN-9, WIN-10, WIN-11, WIN-35, WIN-36	WIN-2, WIN-31, WIN-32, WIN-45, WIN-52, WIN-56	WIN-3, WIN-50	WIN-3, WIN-4, WIN-5, WIN-6, WIN-11, WIN-34, WIN-35, WIN-36, WIN-53, WIN-54

a. See the introduction to this volume for explanation of mitigation types.

5.9 PUBLIC OUTREACH

The survey and information on the Plan were distributed in January 2021 in the following manner.

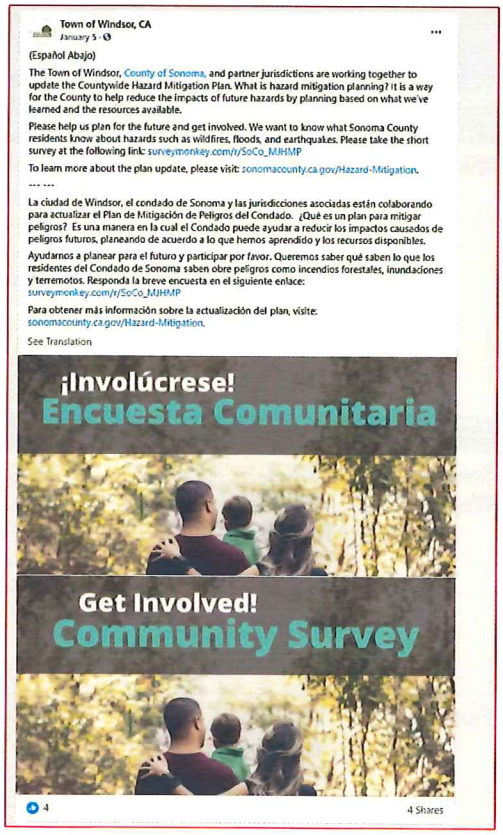
- Email to all Town employees
- Email to Town boards and commissions, including Town Council, Planning Commission, Parks and Recreation Commission, Public Art Advisory Commission, Senior Citizens Advisory Commission
- Posting to the Town's social media accounts, including Facebook and Next Door (example on next page)
- Posting to the Town's website

- Email to the Windsor Chamber of Commerce and Downtown Windsor Merchants Association

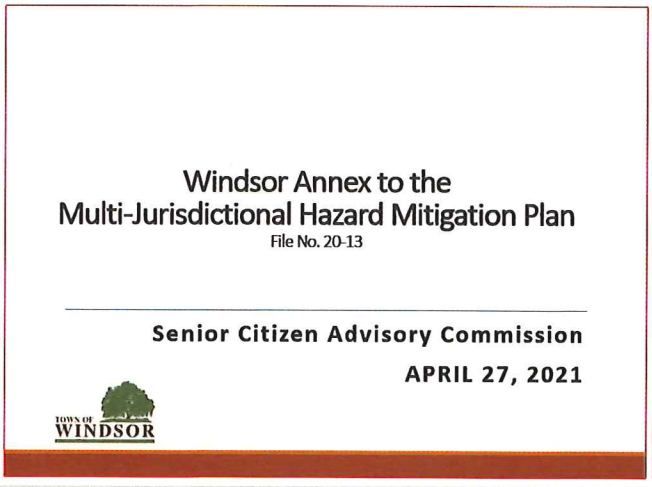
Sonoma County staff presented the Multi-Jurisdiction Hazard Mitigation Plan, Town staff presented Windsor's Annex to the Plan, and Public Works staff presented the Windsor Climate Adaptation (Windsor Ready) Plan to the following Town Commissions (example presentation covers below).

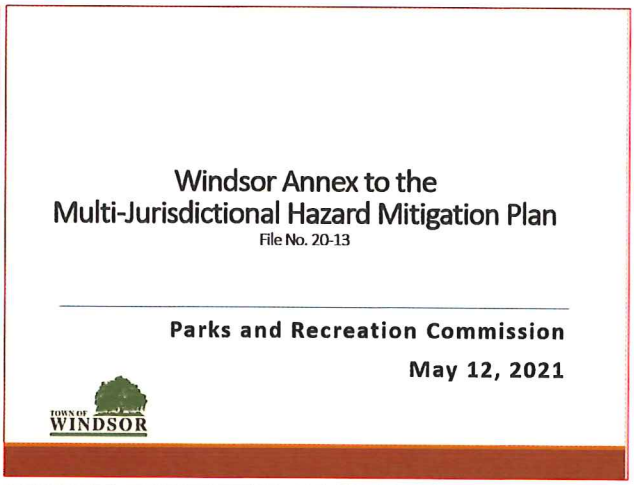
- Senior Citizen Advisory Commission presentation April 27, 2021
- Parks and Recreation Commission May 12, 2021
- Planning Commission May 25, 2021

Sonoma County staff presented the Multi-Jurisdiction Hazard Mitigation Plan and Town staff presented Windsor's Annex to the Plan to the Town Council on June 16, 2021.



Example Social Media Announcement





Example Public Outreach Presentations

5.10 INFORMATION SOURCES USED FOR THIS ANNEX

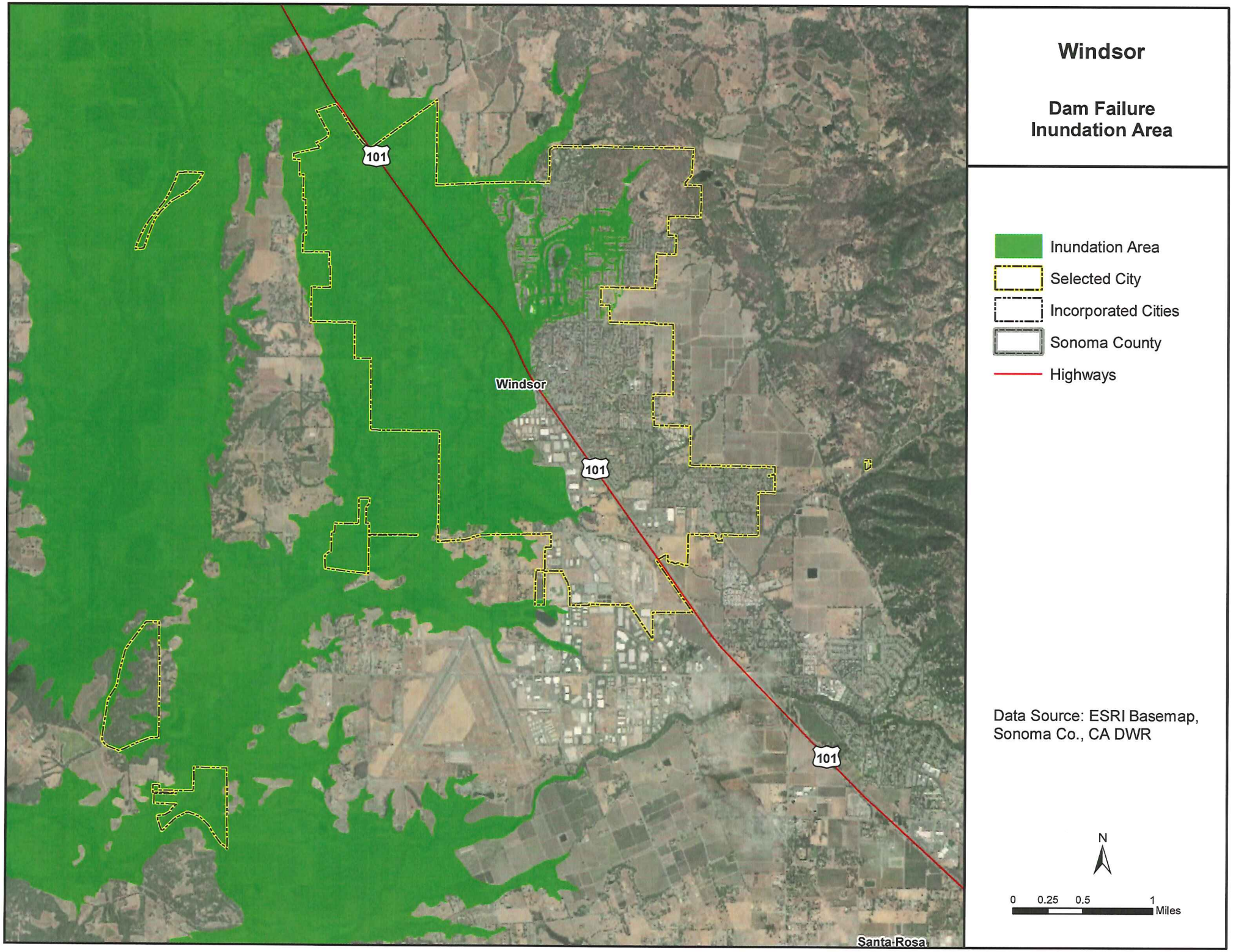
The following technical reports, plans, and regulatory mechanisms were reviewed for this annex.

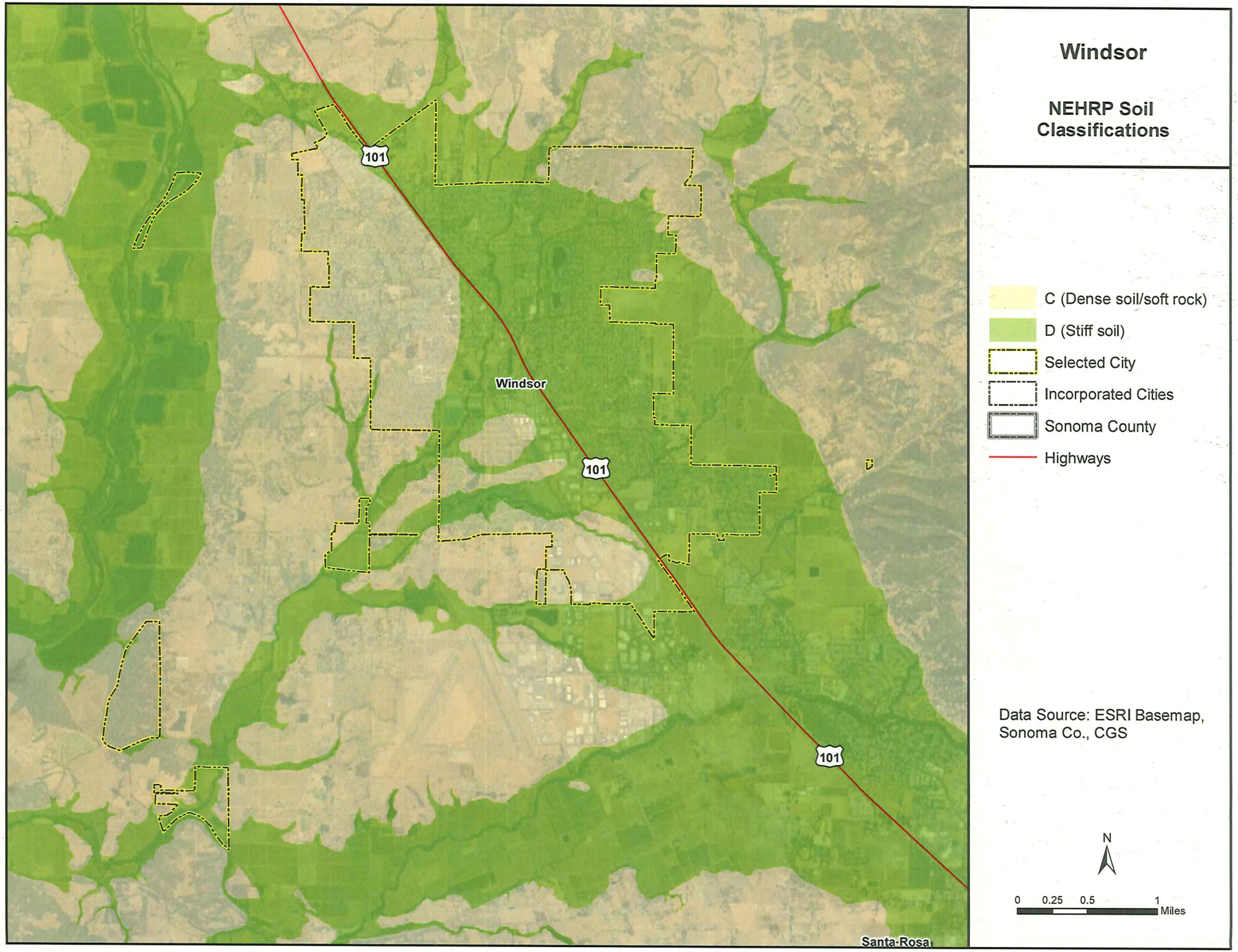
- Windsor 2040 General Plan

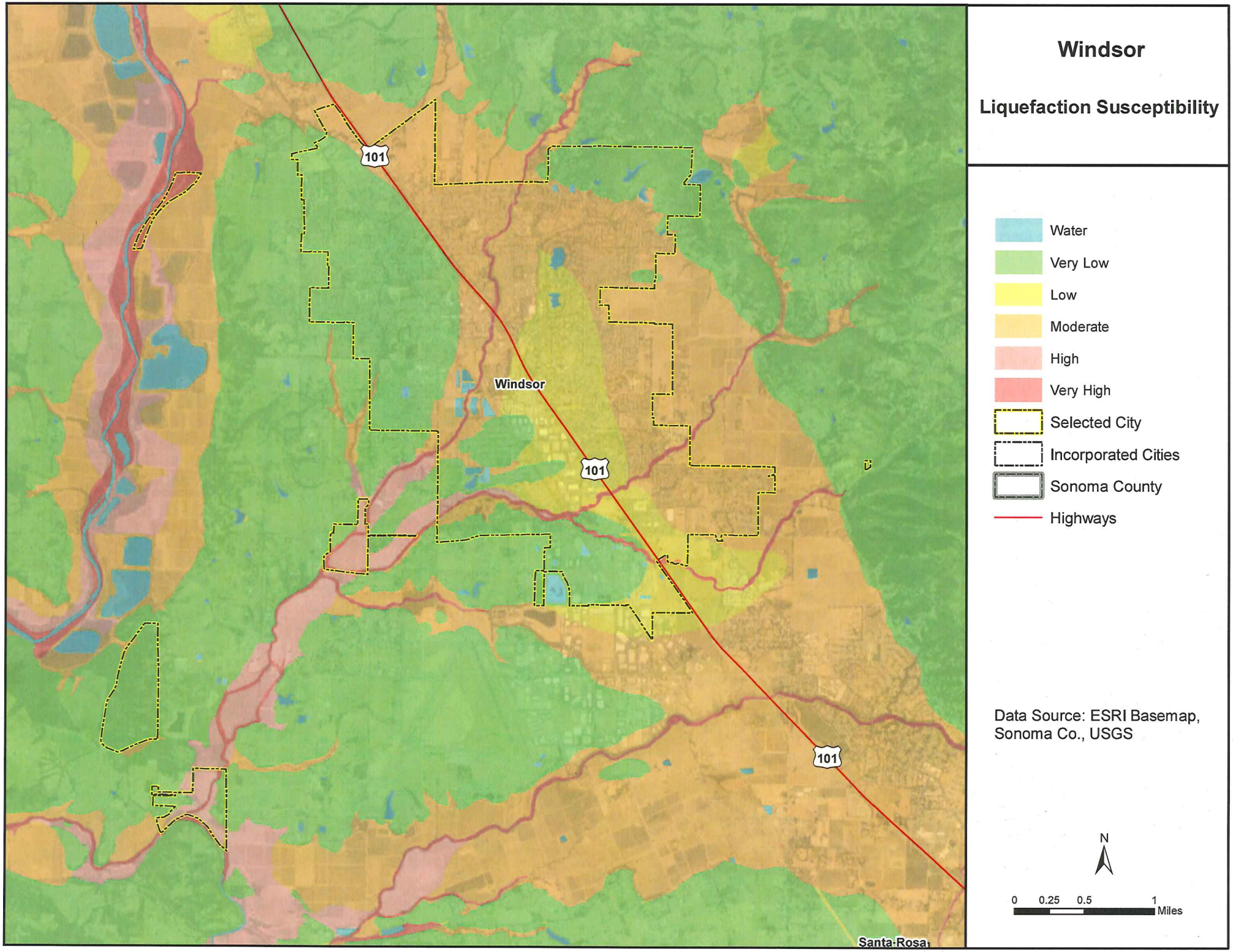
- Windsor Municipal Code—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- Windsor Zoning Ordinance
- Windsor Building Code
- Flood Damage Prevention Ordinance—The flood damage prevention ordinance is included in the Town's Municipal Code and was reviewed for compliance with the National Flood Insurance Program.
- Collection System Master Plan
- Groundwater Sustainability Plan
- Urban Water Management Plan
- Storm Drainage Master Plan
- Water Master Plan
- Windsor Local Hazard Mitigation Plan adopted February 2018

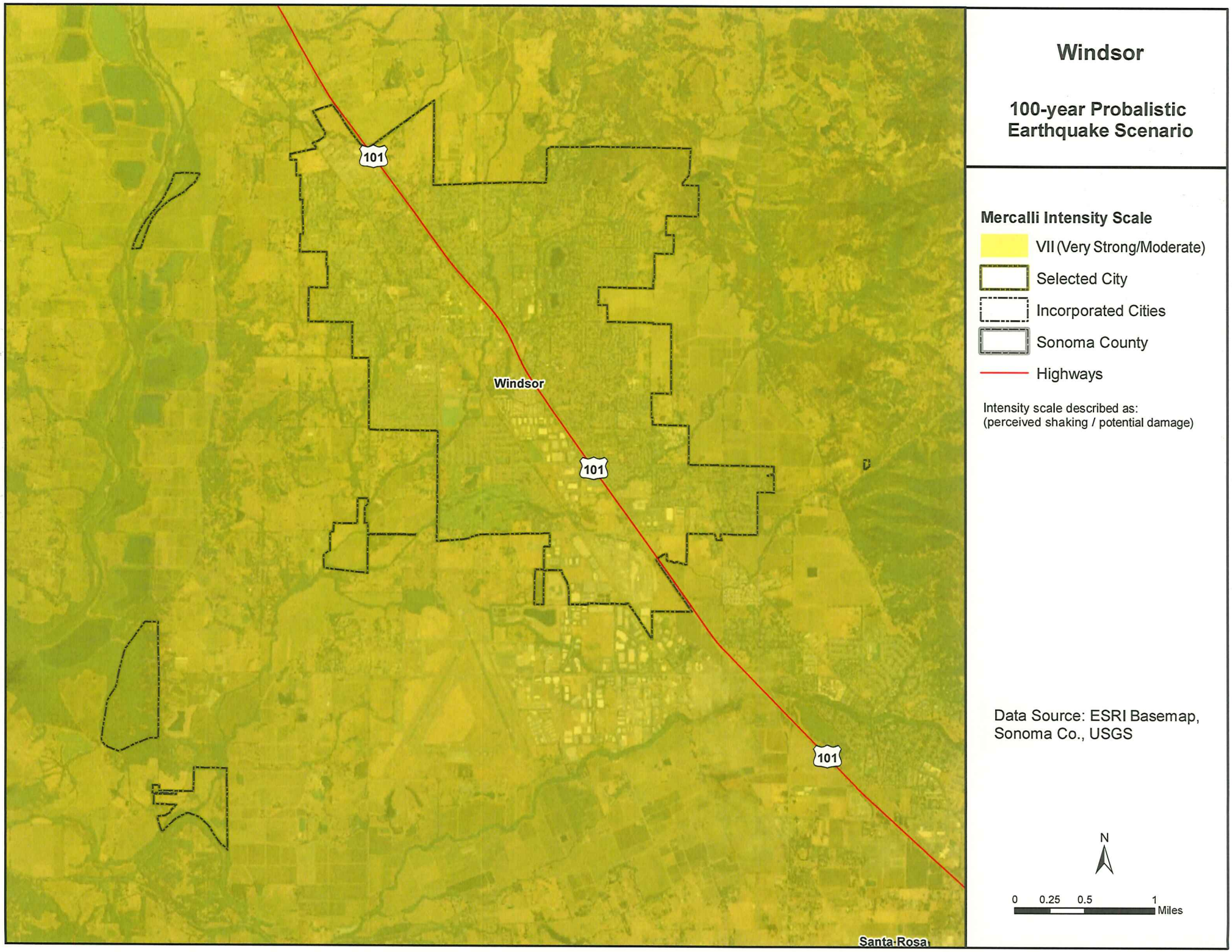
The following outside resources and references were reviewed:

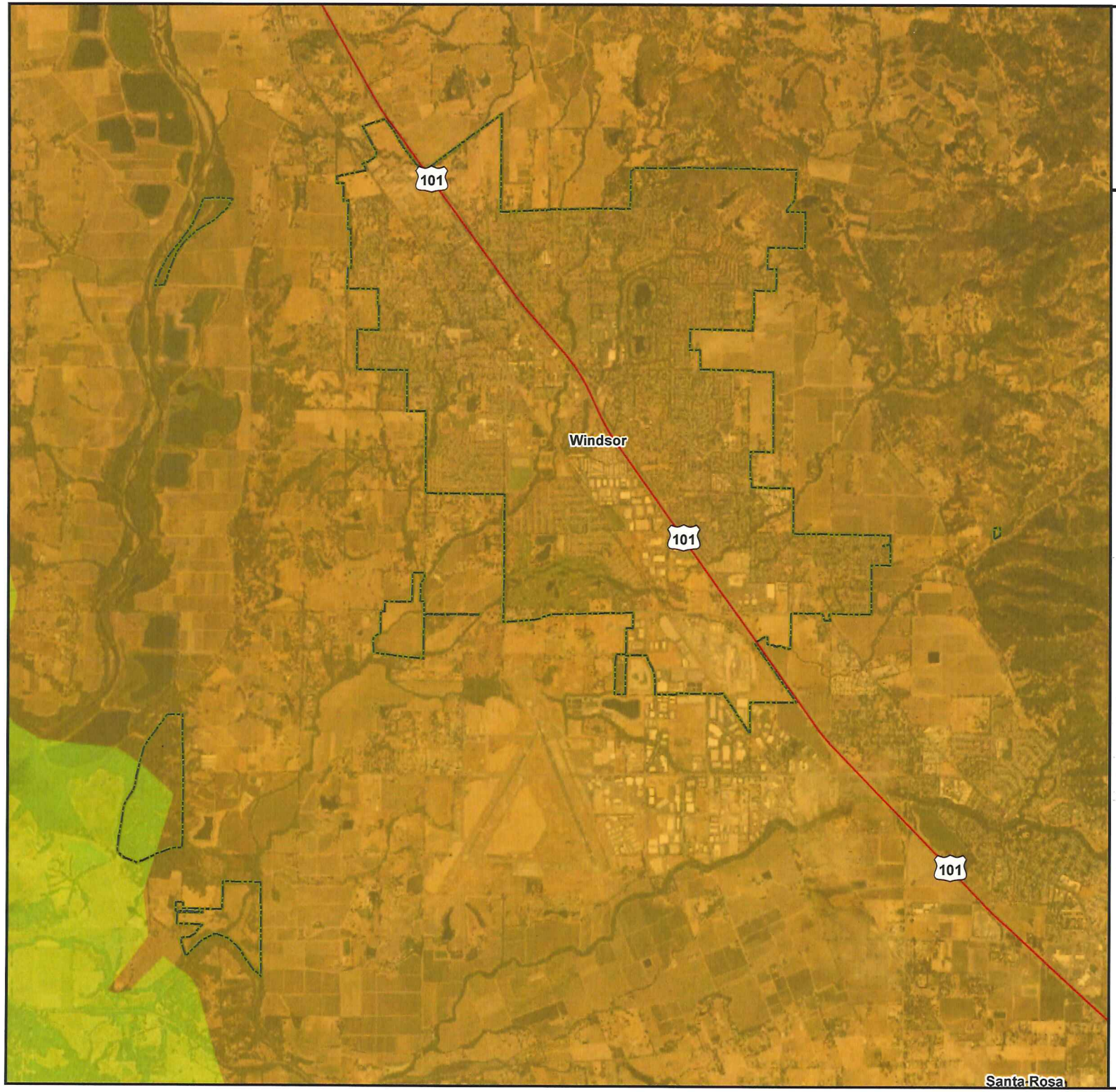
- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.


Windsor
Dam Failure
Inundation Area
Inundation Area
Selected City
Incorporated Cities
Sonoma County
Highways
Windsor
101
101
101
Santa Rosa
Data Source: ESRI Basemap,
Sonoma Co., CA DWR
N
0 0.25 0.5 1
Miles


Windsor
NEHRP Soil Classifications
C (Dense soil/soft rock)
D (Stiff soil)
Selected City
Incorporated Cities
Sonoma County
Highways
Data Source: ESRI Basemap, Sonoma Co., CGS
N
0 0.25 0.5 1 Miles
101
101
101
Windsor
Santa Rosa


Windsor
Liquefaction Susceptibility
Water
Very Low
Low
Moderate
High
Very High
Selected City
Incorporated Cities
Sonoma County
Highways
Data Source: ESRI Basemap, Sonoma Co., USGS
N
0 0.25 0.5 1 Miles
101
101
101
Windsor
Santa Rosa


Windsor
100-year Probalistic Earthquake Scenario
Mercalli Intensity Scale
VII (Very Strong/Moderate)
Selected City
Incorporated Cities
Sonoma County
Highways
Intensity scale described as:
(perceived shaking / potential damage)
Data Source: ESRI Basemap, Sonoma Co., USGS
N
0 0.25 0.5 1 Miles
101
101
101
Windsor
Santa Rosa



Windsor

Hayward M7.57 Earthquake Scenario

Mercalli Intensity Scale

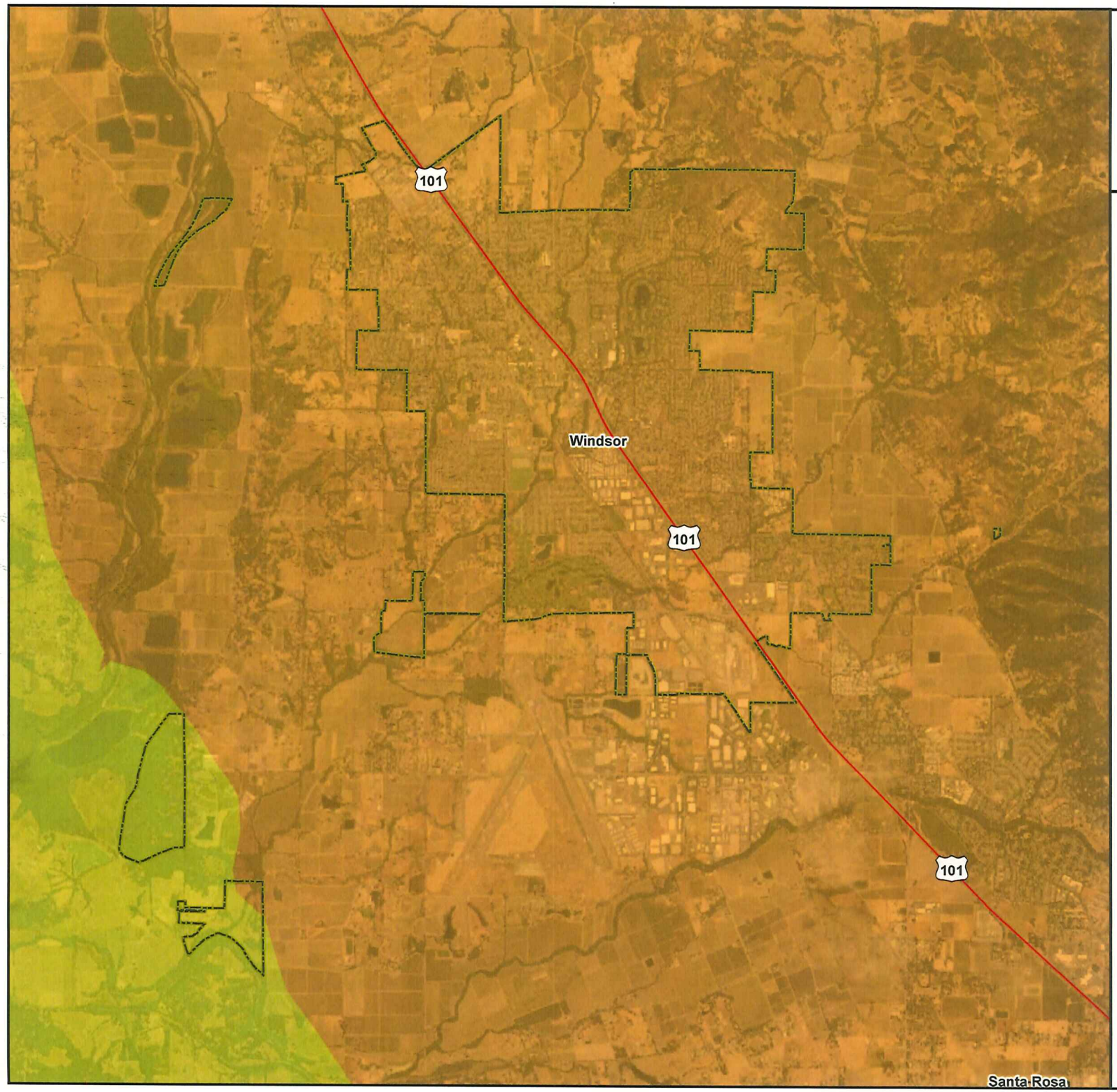
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- Sonoma County
- Highways

Intensity scale described as:
(perceived shaking / potential damage)

Data Source: ESRI Basemap, Sonoma Co., USGS

N

0 0.25 0.5 1 Miles



Windsor

Healdsburg M7.19 Earthquake Scenario

Mercalli Intensity Scale

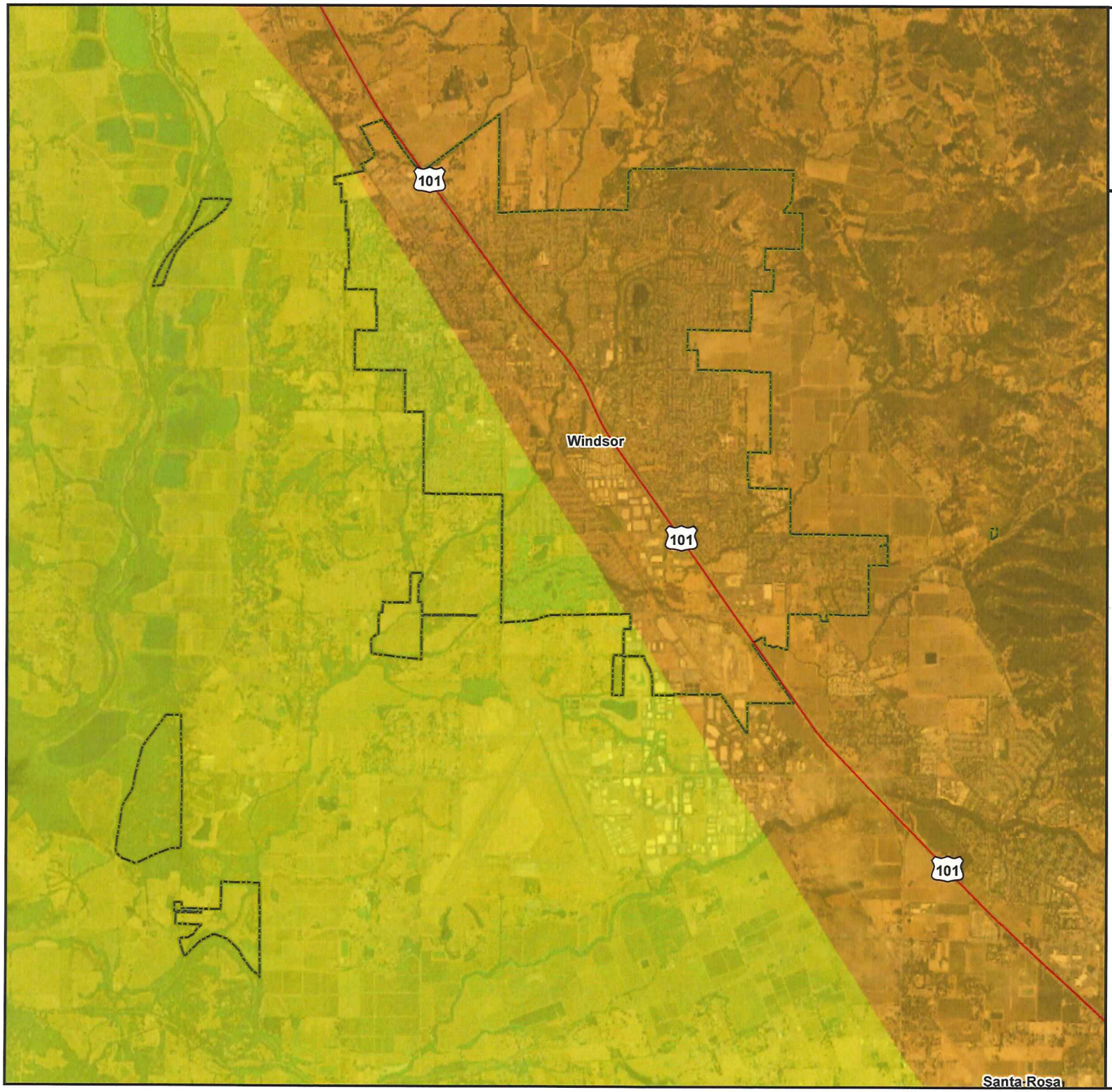
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- Sonoma County
- Highways

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Esri Basemap, Sonoma Co., USGS

N

0 0.25 0.5 1 Miles



Windsor

Maacama M7.55 Earthquake Scenario

Mercalli Intensity Scale

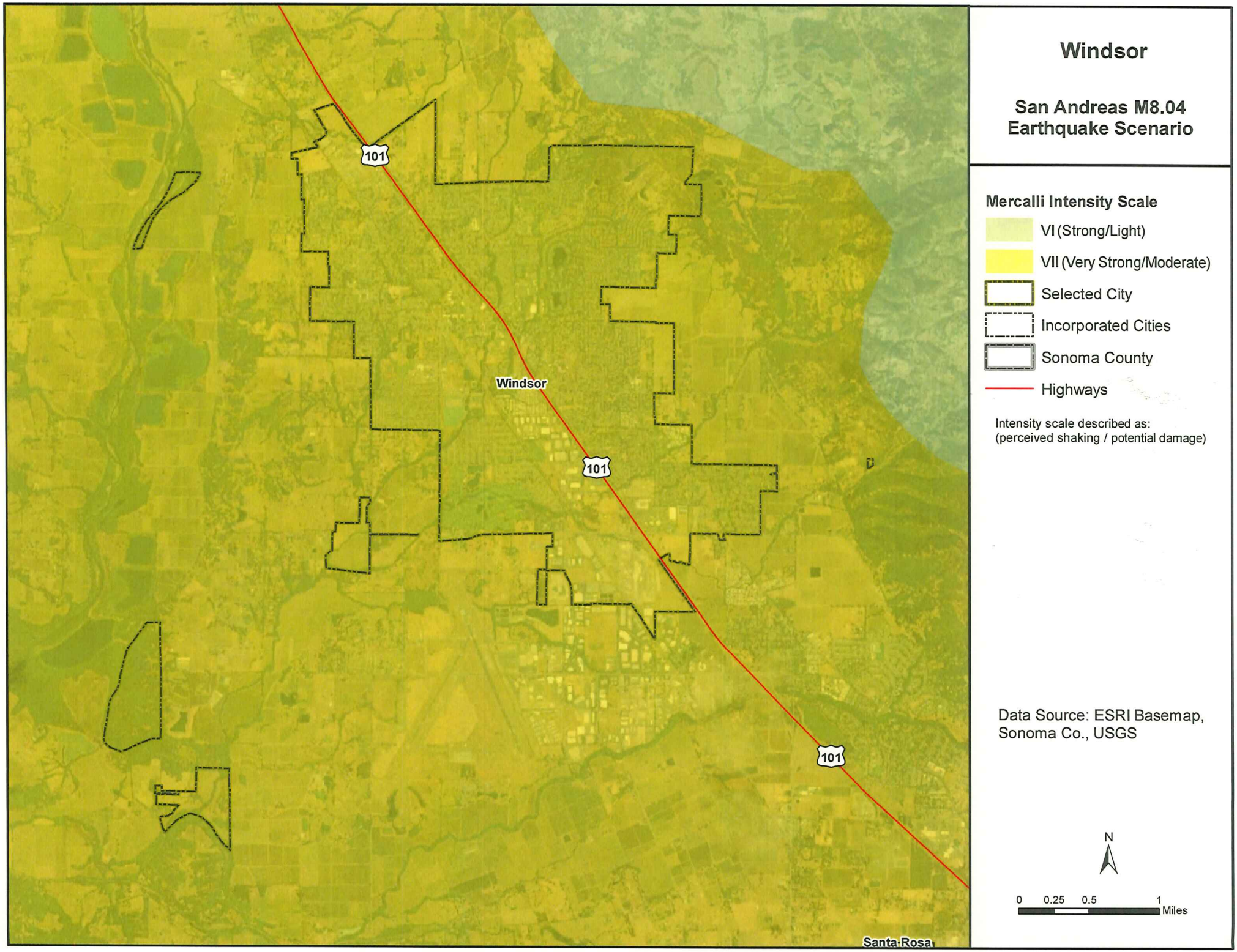
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- Sonoma County
- Highways

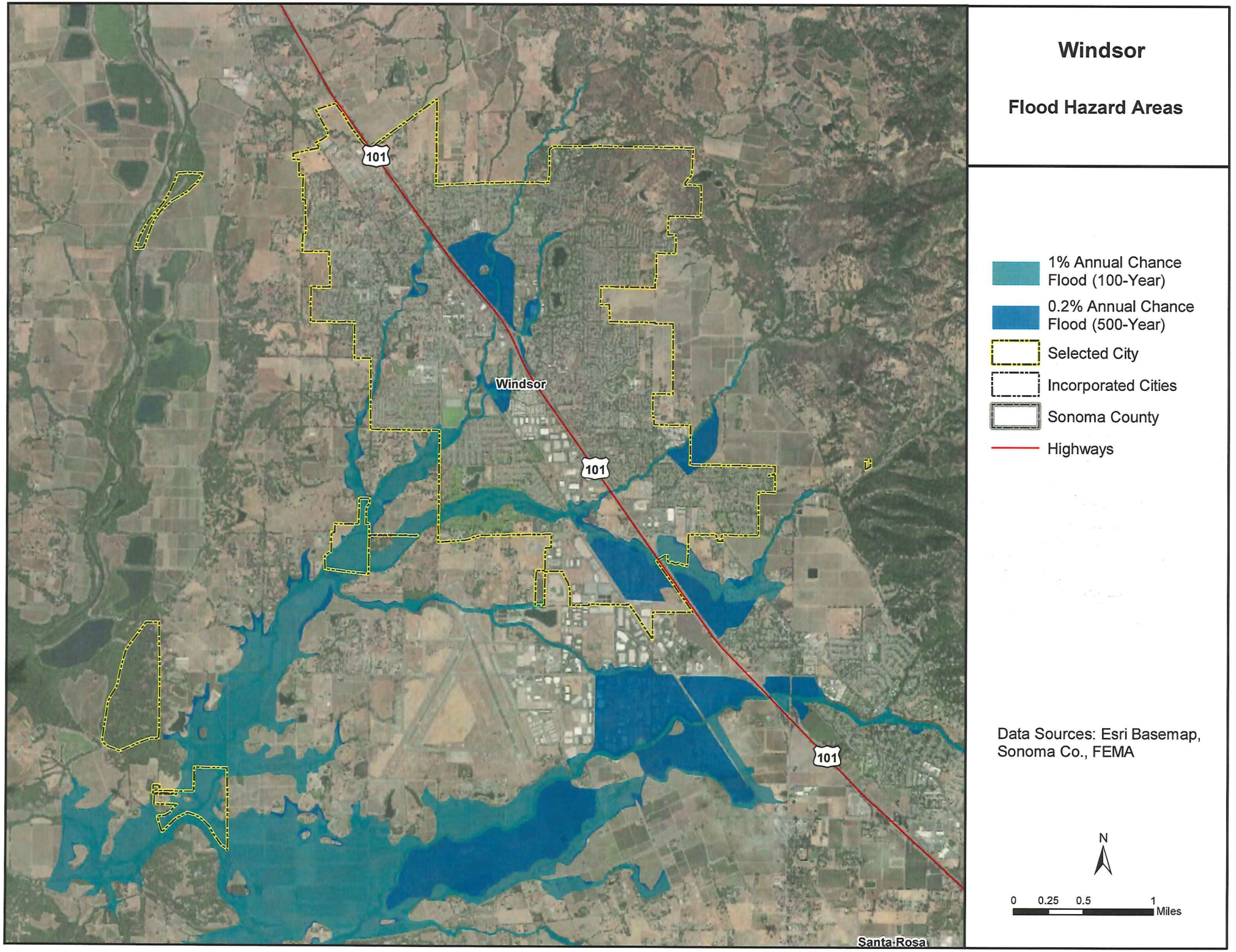
Intensity scale described as:
(perceived shaking / potential damage)

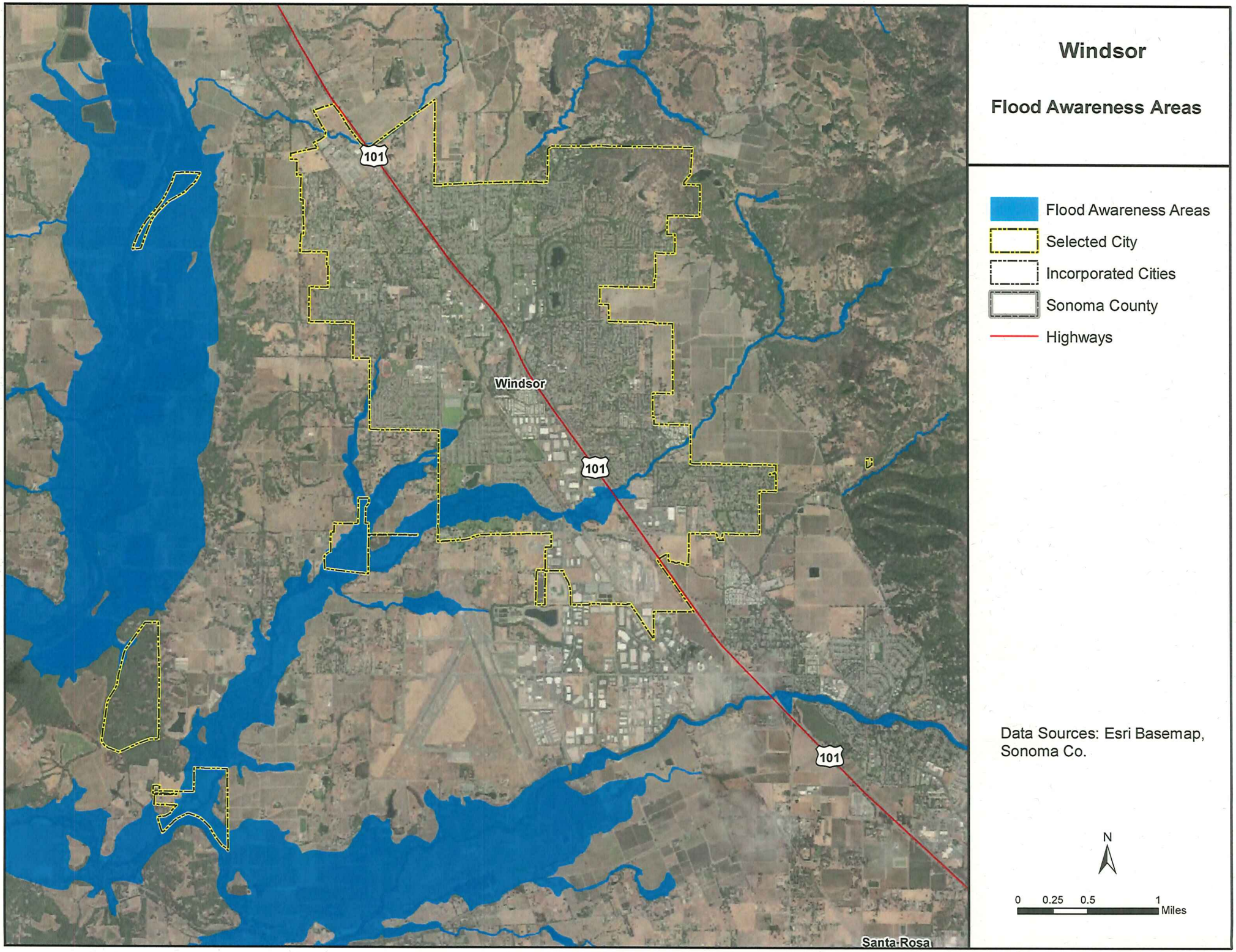
Data Source: ESRI Basemap, Sonoma Co., USGS

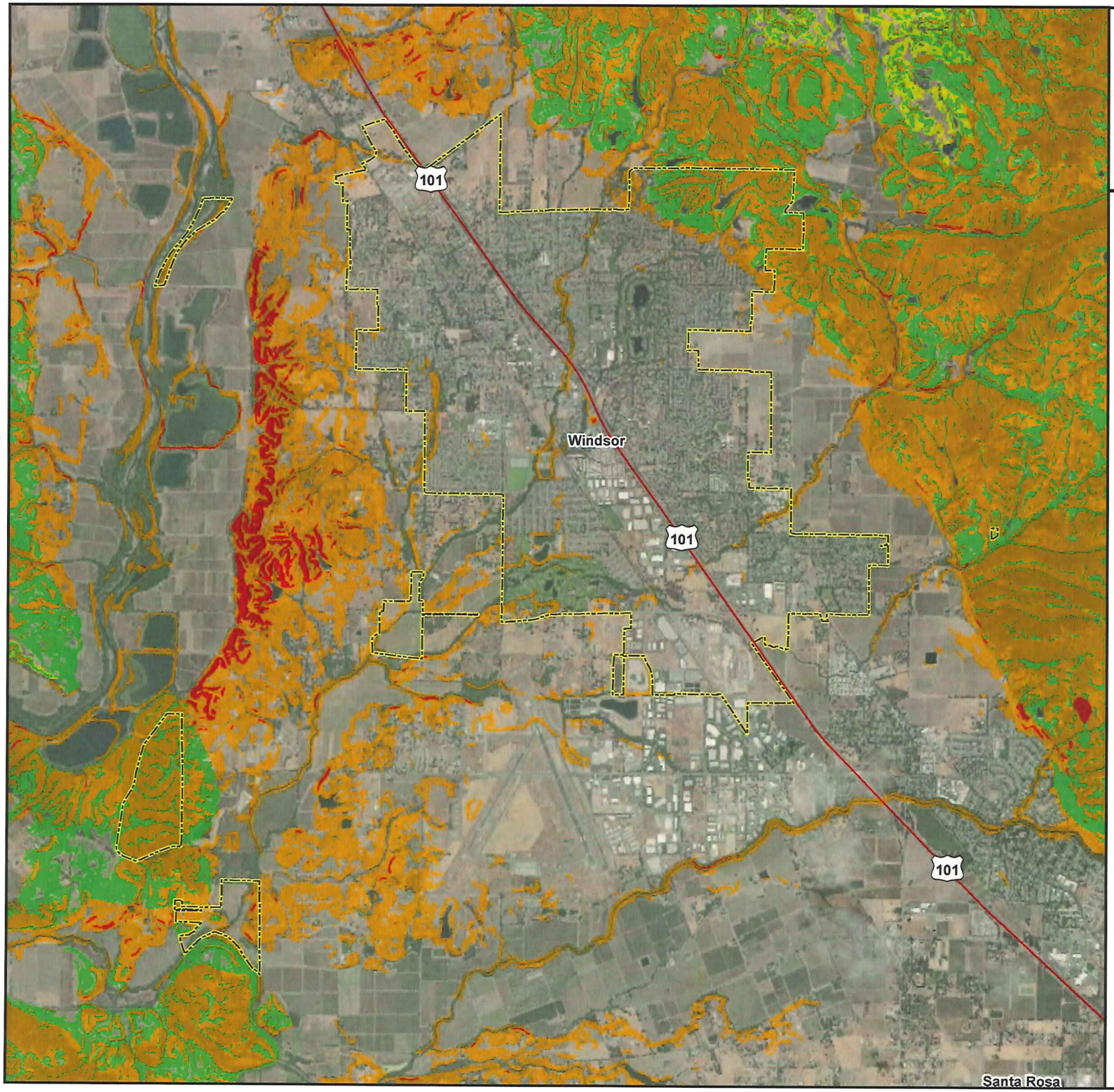
N

0 0.25 0.5 1 Miles


Windsor
San Andreas M8.04
Earthquake Scenario
Mercalli Intensity Scale
VI (Strong/Light)
VII (Very Strong/Moderate)
Selected City
Incorporated Cities
Sonoma County
Highways
Intensity scale described as:
(perceived shaking / potential damage)
Data Source: ESRI Basemap,
Sonoma Co., USGS
N
0 0.25 0.5 1
Miles
101
101
101
Windsor
Santa Rosa


Windsor
Flood Hazard Areas
101
Windsor
101
101
Santa Rosa
1% Annual Chance Flood (100-Year)
0.2% Annual Chance Flood (500-Year)
Selected City
Incorporated Cities
Sonoma County
Highways
Data Sources: Esri Basemap, Sonoma Co., FEMA
N
0 0.25 0.5 1
Miles


Windsor
Flood Awareness Areas
Flood Awareness Areas
Selected City
Incorporated Cities
Sonoma County
Highways
101
Windsor
101
101
Santa Rosa
Data Sources: Esri Basemap, Sonoma Co.
N
0 0.25 0.5 1
Miles



Windsor

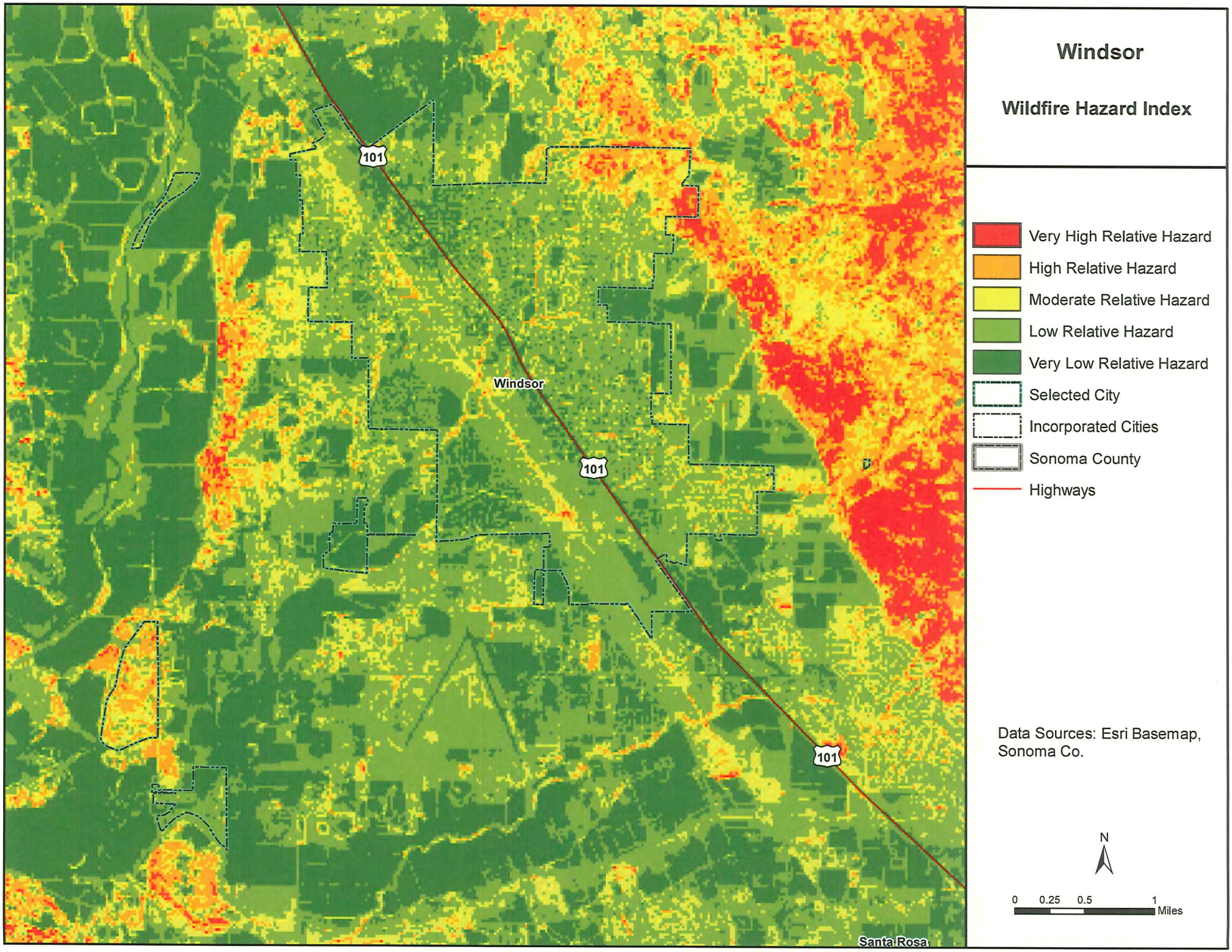
Susceptibility to Deep-Seated Landslides

- Low
- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- Sonoma County
- Highways

Data Sources: Esri Basemap, Sonoma Co., CGS

N

0 0.25 0.5 1 Miles


Windsor
Wildfire Hazard Index
Very High Relative Hazard
High Relative Hazard
Moderate Relative Hazard
Low Relative Hazard
Very Low Relative Hazard
Selected City
Incorporated Cities
Sonoma County
Highways
Data Sources: Esri Basemap, Sonoma Co.
N
0 0.25 0.5 1
Miles
101
101
101
Windsor
Santa Rosa

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix A. Planning Partner Expectations

A. PLANNING PARTNER EXPECTATIONS

ACHIEVING DMA COMPLIANCE FOR ALL PLANNING PARTNERS

The federal Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390), commonly known as the 2000 Stafford Act amendments, was approved by Congress on October 10, 2000. This act required state and local governments to develop hazard mitigation plans as a condition for federal grant assistance. Among other things, this legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide. DMA 2000 is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Prior to 2000, federal legislation provided funding for disaster relief, recovery, and some hazard mitigation planning. The DMA improves upon the planning process by emphasizing the importance of communities planning for disasters before they occur.

The Disaster Mitigation Act defines a "local government" as:

> Any county, municipality, city, town, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity

Any local government wishing to pursue funding afforded under FEMA Hazard Mitigation Grant Programs must have an approved hazard mitigation plan in order to be eligible to apply for these funds.

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. Whether our planning process generates ten individual plans or one large plan that has a chapter for each partner jurisdiction, the following items must be addressed by each planning partner to achieve DMA compliance:

- Participate in the process. It must be documented in the plan that each planning partner "participated" in the process that generated the plan. There is flexibility in defining "participation." Participation can vary based on the type of planning partner (i.e.: City vs. a Special Purpose District). However, the level of participation must be defined and the extent for which this level of participation has been met for each partner must be contained in the plan context.
- Consistency Review. Review of existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with those documents reviewed in producing the "parent" plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).

- Action Review. For plan updates, a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.
- Update Localized Risk Assessment. Personalize the Risk Assessment for each jurisdiction by removing hazards not associated with the defined jurisdictional area or redefining vulnerability based on a hazard's impact to a jurisdiction. This phase will include:
  - A ranking of the risk
  - A description of the number and type of structures at risk
  - An estimate of the potential dollar losses to vulnerable structures
  - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.
- Capability assessment. Each planning partner must identify and review their individual regulatory, technical, and financial capabilities with regards to the implementation of hazard mitigation actions.
- Personalize mitigation recommendations. Identify and prioritize mitigation recommendations specific to each jurisdiction's defined area.
- Create an Action Plan.
- Incorporate Public Participation. Each jurisdiction must present the Plan to the public for comment at least once, within two weeks prior to adoption.
- Plan must be adopted by each jurisdiction.

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other "stakeholders" within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision-making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan's development.

With the above participation requirements in mind, each partner is expected to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each planning partner shall provide the following:

A. A "Letter of Commitment" or resolution to participate to the Planning Team (see exhibit A).

B. Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.

C. Support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.

D. Provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.

E. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:

   i) Steering Committee meetings

   ii) Public meetings or open houses

   iii) Workshops/ planning partner specific training sessions

   iv) Public review and comment periods prior to adoption

At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.

F. There will be one mandatory workshop that all planning partners will be required to attend. This workshop will cover the proper completion of the jurisdictional annex template which is the basis for each partner's jurisdictional chapter in the plan. Failure to have a representative at this workshop will disqualify the planning partner from participation in this effort. The schedule for this workshop will be such that all committed planning partners will be able to attend.

G. After participation in the mandatory template workshop, each partner will be required to complete their template and provide it to the planning team in the time frame established by the Steering Committee. Failure to complete your template in the required time frame may lead to disqualification from the partnership.

H. Each partner will be expected to perform a "consistency review" of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the parent plan.

I. Each partner will be expected to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.

J. Each partner will be expected to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.

K. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.

L. Each partner will be required to formally adopt the plan.

Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be expected to complete their templates in a timely manner and according to the timeline specified by the Steering Committee.

NOTE: Once this plan is completed, and DMA compliance has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan implementation-maintenance protocol identified in the plan. At a minimum, this means completing the ongoing plan maintenance protocol identified in the plan. Partners that do not participate in this plan maintenance strategy may be deemed ineligible by the partnership, and thus lose their DMA eligibility.

Eligible entities that do not wish to participate in the multi-jurisdictional planning process or fail to meet the requirements contained in this document may choose to link to the plan in pursuit of future adoption after the completion of the current effort.

Exhibit A
Example Letter of Commitment

Lisa Hulette
Permit Sonoma | County of Sonoma
2550 Ventura Ave
Santa Rosa, CA 95403

Re: Letter of Commitment as a Participating Jurisdiction in the Sonoma County Multijurisdictional Hazard Mitigation Plan Update Plan 2021

Dear Permit Sonoma | Sonoma County,

As the Federal Emergency Management Agency's (FEMA) local hazard mitigation plan requirements under 44 CFR §201.6 identify criteria for multi-jurisdictional mitigation plans including the participation and collaboration of regional planning and mitigation partners, this letter of commitment is submitted to confirm the participation of <insert agency name> as a Planning Partner in the *Sonoma County Multijurisdictional Hazard Mitigation Plan Update Plan 2021*.

As a condition of participation, <insert agency name> agrees to meet the requirements for mitigation plans identified in 44 CFR §201.6, and to provide timely cooperation and participation to produce a FEMA-approved hazard mitigation plan with the County of Sonoma.

<insert agency name> understands that it must engage in the following planning processes, as detailed in FEMA's *Local Multi-Hazard Mitigation Planning Guidance* dated March 1, 2013. Planning processes include, but are not limited to the following:

- Review of existing 2016 Sonoma County Operational Area Hazard Mitigation Plan
- Identification of local hazards, risk assessment, and vulnerability analysis
- Participation in the formulation of mitigation goals and actions
- Participation in community engagement and public outreach in the development of the plan
- Timely response to requests for information by the coordinating agency and consultants, and adherence to established deadlines
- Formal adoption of the hazard mitigation plan by the planning partner jurisdiction's governing body
- Tracking and monthly submission of personnel hours spent on the hazard mitigation planning effort

Sincerely,

Name _____

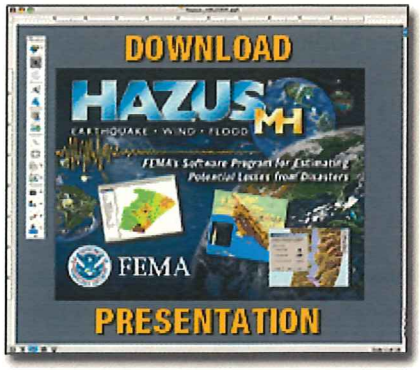
Title _____

Exhibit B
Planning Team Contact information

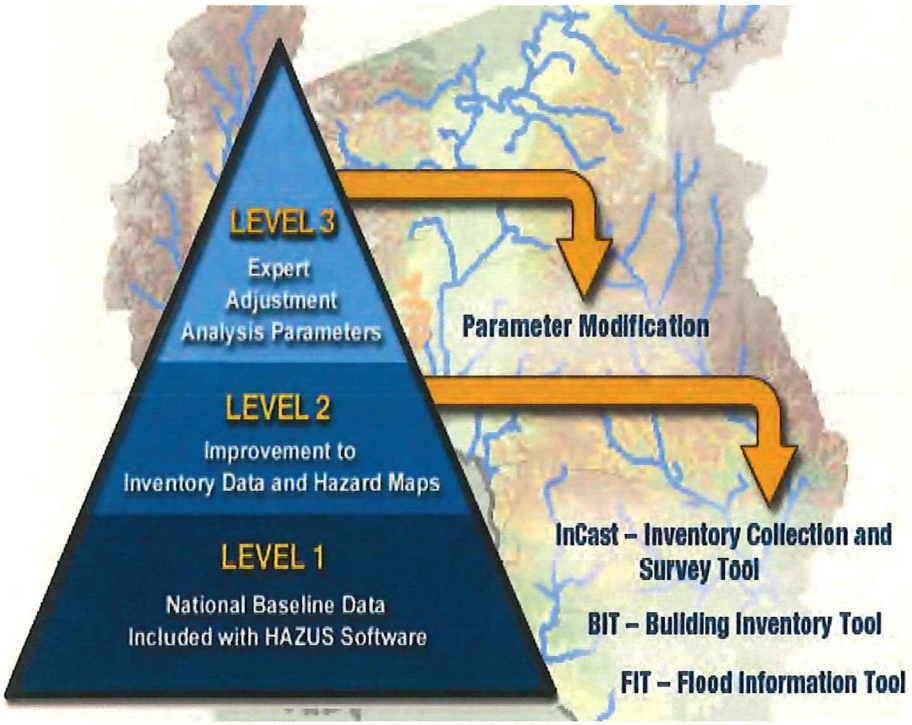
Name	Representing	Address	e-mail
Lisa Hulette	Permit Sonoma | Sonoma County	2550 Ventura Ave Santa Rosa, CA 95403	Lisa.hewletter@sonoma-county.org
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	rob.flaner@tetratech.com
Bart Spencer	Tetra Tech, Inc.	1999 Harrison St., Ste 500 Oakland, CA 946122	bart.spencer@tetratech.com

Exhibit C.
Overview of HAZUS

Overview of HAZUS-MH (Multi-Hazard)



HAZUS-MH, is a nationally applicable standardized methodology and software program that contains models for estimating potential losses from earthquakes, floods, tsunamis, and hurricane winds. HAZUS-MH was developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). NIBS maintains committees of wind, flood, earthquake and software experts to provide technical oversight and guidance to HAZUS-MH development. Loss estimates produced by HAZUS-MH are based on current scientific and engineering knowledge of the effects of hurricane winds, floods, and earthquakes. Estimating losses is essential to decision-making at all levels of government, providing a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning.



HAZUS-MH uses state-of-the-art geographic information system (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of hurricane winds, floods, tsunamis, and earthquakes on populations. The latest release, HAZUS-MH 4.0, is an updated version of HAZUS-MH that incorporates many new features which improve both the speed and functionality of the models. For information on software and hardware requirements to run HAZUS-MH 4.0, see HAZUS-MH Hardware and Software Requirements.

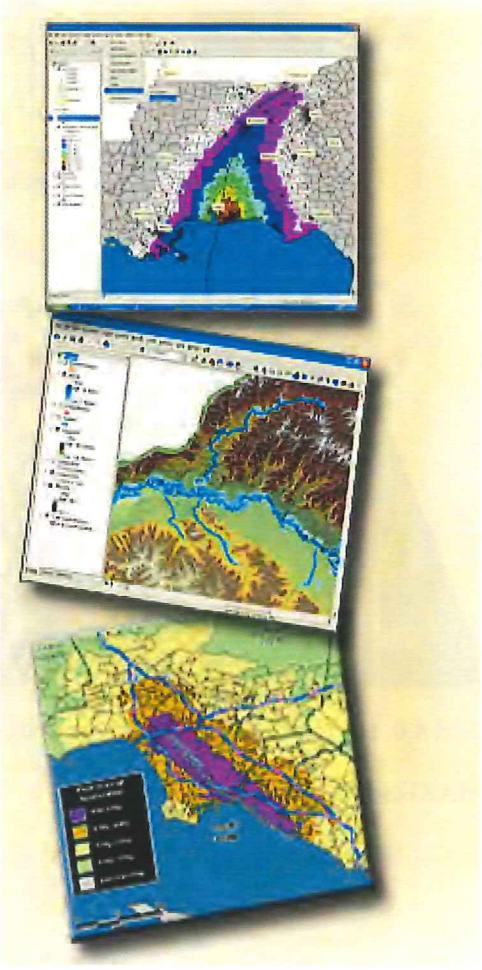
HAZUS-MH Analysis Levels

HAZUS-MH provides for three levels of analysis:

- A Level 1 analysis yields a rough estimate based on the nationwide database and is a great way to begin the risk assessment process and prioritize high-risk communities.
- A Level 2 analysis requires the input of additional or refined data and hazard maps that will produce more accurate risk and loss estimates. Assistance from local emergency management personnel, city planners, GIS professionals, and others may be necessary for this level of analysis.
- A Level 3 analysis yields the most accurate estimate of loss and typically requires the involvement of technical experts such as structural and geotechnical engineers who can modify loss parameters based on to the specific conditions of a community. This level analysis will allow users to supply their own techniques to study special conditions such as dam breaks and tsunamis. Engineering and other expertise is needed at this level.

Three data input tools have been developed to support data collection. The Comprehensive Data Management System helps users collect and manage local building data for more refined analyses than are possible with the national level data sets that come with HAZUS. The system has expanded capabilities for multi-hazard data collection. HAZUS-MH includes an enhanced Building Inventory Tool allows users to import building data and is most useful when handling large datasets, such as tax assessor records. The Flood Information Tool helps users manipulate flood data into the format required by the HAZUS flood model. All Three tools are included in the HAZUS-MH MR1 Application DVD.

HAZUS-MH Models



The HAZUS-MH Hurricane Wind Model gives users in the Atlantic and Gulf Coast regions and Hawaii the ability to estimate potential damage and loss to residential, commercial, and industrial buildings. It also allows users to estimate direct economic loss, post-storm shelter needs and building debris. In the future, the model will include the capability to estimate wind effects in island territories, storm surge, indirect economic losses, casualties, and impacts to utility and transportation lifelines and agriculture. Loss models for other severe wind hazards will be included in the future. Details about the Hurricane Wind Model.

The HAZUS-MH Flood Model is capable of assessing riverine and coastal flooding. It estimates potential damage to all classes of buildings, essential facilities, transportation and utility lifelines, vehicles, and agricultural crops. The model addresses building debris generation and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, and building interiors. The effects of flood warning are taken into account, as are flow velocity effects. Details about the Flood Model.

The HAZUS-MH Earthquake Model, The HAZUS earthquake model provides loss estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. The model addresses debris generation, fire-following, casualties, and shelter requirements. Direct losses are estimated based on physical damage to structures, contents,

inventory, and building interiors. The earthquake model also includes the Advanced Engineering Building Module for single- and group-building mitigation analysis. Details about the Earthquake Model.

The HAZUS-MH Tsunami Model represents the first new disaster module for the Hazus software in almost 15 years and is the culmination of work completed on the Hazus Tsunami Methodology Development (FEMA, 2013) by a team of tsunami experts, engineers, modelers, emergency planners, economists, social scientists, geographic information system (GIS) analysts, and software developers. A Tsunami Oversight Committee provided technical direction and review of the methodology development. New features with the model include:

- Territory Analysis: This release represents the first time that analysis will be available for U.S. territories (Guam, American Samoa, Commonwealth of Northern Mariana Islands and U.S. Virgin Islands).
- New Point Format: The Hazus General Building Stock for the Tsunami release will use a new National Structure Inventory point format (details in User Release Notes available with download).
- Case Studies: The Tsunami Module will require user-provided data, so the Hazus Team has provided five case study datasets for users, which will be available on the MSC download site.
- Two Types of Damage Analysis: Users will be able to run both near-source (Earthquake + Tsunami) and distant-source (Tsunami only) damage analysis.

Additionally, HAZUS-MH can perform multi-hazard analysis by providing access to the average annualized loss and probabilistic results from the hurricane wind, flood, and earthquake models and combining them to provide integrated multi-hazard reports and graphs. HAZUS-MH also contains a third-party model integration capability that provides access and operational capability to a wide range of natural, man-made, and technological hazard models (nuclear and conventional blast, radiological, chemical, and biological) that will supplement the natural hazard loss estimation capability (hurricane wind, flood, tsunami and earthquake) in HAZUS-MH.

Appendix B. Procedures for Linking to Hazard Mitigation Plan

B. Procedures for Linking to Hazard Mitigation Plan

Not all eligible local governments are included in the Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021. Some or all of these non-participating local governments may choose to "link" to the Plan at some point to gain eligibility for programs under the federal Disaster Mitigation Act (DMA). The following "linkage" procedures define the requirements established by the planning team for dealing with an increase in the number of planning partners linked to this plan. No currently non-participating jurisdiction within the defined planning area is obligated to link to this plan. These jurisdictions can choose to do their own "complete" plan that addresses all required elements of Section 201.6 or Section 201.7 of Chapter 44 of the Code of Federal Regulations (44 CFR).

INCREASING THE PARTNERSHIP THROUGH LINKAGE

Eligibility

Eligible jurisdictions located in the planning area may link to this plan at any point during the plan's performance period (5 years after final approval). Eligibility will be determined by the following factors:

- The linking jurisdiction is a local or tribal government as defined by the Disaster Mitigation Act.
- The boundaries or service area of the linking jurisdiction is completely contained within the boundaries of the planning area established during the 2020-2021 hazard mitigation planning process.
- The linking jurisdiction's critical facilities were included in the critical facility and infrastructure risk assessment completed during the 2020 – 2021 plan development process..

Requirements

It is expected that linking jurisdictions will complete the requirements outlined below and submit their completed template to the lead agency Permit Sonoma | Sonoma County for review within six months of beginning the linkage process:

- The eligible jurisdiction requests a "Linkage Package" by contacting the Point of Contact (POC) for the plan:

  Lisa Hulette
  Permit Sonoma
  2550 Ventura Ave
  Santa Rosa, CA 95403

- The POC will provide a linkage procedure package that includes linkage information and a linkage tool-kit:

- Linkage Information
  - Procedures for linking to the multi-jurisdictional hazard mitigation plan
  - Planning partner's expectations for linking jurisdictions
  - A sample "letter of intent" to link to the multi-jurisdictional hazard mitigation plan
  - A copy of Section 201.6 and Section 201.7 of 44 CFR, which defines the federal requirements for a local and tribal hazard mitigation plans.
- Linkage Tool-Kit
  - Copy of Volume 1 and 2 of the plan
  - A special purpose district or tribe template and instructions
  - A catalog of hazard mitigation alternatives
  - A sample resolution for plan adoption

- The new jurisdiction will be required to review both volumes of the Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021, which include the following key components for the planning area:
  - Goals and objectives
  - The planning area risk assessment
  - Comprehensive review of alternatives
  - Countywide actions
  - Plan implementation and maintenance procedures.

  Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC.
- The development of the new jurisdiction's annex must not be completed by one individual in isolation. The jurisdiction must develop, implement and describe a public involvement strategy and a methodology to identify and vet jurisdiction-specific actions. The original partnership was covered under a uniform public involvement strategy and a process to identify actions that covered the planning area described in Volume 1 and Volume 2 of this plan. Since new partners were not addressed by these strategies, they will have to initiate new strategies and describe them in their annex. For consistency, new partners are encouraged to develop and implement strategies similar to those described in this plan.
- The public involvement strategy must ensure the public's ability to participate in the plan development process. At a minimum, the new jurisdiction must solicit public opinion on hazard mitigation at the onset of the linkage process and hold one or more public meetings to present the draft jurisdiction-specific annex for comment at least two weeks prior to adoption by the governing body. The POC will have resources available to aid in the public involvement strategy, including:
  - The questionnaire utilized in the plan development
  - Presentations from public meeting workshops and the public comment period
  - Press releases used throughout the planning process
  - The plan website.
- The methodology to identify actions should include a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard and a description of the process by which chosen actions were identified. As part of this process, linking jurisdictions should coordinate the selection of actions amongst the jurisdiction's various departments.
- Once their public involvement strategy and template are completed, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the multi-jurisdictional plan format and linkage procedure requirements.
- The POC will review for the following:

  - Documentation of public involvement and action plan development strategies
  - Conformance of template entries with guidelines outlined in instructions
  - Chosen actions are consistent with goals, objectives, and mitigation catalog of the Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021
  - A designated point of contact
  - A completed FEMA plan review crosswalk.
- Plans will be reviewed by the POC and submitted to California Governor's Office of Emergency Services (Cal OES) for review and approval.
- Cal OES will review plans for state compliance. Non-compliant plans are returned to the lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.
- FEMA reviews the linking jurisdiction's plan in association with the approved plan to ensure DMA compliance. FEMA notifies the new jurisdiction of the results of review with copies to Cal OES and the approved plan lead agency.
- Linking jurisdiction corrects plan shortfalls (if necessary) and resubmits to Cal OES through the approved plan lead agency.
- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan and forwards adoption resolution to FEMA with copies to lead agency and Cal OES.
- FEMA regional director notifies the new jurisdiction's governing authority of the plan's approval.

The new jurisdiction plan is then included with the multi-jurisdiction hazard mitigation plan and the linking jurisdiction is committed to participate in the ongoing plan maintenance strategy identified in Chapter 21, Volume 1 of the hazard mitigation plan.

DECREASING THE PARTNERSHIP

The eligibility afforded under this process to the planning partnership can be rescinded in two ways. First, a participating planning partner can ask to be removed from the partnership. This may be done because the partner has decided to develop its own plan or has identified a different planning process for which it can gain eligibility. A partner that wishes to voluntarily leave the partnership shall inform the POC of this desire in writing. This notification can occur any time during the calendar year. A jurisdiction wishing to pursue this avenue is advised to make sure that it is eligible under the new planning effort, to avoid any period of being out of compliance with the Disaster Mitigation Act.

After receiving this notification, the POC shall immediately notify both Cal OES and FEMA in writing that the partner in question is no longer covered by the Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021, and that the eligibility afforded that partner under this plan should be rescinded based on this notification.

The second way a partner can be removed from the partnership is by failure to meet the participation requirements specified in the "Planning Partner Expectations" package provided to each partner at the beginning of the process, or the plan maintenance and implementation procedures specified in Volume 1 of the plan. Each partner agreed to these terms by adopting the plan.

Eligibility status of the planning partnership will be monitored by the POC. The determination of whether a partner is meeting its participation requirements will be based on the following parameters:

- Are partners notifying the POC of changes in designated points of contact?
- Are the partners supporting the Steering Committee by attending designated meetings or responding to needs identified by the body?
- Are the partners continuing to be supportive as specified in the planning partners expectations package provided to them at the beginning of the process?

Participation in the plan does not end with plan approval. This partnership was formed on the premise that a group of planning partners would pool resources and work together to strive to reduce risk within the planning area. Failure to support this premise lessens the effectiveness of this effort. The following procedures will be followed to remove a partner due to the lack of participation:

- The POC will advise the Steering Committee of this pending action and provide evidence or justification for the action. Justification may include: failure to attend meetings determined to be mandatory by the Steering Committee, failure to act on the partner's action plan, or inability to reach designated point of contact after a minimum of five attempts.
- The Steering Committee will review information provided by POC, and determine action by a vote. The Steering Committee will invoke the voting process established in the ground rules established during the formation of this body.
- Once the Steering Committee has approved an action, the POC will notify the planning partner of the pending action in writing via certified mail. This notification will outline the grounds for the action, and ask the partner if it is their desire to remain as a partner. This notification shall also clearly identify the ramifications of removal from the partnership. The partner will be given 30 days to respond to the notification.
- Confirmation by the partner that they no longer wish to participate or failure to respond to the notification shall trigger the procedures for voluntary removal discussed above.
- Should the partner respond that they would like to continue participation in the partnership, they must clearly articulate an action plan to address the deficiencies identified by the POC. This action plan shall be reviewed by the Steering Committee to determine whether the actions are appropriate to rescind the action. Those partners that satisfy the Steering Committee's review will remain in the partnership, and no further action is required.
- Automatic removal from the partnership will be implemented for partners where these actions have to be initiated more than once in a 5-year planning cycle.

Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

Appendix C. Annex Instructions and Templates

Annex Templates and Instructions for Municipalities

1. JURISDICTION NAME

1.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Alternate Point of Contact
Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Development of this annex was carried out by the members of the local mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Mitigation Planning Team Members

Name	Title

1.2 JURISDICTION PROFILE

1.2.1 Location

___[jurisdiction name]___ is in ___[general location description]___

The current boundaries generally extend from ___[describe]___, encompassing an area of ___[area in square miles]___.

1.2.2 History

___[jurisdiction name]___ was incorporated in ___[date]___. ___[brief historical summary]___

1.2.3 Climate

The climate of ___[jurisdiction name]___ is ___[general description]___.

1.2.4 Governing Body Format

___[general description]___.

The __[name of adopting body]___ assumes responsibility for the adoption of this plan; __[name of oversight agency]__ will oversee its implementation.

1.3 CURRENT TRENDS

1.3.1 Population

According to ___[identify data source]___, the population of ___[jurisdiction name]___ as of ___[month year]___ was ___[population]___ Since ___[year]___, the population has grown at an average annual rate of ___[number]___ percent.

1.3.2 Development

_DESCRIBE TRENDS IN GENERAL__.

Table 1-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 1-2. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes/No _____					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	Yes/No _____ _____					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Yes/No _____					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		2015	2016	2017	2018	2019
	Single Family	__	__	__	__	__
	Multi-Family	__	__	__	__	__
	Other (commercial, mixed use, etc.)	__	__	__	__	__
	Total	__	__	__	__	__

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: # • Landslide: # • High Liquefaction Areas: # • Tsunami Inundation Area: # • Wildfire Risk Areas: #
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	

1.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities is presented in Table 1-3.
- Development and permitting capabilities are presented in Table 1-4.
- An assessment of fiscal capabilities is presented in Table 1-5.
- An assessment of administrative and technical capabilities is presented in Table 1-6.
- An assessment of education and outreach capabilities is presented in Table 1-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-8.
- Classifications under various community mitigation programs are presented in Table 1-9.
- The community's adaptive capacity for the impacts of climate change is presented in Table 1-10.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions.

Table 1-3. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Zoning Code *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Subdivisions *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Stormwater Management *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Post-Disaster Recovery *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Real Estate Disclosure *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Growth Management *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Site Plan Review *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Environmental Protection *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Flood Damage Prevention *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Emergency Management *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Climate Change *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Other *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Planning Documents				
General Plan *Is the plan compliant with Assembly Bill 2140?* *Comment:*	Yes/No *Yes/No*	Yes/No	Yes/No	Yes/No
Capital Improvement Plan *How often is the plan updated?* *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Disaster Debris Management Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Floodplain or Watershed Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Stormwater Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Urban Water Management Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Economic Development Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Shoreline Management Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Community Wildfire Protection Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Forest Management Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Climate Action Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Comprehensive Emergency Management Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Threat & Hazard Identification & Risk Assessment (THIRA) *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Post-Disaster Recovery Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Continuity of Operations Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Public Health Plan *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No
Other *Comment:*	Yes/No	Yes/No	Yes/No	Yes/No

Table 1-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes/No _____
Does your jurisdiction have the ability to track permits by hazard area?	Yes/No
Does your jurisdiction have a buildable lands inventory?	Yes/No

Table 1-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes/No
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No (If yes, specify)
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
Withhold Public Expenditures in Hazard-Prone Areas	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Other	Yes/No (if yes, specify)

Table 1-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes/No	Insert appropriate information
Engineers or professionals trained in building or infrastructure construction practices	Yes/No	Insert appropriate information
Planners or engineers with an understanding of natural hazards	Yes/No	Insert appropriate information
Staff with training in benefit/cost analysis	Yes/No	Insert appropriate information
Surveyors	Yes/No	Insert appropriate information
Personnel skilled or trained in GIS applications	Yes/No	Insert appropriate information
Scientist familiar with natural hazards in local area	Yes/No	Insert appropriate information
Emergency manager	Yes/No	Insert appropriate information
Grant writers	Yes/No	Insert appropriate information
Other	Yes/No	Insert appropriate information

Table 1-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes/No
Do you have personnel skilled or trained in website development?	Yes/No
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	Yes/No Insert appropriate information
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	Yes/No Insert appropriate information
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	Yes/No Insert appropriate information
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	Yes/No Insert appropriate information
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Yes/No Insert appropriate information

Table 1-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Insert appropriate information
Who is your floodplain administrator? (department/position)	Insert appropriate information
Are any certified floodplain managers on staff in your jurisdiction?	Yes/No
What is the date that your flood damage prevention ordinance was last amended?	Insert appropriate information
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets/Exceeds Insert appropriate information
When was the most recent Community Assistance Visit or Community Assistance Contact?	Insert appropriate information
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state what they are.	Yes/No Insert appropriate information
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what they are.	Yes/No Insert appropriate information
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, state why.	Yes/No Insert appropriate information
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes/No Insert appropriate information
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	Yes/No Yes/No Yes/No
How many flood insurance policies are in force in your jurisdiction?[a] • What is the insurance in force? • What is the premium in force?	Insert appropriate information $_____ $_____

Criterion	Response
How many total loss claims have been filed in your jurisdiction?[a] • How many claims are still open or were closed without payment? • What were the total payments for losses?	Insert appropriate information Insert appropriate information $_____

a. According to FEMA statistics as of MONTH XX, 20XX

Table 1-9. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes/No	_____	Date
Building Code Effectiveness Grading Schedule	Yes/No	_____	Date
Public Protection	Yes/No	_____	Date
Storm Ready	Yes/No	_____	Date
Firewise	Yes/No	_____	Date

Table 1-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating[a]
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts *Comment:*	High/Medium/Low
Jurisdiction-level monitoring of climate change impacts *Comment:*	High/Medium/Low
Technical resources to assess proposed strategies for feasibility and externalities *Comment:*	High/Medium/Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory *Comment:*	High/Medium/Low
Capital planning and land use decisions informed by potential climate impacts *Comment:*	High/Medium/Low
Participation in regional groups addressing climate risks *Comment:*	High/Medium/Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes *Comment:*	High/Medium/Low
Identified strategies for greenhouse gas mitigation efforts *Comment:*	High/Medium/Low
Identified strategies for adaptation to impacts *Comment:*	High/Medium/Low
Champions for climate action in local government departments *Comment:*	High/Medium/Low
Political support for implementing climate change adaptation strategies *Comment:*	High/Medium/Low
Financial resources devoted to climate change adaptation *Comment:*	High/Medium/Low

Criterion	Jurisdiction Rating[a]
Local authority over sectors likely to be negative impacted	High/Medium/Low
Comment:	
Public Capacity	
Local residents knowledge of and understanding of climate risk	High/Medium/Low
Comment:	
Local residents support of adaptation efforts	High/Medium/Low
Comment:	
Local residents' capacity to adapt to climate impacts	High/Medium/Low
Comment:	
Local economy current capacity to adapt to climate impacts	High/Medium/Low
Comment:	
Local ecosystems capacity to adapt to climate impacts	High/Medium/Low
Comment:	

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

1.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Plan or Program Name**—Description

- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description

1.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-11 lists past occurrences of natural hazards for which specific damage was recorded in ___[jurisdiction name]___. Other hazard events that broadly affected the entire planning area, including ___[jurisdiction name]___, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 1-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____

1.7 HAZARD RISK RANKING

Table 1-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 1-12. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	_____	_____	High/Medium/Low
2	_____	_____	High/Medium/Low
3	_____	_____	High/Medium/Low
4	_____	_____	High/Medium/Low
5	_____	_____	High/Medium/Low
6	_____	_____	High/Medium/Low
7	_____	_____	High/Medium/Low
8	_____	_____	High/Medium/Low
9	_____	_____	High/Medium/Low

1.8 JURISDICTION-SPECIFIC VULNERABILITIES

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for the jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

1.8.1 Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: XX
- Number of FEMA-identified Severe-Repetitive-Loss Properties: XX
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: XX

1.8.2 Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Insert as appropriate.
- Insert as appropriate.
- Insert as appropriate.

Mitigation actions addressing these issues were prioritized for consideration in the action plan presented in this annex.

1.9 STATUS OF PREVIOUS PLAN ACTIONS

Table 1-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-13. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				

1.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 1-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 1-15 identifies the priority for each action. Table 1-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action xxx-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: Earthquake, flooding, landslide, tsunami, wildfire						
Existing	3, 4, 10	TBD	TBD	High	HMGP, PDM, FMA	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action xxx-2— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including _____						
Hazards Mitigated: Dam failure, drought, earthquake, flooding, landslide, tsunami, wildfire						
New & Existing	1, 3, 4, 5, 7, 8, 10	TBD	TBD	Low	Staff Time, General Funds	Ongoing
Action xxx-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: All hazards						
New & Existing	1, 5, 8	TBD	TBD	Low	Staff Time, General Funds	Short-term
Action xxx-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Dam failure, flooding, severe weather, tsunami, sea level rise						
New & Existing	1, 3, 5, 7, 8, 10	TBD	TBD	Low	Staff Time, General Funds	Ongoing
Action xxx-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: • _____.						
Hazards Mitigated: TBD						
New & Existing	1, 3, 4, 5, 6, 7, 8	TBD	TBD	Low	Staff Time, General Funds	Short-term
Action xxx-6— Purchase generators for critical facilities and infrastructure that lack adequate backup power, including _____.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	2, 6, 9					
Action xxx-7—Description						
Hazards Mitigated: TBD						
Action xxx-8—Description						
Hazards Mitigated:						
Action xxx-9—Description						
Hazards Mitigated: TBD						
Action xxx-10—Description						
Hazards Mitigated: TBD						
Action xxx-11—Description						
Hazards Mitigated: TBD						

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

See the introduction to this volume for list of acronyms used here.

Table 1-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
TBD	3	High	High	Yes	Yes	No	Medium	High
TBD	7	Medium	Low	Yes	No	Yes	High	Low
TBD	3	Low	Low	Yes	No	Yes	High	Low
TBD	6	Medium	Low	Yes	No	Yes	High	Low
TBD	7	Medium	Low	Yes	No	Yes	High	Medium
TBD	3	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 1-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
High-Risk Hazards								
Medium-Risk Hazards								
Low-Risk Hazards								

a. See the introduction to this volume for explanation of mitigation types.

1.11 REVIEW AND INCORPORATION OF INFORMATION FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **___[jurisdiction name]___ Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **___[jurisdiction name]___ Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>

The following **o**utside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- <INSERT DOCUMENT AND DESCRIPTION OF HOW IT WAS USED>

1.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Insert text, if any; otherwise, delete section

1.13 ADDITIONAL COMMENTS

Insert text, if any; otherwise, delete section

INSTRUCTIONS FOR COMPLETING CITY/COUNTY ANNEX TEMPLATE

The jurisdictional annex templates for the *2020 Sonoma County Hazard Mitigation Plan* update will be completed in three phases. **This document provides instructions for completing all three phases of the template for municipalities.**

The target timeline for phase completion is as follows:

- **Phase 1**—Profile, Trends and Previous Plan Status
  - Deployed: Month xx, xxxx
  - Due: Month xx, xxxx
- **Phase 2**—Capability Assessment and Information Sources
  - Deployed: Month xx, xxxx
  - Due: Month xx, xxxx
- **Phase 3**—Risk Ranking, Action Plan, and Information Sources
  - Deployed: Month xx, xxxx
  - Due: Month xx, xxxx

Please direct any questions and return your completed Phase 3 template by April __, 2021 to:

Bart Spencer
Tetra Tech, Inc.
(650) 324-1810
E-mail:bart.spencer@tetratech.com

A Note About Formatting:

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner.

Content should be entered within the yellow, highlighted text that is currently in the template, rather than creating text in another document and pasting it into the template. Pasting text from another source may alter the style and formatting of the document.

The numbering of sections and tables in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of this numbering.

IMPORTANT! READ THIS FIRST

Phase 1 and Phase 2 templates were previously provided to your jurisdiction for completion.

If your jurisdiction returned the completed Phase 1 & 2 templates:

- The Phase 1 & 2 content you provided is already incorporated into your Phase 3 template.
- Please review the template to see if we have inserted any comments requesting further work to be done on Phase 1 or 2
  - ***If any comments are included, please address them.*** Then, begin your work on Phase 3 following the Phase 3 instructions beginning on page 12.
  - If no comments are included, then you **DO NOT** need to do any further work on the Phase 1 or Phase 2 content. ***Go directly to the instructions for Phase 3, beginning on page 12.***

If your jurisdiction has **NOT** yet done any work on the Phase 1 or Phase 2 template:

- Follow the instructions below for providing the Phase 1 and Phase 2 information.
- Then proceed with the Phase 3 instructions.

If your jurisdiction started work on the Phase 1 or 2 template but never completed and submitted it, please copy the work you had completed so far into the new template. Then complete Phases 1, 2, and 3 following the instructions provided here.

PHASE 1 INSTRUCTIONS

CHAPTER TITLE

You jurisdiction's name has already been entered as the title of the chapter. Please review and correct if needed.

HAZARD MITIGATION PLAN POINT OF CONTACT

Provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, please let the planning team know by inserting a comment into the document.

Complete the table providing the names and titles of members of the local mitigation planning team responsible for completing this annex. Team membership should consist of agencies with authority to regulate development and enforce local ordinances or regulatory standards, such as building/fire code enforcement, emergency management, emergency services, floodplain management, parks and recreation, planning/community development, public information, public works/engineering, stormwater management, transportation, or infrastructure.

JURISDICTION PROFILE

Provide information specific to your jurisdiction as indicated, in a style similar to the examples provided below. This should be information that will not be provided in the overall mitigation plan document.

Location

Describe the community's location, size and prominent features, similarly to the example below

> The City of Jones is in the northwest portion of Smith County, along the Pacific Coast in northern California. It is almost 300 miles of San Francisco. The city's total area is 4.2 square miles, with boundaries generally extending north-south from State Highway 111 to the Johnson River and east-west from Coast Road to East Frank Avenue. The City of Allen is to the north, unincorporated county is to the west, the City of Bethany is to the south, and the Pacific Ocean is to the west.
>
> Jones is home to the University of Arbor, Bickerson Manufacturing, and the western portion of Soosoo National Park.

History

Describe the community's history, focusing on economy and development, and note its year of incorporation, similarly to the example below

The City of Jones was incorporated in 1858. The area was settled during the gold rush in the 1850s as a supply center for miners. As the gold rush died down, timber and fishing became the area's major economic resources. By 1913, the Jones Teachers College, a predecessor to today's University of Arbor, was founded. Recently, the presence of the college has come to shape Jones' population into a young and educated demographic. In 1981 the City developed the Jones Marsh and Wildlife sanctuary, an environmentally friendly sewage treatment enhancement system.

With numerous annexations since its original incorporation, the city's area has almost doubled. Today it features a commercial core in the center of the city, with mostly residential areas to the north and south, the university to the west and the national park on the east.

Climate

Describe the community's key climate characteristics, similarly to the example below

Jones' weather is typical of the Northern California coast, with mild summers and cool, wet winters. It rarely freezes in the winter and it is rarely hot in the summer. Annual average rainfall is over 40 inches, with 80 percent of that falling from November through April. The average year-round temperature is 59°F. Humidity averages 72 to 87 percent. Prevailing winds are from the north, and average 5 mph.

Governing Body Format

Describe the community's key governance elements, similarly to the example below

The City of Jones is governed by a five-member city council. The City consists of six departments: Finance, Environmental Services, Community Development, Public Works, Police and the City Manager's Office. The City has 13 commissions and task forces, which report to the City Council.

The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

CURRENT TRENDS

Population

For population data, use the most current population figure for your jurisdiction based on an official means of tracking (e.g., the U.S. Census or state office of financial management).

According to California Department of Finance, the population of Jones as of July 2018 was 17,280. Since 2010, the population has grown at an average annual rate of 1.2 percent, though that rate is declining, with an annual average of only 0.8 percent since 2015.

Development

In the yellow-highlighted text that says "Describe trends in general," provide a brief description of your jurisdiction's recent development trends similar to the following example:

Anticipated development levels for Jones are low to moderate, consisting primarily of residential development. The majority of recent development has been infill. Residentially, there has been a focus on affordable housing and a push for more secondary mother-in-law units on properties.

The City of Jones adopted its general plan in July 2000. The plan focuses on issues of the greatest concern to the community. City 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. Future growth and development in the city will be managed as identified in the general plan.

Complete the table titled "Recent and Expected Future Development Trends." Please note:

- The portion of the table requesting the number of permits by year is specifically looking for development permits for new construction. If your jurisdiction does not have the ability to differentiate between permit types, please list the total number of permits and indicate "N/A" (not applicable) for the permit sub-types.
- If your jurisdiction does not have the ability to track permits for each hazard area, please delete the bullet list of hazard areas and insert a qualitative description of where development has occurred.

STATUS OF PREVIOUS PLAN ACTIONS

Please note that this section only applies to jurisdictions that are conducting updates to previously approved hazard mitigation plans. If your jurisdiction has not previously participated in an approved plan, please enter a note stating this, and we will remove this section in your final annex.

Also note that this section is further back in the annex than the rest of the Phase 1 content. Some Phase 2 sections are included before it.

All action items identified in prior mitigation plans must be reconciled in this update. Action items must all be marked as **ONE** of the following; check the appropriate box (place an X) and provide the following information:

- **Completed**—If an action has been completed since the prior plan was prepared, please check the appropriate box and provide a date of completion in the comment section. If an action has been initiated and is an ongoing program (e.g. annual outreach event), you may mark it as completed and **note that it is ongoing in the comments**. If an action addresses an ongoing program you would like to continue to include in your action plan, please see the Carried Over to Plan Update bullet below.
- **Removed**—If action items are to be removed because they are no longer feasible, a reason must be given. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. **Place a comment in the comment section explaining why the action is no longer feasible or barriers that prevented the action from being implemented (e.g., "Action no longer considered feasible due to lack of political support.").** If the wording and/or intent of a previously identified action is unclear, this can be a reason for removal. A change in community priorities may also be a reason for removal and should be discussed in the comments.
- **Carried Over to Plan Update**—If an action is in progress, is ongoing, or has not been initiated and you would like to carry it over to the plan update, please check the "Check if Yes" column under "Carried Over to Plan Update." Selecting this option indicates that the action will be included in the mitigation action plan for this update. If you are carrying over an action to the update, please include a comment describing any action that has been taken or why the action was not taken (specifically, any barriers or obstacles that prevented the action from moving forward or slowed progress). Leave the last column, "Action # in Update," blank at this point. This will be filled in after completing the updated action plan in Phase 3.

Please ensure that you have provided a status and a comment for each action.

THIS COMPLETES PHASE 1

PHASE 2 INSTRUCTIONS

CAPABILITY ASSESSMENT

Please note that it is unlikely that you will be able to complete all sections of the capability assessment on your own. You will likely need to reach out to other departments within your local government, such as planning, finance, public works, etc. It may be beneficial to provide these individuals with background information about this planning process, as you will want input from them again during Phase 3 of your annex development.

Legal and Regulatory Capability

In the table titled "Legal and Regulatory Capability," indicate "Yes" or "No" for each listed code, ordinance, requirement or planning document in each of the following columns:

- **Local Authority**—Enter "Yes" if your jurisdiction has prepared or adopted the identified item; otherwise, enter "No." If yes, then enter the code, ordinance number, or plan name and its date of adoption in the comments column. ***Note: If you are entering yes, please be sure that you are providing a comment with the appropriate code, ordinance or plan.***
- **Other Jurisdiction Authority**—Enter "Yes" if there are any regulations that may impact your jurisdiction that are enforced or administered by another agency (e.g., a state agency or special purpose district) or if you know that there are any state or federal regulations or laws that would prohibit local implementation of the identified item; otherwise, enter "No." ***Note: If you answer yes, please indicate the other agency in the comments.***
- **State Mandated**—Enter "Yes" if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, enter "No." ***Note: If you are entering yes, please be sure that you are providing a comment.***
- **Integration Opportunity**—Enter "Yes" if your jurisdiction has opportunities for integrating the code, ordinance or plan with the hazard mitigation plan. Consider entering "Yes" in the Integration Opportunity column based on your responses to the following:
  - ➢ If you answered "Yes" in the Local Authority column for this code, ordinance or plan:
    - Does the code, ordinance or plan already address hazards and their potential impacts?
      - If so, should it be updated or revised to reflect new information about risk?
      - If not, will (or should) the code, ordinance or plan be updated over the performance period of the hazard mitigation plan (5 years)?
    - Does the code, ordinance or plan include specific projects that should be reviewed to incorporate hazard mitigation goals?
    - Does the code, ordinance or plan include specific projects that should be included as action items in the hazard mitigation action plan?
  - ➢ If you answered "No" in the Local Authority column for this code, ordinance or plan:
    - Will your jurisdiction develop the code, ordinance or plan during the performance period of the hazard mitigation plan?

Note: Each capability with a "Yes" answer to Integration Opportunity will be discussed in more detail later in the annex. You may wish to keep notes when assessing the Integration Opportunity or review the "Integration with Other Planning Initiatives" section below.

- **Comments**—Enter the code number and adoption date for any local code indicated as being in place; provide other comments as appropriate to describe capabilities for each entry. **PLEASE DO NOT OVERLOOK THIS STEP**

For the categories "General Plan" and "Capital Improvement Plan," answer the specific questions shown, in addition to completing the four columns indicating level of capability.

Development and Permit Capabilities

Complete the table titled "Development and Permitting Capabilities."

Fiscal Capability

Complete the table titled "Fiscal Capability" by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter "Yes" if the resource is fully accessible to your jurisdiction. Enter "No" if there are limitations or prerequisites that may hinder your use of this resource.

Administrative and Technical Capability

Complete the table titled "Administrative and Technical Capability" by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter "Yes" or "No" in the column labeled "Available?". If yes, then enter the department and position title in the right-hand column. If you have contract support staff with these capabilities, you can still answer "Yes." Indicate in the department column that this resource is provided through contract support.

Education and Outreach Capabilities

Complete the table titled "Education and Outreach" to indicate your jurisdiction's capabilities and existing efforts regarding hazard mitigation education and outreach.

National Flood Insurance Program Compliance

Complete the table titled "National Flood Insurance Program Compliance" by indicating your jurisdiction's capabilities related to each question in the table.

Classification in Hazard Mitigation Programs

Complete the table titled "Community Classifications" to indicate your jurisdiction's participation in various national programs related to natural hazard mitigation. For each program enter "Yes" or "No" in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter "N/A" in the third and fourth columns if your jurisdiction is not participating. If you do not know your current classification, information is available at the following websites:

- **Community Rating System**— https://www.fema.gov/floodplain-management/community-rating-system
- **Storm Ready**— https://www.weather.gov/stormready/communities
- **Firewise**— http://www.firewise.org/usa-recognition-program/map-of-active-participants.aspx

- **Building Code Effectiveness Grading Schedule (BCEGS)**— https://www.isomitigation.com/bcegs/iso-s-building-code-effectiveness-grading-schedule-bcegs.html
- **Public Protection Classification**— https://www.isomitigation.com/ppc/

Adaptive Capacity for Climate Change

Consider the climate change impact concerns identified for the planning area:

- Reduced snowpack
- Increased wildfires
- Sea level rise and inland flooding
- Threats to sensitive species (e.g. coho salmon)
- Loss in agricultural productivity (e.g. forestry, wine grapes, nursery products, dairy)
- Public health and safety.

With those impacts in mind, complete the table titled "Adaptive Capacity for Climate Change" by indicating your jurisdiction's capacity for each listed criterion as follows:

- **High**—The capacity exists and is in use.
- **Medium**—The capacity may exist, but is not used or could use some improvement.
- **Low**—The capacity does not exist or could use substantial improvement.
- **Unsure**—Not enough information is known to assign a rating.

This is a subjective assessment, but providing a few words of explanation is useful. It is highly recommended that you complete this table with an internal planning team after reviewing the results of the other capability assessment tables.

INTEGRATION WITH OTHER PLANNING INITIATIVES

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. The goal of integration is to ensure that the potential impact of hazards is considered in planning for future development. FEMA recommends integration as follows:

- Integrate hazard mitigation plan goals with community objectives (e.g. incorporate the goals for risk reduction and safety into the policies of other plans).
- Use the risk assessment to inform plans and policies (e.g. incorporate risk assessment findings into land use plans, site plan review, emergency operations plans).
- Implement mitigation actions through existing mechanisms (e.g. include mitigation projects in the capital improvement plan).
- Think about mitigation before and after a disaster (e.g. build recovery planning on existing mitigation plans and goals).

After reviewing the plans, programs and ordinances identified in the capability assessment tables, identify all plans and programs that have already been integrated with the hazard mitigation plan, and those that offer opportunities for future integration. The simplest way to do this is to review the Legal and Regulatory Capabilities table to see which items were marked as "Yes" under the Integration Opportunity column.

Existing Integration

In the highlighted bullet list, list items for which you entered "Yes" under the Integration Opportunity column of the "Legal and Regulatory Capability" table because the plan or ordinance already addresses potential impacts or includes specific projects that should be included as action items in the mitigation action plan. Consider listing items marked as Completed in the "Status of Previous Plan Actions" table if they were indicated as being ongoing actions. Provide a brief description of how the plan or ordinance is integrated. Examples are as follows:

- **Capital Improvement Plan**—The capital improvement plan includes projects can help mitigate potential hazards. The City will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Building Code and Fire Code**—The City's adoption of the 2016 California building and fire codes incorporated local modifications to account for the climatic, topographic and geographic conditions that exist in the City.
- **General Plan**—The general plan includes a "Safety, Services, and Infrastructure" element to protect the community from unreasonable risk by establishing policies and actions to avoid or minimize the following hazards:
  - Geologic and seismic hazards
  - Fire hazards
  - Hazardous materials
  - Flood control
  - Impacts from climate change.
- **Climate Action Plan**—The City's Climate Action Plan includes projects for reducing greenhouse gas emissions and adapting to likely impacts of climate change. These projects were reviewed to identify cross-planning initiates that serve both adaptation and mitigation objectives.

Note: Any plans that fall into this category should be reviewed during the development of the mitigation strategy in Phase 3 and included as appropriate.

Opportunities for Future Integration

List any remaining items that say "Yes" in the Integration Opportunity column in the Legal and Regulatory Capabilities and explain the process by which integration will occur. Examples follow:

- **Zoning Code**—The City is conducting a comprehensive update to its zoning code. The opportunity to incorporate additional mitigation and abatement measures will be considered for inclusion into the code.
- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.

- **Post-Disaster Recovery Plan**—The City does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the goals and objectives identified in the hazard mitigation plan.

After you have accounted for all items marked as "Yes" under the Integration Opportunity column, consider other programs you may have in place in your jurisdiction that include routine consideration and management of hazard risk. Examples of such programs may include: tree pruning programs, right-of-way mowing programs, erosion control or stream maintenance programs, etc. Please add any such programs to the integration discussion and provide a brief description of how these programs manage (or could be adapted to manage) risk from hazards.

REVIEW AND INCORPORATION OF INFORMATION FOR THIS ANNEX

Please note that this section will ultimately describe all information sources used to develop this annex, but that only the sources used for Phases 1 and 2 will be listed at this point. Additional sources will be added with the preparation of the Phase 3 annex.

This section should describe what resources you used to complete the annex and how you used them. Several items are started for you, but please be sure to update and enhance any descriptions. This may seem trivial or unimportant, but it is a requirement to pass the state and FEMA review process.

THIS COMPLETES PHASE 2

PHASE 3 INSTRUCTIONS

JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

In the table titled "Past Natural Hazard Events," list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction. Include the date of the event and the estimated dollar amount of damage it caused. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Please refer to the table below that lists hazard events in Sonoma County as recognized by the County, the state, and the federal government.

Presidential Disaster Declarations for Sonoma County

Year	Dates	Event Name	County EOC Activated	Gubernatorial Declaration	Presidential Declaration
2020	Sept. 4 – Nov. 17	Wildfires			X
2020	Aug. 14 – Sept. 26	Wildfires			X
2020	Jan. 20 – present	COVID-19 Pandemic	X	X	X
2019	October	PG&E Power Shutoff	X		
2019	Oct. 23 – Nov. 7	Kincade Fire	X	X	
2019	Feb. 24 – Mar. 1	Severe Winter Storms, Flooding, Landslides, Mudslides	X		X
2018	October	PG&E Power Shutoff	X		
2017	October	LNU Complex Fires	X		
2017	Oct. 8-31	Wildfires			X
2017	Feb. 1-23	Severe Winter Storms, Flooding, Mudslides	X		X
2017	Jan. 3-12	Severe Winter Storms, Flooding, Mudslides	X		X
2014-2016	Feb. 25	Drought		X	
2015	Sep. 12-25	Valley Fire	X	X	X
2014	Dec. 11-12	December Winter Storm	X		
2014	Aug. 24	South Napa Earthquake	X	X	X
2013	Oct. 29 and Nov. 5	Lopez Protests	X		
2012	Dec. 2	Holiday Decoration Flood	X		
2011	Mar. 11	Great Tohoku Tsunami	X	X	X
2009	Apr.-May	H1N1 Influenza Pandemic			
2007	Nov. 7	SF Oil Spill		X	
2006	Mar. 29-Apr. 16	Late Spring Storms		X	X
2005-2006	Dec. 31, 05–Jan. 3, 06	New Year's Floods	X	X	X
2004	Sept. 3-8	Geysers Fire	X		
2002-2003	Dec. 17, 02–Apr. 8, 03	December Winter Storms			
1998-2000	Feb. 2, 1998–Jan. 4, 2000	Flood of '98/ Rio Nido Debris Flow	X	X	X
1999	Feb. 8-10	February Winter Storm		X	
1997	Jan. 25	Superbowl Flood	X		
1996-1997	Dec. 30, 96–Jan. 4, 97	New Year's Flood	X	X	X
1996	Oct. 27-28	Porter Creek Fire	X		
1996	Jul. 31–Aug. 20	Cavedale Fire	X		

Year	Dates	Event Name	County EOC Activated	Gubernatorial Declaration	Presidential Declaration
1996	Jul. 31–Aug. 20	Jenner Sandbarrier			
1996	Feb. 4-5	February Winter Storm	X		
1995	Dec. 11-12	December Winter Storm	X		
1995	Mar. 7-15	Flood of '95, Part II	X	X	X
1995	Jan. 8-31	Flood of '95, Part 1	X	X	X
1994	May–Sep.	Fishing Emergency		X	X
1993	Jan. 20-25	Flood of '93	X	X	X
1990-1991	Dec. 90–Feb. 91	Freeze of '91		X	X
1986	Feb. 12 – Mar. 10	Severe Storms, Flooding			X
1983	Jan. 21 – Mar. 30	Coastal Storms, Floods, Slides, Tornadoes			X
1981-1982	Dec. 19 – Jan. 8	Severe Storms, Flood, Mudslides, High Tide			X
1969	Jan. 26	Severe Storms, Flooding			X
1964	Dec. 24	Heavy Rains and Flooding			X

We recommend including most large-scale disasters, unless you know that there were no impacts on your jurisdiction. Specifically, we recommend that you include these events if you have damage estimate information or can provide a brief description of impacts that occurred within your community. In addition to these events, please refer to the NOAA storm events database included in the tool kit. We recommend conducting a search for the name of your jurisdiction in order to identify events with known impacts. Other potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Resident input.

If you do not have estimates for dollars of damage caused, please list "Not Available" in the appropriate column or simply list a brief description of the damages (e.g. Main Street closed as a result of flooding, downed trees and residential damages). Please note that tracking such damages is a valid and useful mitigation action if your jurisdiction does not currently track such information.

HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and, therefore, needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy.

The risk ranking for each jurisdiction is included in the Risk Ranking Summary tab in the Loss Matrix included in the toolkit. Tetra Tech has filled in the results for each jurisdiction. If this risk ranking exercise generates results other that what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template and include what you believe the rank should be and why. For example, drought was ranked as low; however, the jurisdiction's economy is heavily reliant on water using industries, such as agriculture or manufacturing, so you believe it should be ranked as medium.

Also keep in mind that one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. **You will need to have at least one true mitigation action for each hazard ranked as "high" or "medium."** This is discussed in more detail in the Hazard Mitigation Action Plan section of these instructions.

The instructions below describe the methodology for how these rankings were derived. Please review before providing any comments.

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and, therefore, needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy.

The risk ranking for each jurisdiction is included in the Risk Ranking Summary tab in the Loss Matrix included in the toolkit. Tetra Tech has filled in the results for each jurisdiction. If this risk ranking exercise generates results other that what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template and include what you believe the rank should be and why. For example, drought was ranked as low; however, the jurisdiction's economy is heavily reliant on water using industries, such as agriculture or manufacturing, so you believe it should be ranked as medium.

Also keep in mind that one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. **You will need to have at least one true mitigation action for each hazard ranked as "high" or "medium."** This is discussed in more detail in the Hazard Mitigation Action Plan section of these instructions.

The instructions below describe the methodology for how these rankings were derived. Please review before providing any comments.

Risk Ranking Methodology

Review Risk Ranking in Template

Review the hazard risk ranking information that Tetra Tech has provided. The hazard with the highest risk rating is listed at the top of table titled "Hazard Risk Ranking" in your template and was given a rank of 1; the hazard with the second highest rating is listed second with a rank of 2; and so on. Two hazards with equal risk ratings were given the same rank. "High," Medium," and "Low" assignments were given for each hazard of concern based on the total score (probability x impact). It is important to note, that this is determined by the scores rather than assigning a certain number of hazards to each category.

When reviewing the risk ranking results, it is important to remember that this exercise is about categorizing hazards into broad levels of risk (e.g. high, medium, low). It is not an exercise in precision.

Review Risk Ranking in Loss Matrix

The following sections discuss the methodology used to develop the results included in your template. Please refer to the Loss Matrix provided in your tool kit in order to follow along.

Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. The probability of occurrence of a hazard event is generally based on past hazard events in an area, although weight can be given to expected future probability of occurrence based on established return intervals and changing climate conditions. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category. Each hazard was assigned a probability factor as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

Potential Impacts of Each Hazard

The impact of each hazard is divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories are also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1.

Impact factors for each category (people, property, economy) are described below:

- **People**—Values are assigned based on the percentage of the total ***population exposed*** to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. Impact factors were assigned as follows:
  - High—25 percent or more of the population is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the population is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the population is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the population is exposed to a hazard (Impact Factor = 0)
- **Property**—Values are assigned based on the percentage of the total ***property value exposed*** to the hazard event:
  - High—25 percent or more of the total replacement value is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the total replacement value is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the total replacement value is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the total replacement value is exposed to a hazard (Impact Factor = 0)
- **Economy**—Values were assigned based on the percentage of the total ***property value vulnerable*** to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total replacement value of the property exposed to the hazard. For some hazards, such as wildland fire

and landslide, vulnerability may be considered to be the same or a portion of exposure due to the lack of loss estimation tools specific to those hazards.

- High—Estimated loss from the hazard is 10 percent or more of the total replacement value (Impact Factor = 3)
- Medium—Estimated loss from the hazard is 5 percent to 9 percent of the total replacement value (Impact Factor = 2)
- Low—Estimated loss from the hazard is 4 percent or less of the total replacement value (Impact Factor = 1)
- No impact—No loss is estimated from the hazard (Impact Factor = 0).

Impacts on People

The percent of the total population exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **green highlighted column.** For those hazards that do not have a defined extent and location the entire population or a portion of the population is considered to be exposed, depending on the hazard. For the drought hazard, it is common for jurisdictions to list "low" or "none," because all people in the planning area would be exposed to drought, but impacts to the health and safety of individuals are expected to be minimal.

Impacts on Property

The percent of the total value exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **blue highlighted column.** For those hazards that do not have a defined extent and location (e.g. severe weather) the entire building stock is generally considered to be exposed. For the drought hazard, it is common for jurisdictions to list "low" or "none," because all structures in the planning area would be exposed to drought, but impacts to structures are expected to be minimal.

Impacts on the Economy

The loss estimates for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the loss estimate matrix in the **purple highlighted column.** For those hazards that have a defined extent and location, but do not have modelled loss results, loss estimates can be the same as exposure or a portion thereof. For example, a large percentage of the building stock may be exposed to landslide or wildland fire risk, but it would not be expected that one event that resulted in loss to all exposed structures would occur. For those hazards that do not have a defined extent and location, exposure is based on the hazard type.

Risk Rating for Each Hazard

A risk rating for each hazard was determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

Risk Rating = Probability Factor x Weighted Impact Factor {people + property + economy}

This is the number that is shown in the risk ranking table in your template. Generally, score of 30 or greater receive a "high" rating, score between 15 and 30 receive a "medium" rating, and score of less than 15 receives a "low" rating.

JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of $1,000 in any rolling 10-year period since 1978. In the space provided, Tetra Tech has inserted the following information based on data provided by FEMA:

- The number of any FEMA-identified repetitive-loss properties in your jurisdiction.
- The number of any FEMA-identified severe-repetitive-loss properties in your jurisdiction.
- The number (if any) of repetitive-loss or severe-repetitive-loss properties in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure.

Please note that if your jurisdiction has any repetitive loss properties, we would strongly encourage you to include a mitigation action that addresses mitigating these properties.

Other Vulnerabilities

We would strongly encourage you to review the results of the risk assessment included in the tool kit, your jurisdiction's natural events history, and any relevant public comments/input and develop a few sentences that discuss specific risks. You do not need to develop a sentence for every single parameter, but review the results and identify a few issues you would like to highlight. For example:

- Only about 2 percent of the jurisdiction's population is estimated to reside in the 1 percent annual chance flood hazard area; however, 45 percent of the population is estimated to reside in the 0.2 percent annual chance flood hazard area where flood insurance is generally not required.
- A magnitude 7.5 earthquake on the Smithburg Fault may produce nearly 1 million tons of structure debris.
- Over the past 10 years, the jurisdiction has experienced more than $6 million in estimated damages from severe storm events.
- More than 50 buildings are located in areas that will be permanently inundated with 12 inches of sea level rise.
- The results of the public survey indicated that 40 percent of Smithburg residents would not be able to be self-sufficient for 5 days following a major event.

In addition, please list any noted vulnerabilities in your jurisdiction related to hazard mitigation that may not be apparent from the risk assessment and other information provided. This may include things such as the following:

- An urban drainage issue that results in localized flooding every time it rains.
- An area of the community that frequently loses power due to a lack of tree maintenance.
- A critical facility, such as a police station, that is not equipped with a generator.
- A neighborhood that has the potential to have ingress and egress cut off as the result of a hazard event, such as a flood or earthquake (e.g. bridge only access).
- Substantial number of buildings in one area of the community are unreinforced masonry or soft-story construction.
- An area along the river is eroding and threatening public and/or private property.
- A large visitor population that may not be aware of tsunami risk.

Spending some time thinking about the results of the risk assessment and other noted vulnerabilities will be a big help in the development of your mitigation strategy. Tetra Tech has inserted a few items in this section to get you started. In addition, two examples are shown in the table below.

Noted Vulnerability	Example Mitigation Action
Only about 2 percent of the jurisdiction's population is estimated to reside in the 1 percent annual chance flood hazard area; however, 45 percent of the population is estimated to reside in the 0.2 percent annual chance flood hazard area where flood insurance is generally not required.	Develop and implement an annual public information initiative that targets residents in the 0.2 percent annual chance flood hazard area. Provide information on the availability of relatively low cost flood insurance policies.
An urban drainage issue that results in localized flooding every time it rains.	Replace undersized culverts that are contributing to localized flooding. Priority areas include: • The corner of Main Street and 1st Street • Old Oak subdivision.

HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

This section is the heart of your jurisdictional annex. This is where you will identify the actions your jurisdiction would like to pursue with this plan. All of the work that you have done thus far should provide you with a plethora of ideas for actions. With this in mind, we recommend that you review the following and develop a list of potential actions:

- **Capability Assessment Section of Annex**—Review the Legal and Regulatory Capability table, the Fiscal Capability table, the Administrative and Technical Capability table, the Education and Outreach table, and the Community Classification table.

  - For any capability that you indicated that you did not have, ask yourself – should we have this capability? If yes, consider including an action to develop/acquire the capability.
  - Example: Ensure a staff person from public works and planning are trained in the use of FEMA's benefit-cost analysis software.
  - Review the Legal and Regulatory capabilities. If any have not been reviewed and updated in more than 10 years, consider an action to review and update the capability and, as appropriate, incorporate hazard mitigation principles or information obtained in the risk assessment (Note: actions such as this should also be identified in the opportunities for future integration section). Also, consider including projects or actions that have been identified in other plans and programs such as Capital Improvement Plans, Strategic Plans, etc. as actions in this plan.
  - For any capability that you indicated you do have, consider how this capability can be leveraged to increase or improve hazard mitigation in the jurisdiction.

- **National Flood Insurance Program Compliance Table of this Annex**—Review the table and consider the following:

  - If you have no certified floodplain managers and you have flood risk, consider adding an action to provide key staff members with training appropriate to obtain certification.
  - If your flood damage prevention was last updated in or before 2004, you should identify an action to update your ordinance to ensure it is compliant with NFIP requirements.
  - If you have any outstanding NFIP compliance issues, be sure to add an action to address them.
  - If flood hazard maps do not adequately address the flood risk within your jurisdiction, consider actions to request new mapping or conduct studies.

- If you don't participate in CRS or you would like to improve your classification, consider this as an action.
- If the number of flood insurance polices in your jurisdiction is low relative to the number of structures in the floodplain, consider an action that will promote flood insurance in your jurisdiction.

- **Adaptive Capacity for Climate Change Section of this Annex**—Consider your responses to this section. For those criterion that you listed as medium or low, think of ways you could improve this rating (see adaptive capacity portion of the mitigation best practices catalog). For those criterion you listed as high, think about how you can leverage this capacity to improve or enhance mitigation or continue to improve this capacity. For those criterion that you were unable to provide responses for, consider ways you could improve your understanding of this capacity (see mitigation best practices and adaptive capacity catalog).
- **Opportunities for Future Integration Section in this Annex**—Review the items you identified in this section. For those items that address land use include them in the prepopulated Action in your template that reads as follows: Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including _____. For other items listed in this section, consider an action that specifically says what the plan, code, ordinance etc. is and how it will be integrated.
- **Jurisdiction-Specific Vulnerabilities Section in this Annex**—Review the items that you have identified in this section and consider actions that will help reduce these vulnerabilities (see mitigation best practices catalog).
- **Mitigation Best Practices Catalog**—A catalog that includes FEMA and other agency identified best practices, steering committee and other stakeholder recommendations was developed as part of the plan development process and included in your tool kit. Review the catalog and identify those actions that your jurisdiction should consider including in its action plan.
- **Public Input**—Review input received during the process, specifically the public survey results included in your toolkit.
- **Prior Mitigation Planning Efforts**—If your jurisdiction participated in a previous hazard mitigation plan, please be sure to remember to include any actions that were identified as "carry over" actions. Once you have carried them over, return to the Status of Previous Actions table and record the new action number (see discussion below).

Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify actions where benefits exceed costs.
- Include any action that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) grants (see fact sheet provided in toolkit). If you have actions that are not HMGP, PDM or FMA grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- **You must identify at least one true mitigation action (i.e. not a preparedness or response action) that is clearly defined and actionable for hazards ranked as "high" or "medium."**

Recommended Actions

We recommend that every planning partner strongly consider the following actions. **The specifics of these actions should be adjusted as needed for the particulars of each community.** You will note that six of these actions have been prepopulated in your annex template. These six actions should be included in every annex and should not be removed.

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard.
- Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.
- Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.
- Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:

  - Enforce the flood damage prevention ordinance.
  - Participate in floodplain identification and mapping updates.
  - Provide public assistance/information on floodplain requirements and impacts.

- Identify and pursue strategies to increase adaptive capacity to climate change.
- Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.
- Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.
- Develop a post-disaster recovery plan and a debris management plan.
- Develop and/or update plans that support or enhance continuity of operations following disasters.
- Purchase generators for critical facilities and infrastructure that lack adequate back-up power.

Complete the Table

Complete the table titled "Hazard Mitigation Action Plan Matrix" for all the actions you have identified and would like to include in the plan:

- Enter the action number and description. If the action is carried over from your previous hazard mitigation plan, return to the "Status of Previous Plan Actions" table you completed in Phase 1 and enter the new action number in the column labeled Action # in Update.
- Indicate whether the action mitigates hazards for new and/or existing assets.
- Identify the specific hazards the action will mitigate (note: you must list the hazards, simply indicating all hazards is not deemed acceptable).
- Identify by number the mitigation plan objectives that the action addresses (see toolkit).

Action Item Numbering:

Please use the following action item numbering conventions:

- Sonoma County—SCO-1
- Cotati City—COT-1
- Santa Rosa City—SRO-1
- Sonoma City—SCI-1
- Windsor Town—WIN-1
- Cloverdale Fire—CLO-1
- Gold Ridge RCD—GOL-1
- N. Sonoma Coast FPD—NSC-1
- N. Sonoma County Fire—NFR-1
- Rancho Adobe Fire—RAF-1
- Sonoma Co. Ag. & Open Space—SAO-1
- Sonoma RCD—SCR-1
- Sonoma Valley Fire—SVF-1
- Timber Cover Fire—TIM-1

- Indicate who will be the lead in administering the action. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department, please ensure that it is clear who the lead agency will be and list supporting agencies in the appropriate column.
- Enter an estimated cost in dollars if known; otherwise, enter "High," "Medium" or "Low" as determined for the prioritization process described in the following section.
- Identify funding sources for the action. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment to identify possible sources of funding and refer to the table below for project eligibility for FEMA's hazard mitigation assistance grant program.
- Indicate the time line as "short-term" (1 to 5 years) or "long-term" (5 years or greater) or "ongoing" (a continual program)

Eligible Activities	HMGP	PDM	FMA
Mitigation Projects			
Property Acquisition and Structure Demolition	√	√	√
Property Acquisition and Structure Relocation	√	√	√
Structure Elevation	√	√	√
Mitigation Reconstruction	√	√	√
Dry Floodproofing of Historic Residential Structures	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√
Generators	√	√	
Localized Flood Risk Reduction Projects	√	√	√
Non-Localized Flood Risk Reduction Projects	√	√	
Structural Retrofitting of Existing Buildings	√	√	√
Non-structural Retrofitting of Existing Buildings and Facilities	√	√	√
Safe Room Construction	√	√	
Wind Retrofit for One- and Two-Family Residences	√	√	
Infrastructure Retrofit	√	√	√
Soil Stabilization	√	√	√
Wildland fire Mitigation	√	√	
Post-Disaster Code Enforcement	√		
Advance Assistance	√		
5 Percent Initiative Projects*	√		
Aquifer and Storage Recovery**	√	√	√
Flood Diversion and Storage**	√	√	√
Floodplain and Stream Restoration**	√	√	√
Green Infrastructure**	√	√	√
Miscellaneous/Other**	√	√	√
Hazard Mitigation Planning	√	√	√
Technical Assistance			√
Management Costs	√	√	√

Notes: HMGP = Hazard Mitigation Grant Program; PDM = Pre-Disaster Mitigation; FMA = Flood Mitigation Assistance

* FEMA allows increasing the 5% Initiative amount up to 10% for a Presidential major disaster declaration under HMGP. The additional 5% Initiative funding can be used for activities that promote disaster-resistant codes for all hazards. As a condition of the award, either a disaster-resistant building code must be adopted or an improved Building Code Effectiveness Grading Schedule is required.

**Indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.
Source: https://www.fema.gov/hazard-mitigation-assistance-mitigation-activity-chart

Please see the table below for examples of some of the recommended actions above:

Example Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
EX-1—**Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard areas.**							
Existing	Dam failure, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	3, 4, 10	Planning		High	HMGP, PDM, FMA	Short-term
EX-2—**Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community including _____.**							
New and Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 3, 4, 5, 7, 8, 10	Planning		Low	Staff Time, General Funds	Ongoing
EX-3—**Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.**							
Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	4, 8	Emergency Management		Medium	Staff Time, General Funds	Short-term
EX-4—**Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.**							
New and Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Lead Contact Department for Plan	Any Supporting Departments	Low	Staff Time, General Funds	Short-term
EX-5—**Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.**							

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
New and Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 5, 8	Lead Contact Department for Plan	Any Supporting Departments	Low	Staff Time, General Funds	Short-term
EX-6—**Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:** **Enforcement of the flood damage prevention ordinance** **Participate in floodplain identification and mapping updates** **Provide public assistance/information on floodplain requirements and impacts.**							
New and Existing	Flood, Dam Failure	1, 3, 5, 7, 8, 10	Floodplain Administration Department		Low	Staff Time, General Funds	Ongoing
EX-7—**Work with building officials to identify ways to improve the jurisdictions' BCEGS classification.**							
New	Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 4, 7	Building and Development Services		Low	Staff Time, General Funds	Short-term
EX-8—**Develop a post-disaster recovery plan and a debris management plan.**							
Existing	Dam failure, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	9	Emergency Management		Medium	EMPG	Long-term
EX-9—**Participate in programs such as Firewise, StormReady and the Community Rating System.**							
New and Existing	Dam Failure, Flooding, Severe weather, Wildland fire	3, 4	Emergency Management	Public Works	Low	Staff Time, General Funds	Short-term
EX-10—**Identify and pursue strategies to increase adaptive capacity to climate change including _____.**							
New and Existing	Dam failure, Drought, Flooding, Landslide, Severe weather, Wildland fire	1, 3, 4, 5, 6, 7, 8	Planning		Low	Staff Time, General Funds	Short-term
EX-11—**Purchase generators for critical facilities and infrastructure that lack adequate back-up power including _____.**							
New and Existing	Dam failure, Flooding, Landslide, Severe weather, Wildland fire	2, 6, 9	Planning		Low	Staff Time, General Funds	Short-term

Prioritization of Mitigation Actions

Complete the information in the table titled "Mitigation Strategy Priority Schedule" as follows:

- **Action #**—Indicate the action number from the previous annex table (Hazard Mitigation Action Plan Matrix).
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter "High," "Medium" or "Low" as follows:

  - High: Action will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Action will have a long-term impact on the reduction of risk exposure to life and property, or action will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the action are difficult to quantify in the short term.

- **Costs**—Enter "High," "Medium" or "Low" as follows:

  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed action.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
  - Low: Possible to fund under existing budget. Action is or can be part of an existing ongoing program.
  - If you know the estimated cost of an action because it is part of an existing, ongoing program, indicate the amount.

- **Do Benefits Exceed the Cost?**—Enter "Yes" or "No." This is a qualitative assessment. Enter "Yes" if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter "No" if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Action Grant-Eligible?**—Enter "Yes" or "No." Refer to the fact sheet on HMGP, PDM and FMA and the table above.
- **Can Action Be Funded Under Existing Program Budgets?**—Enter "Yes" or "No." In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**— Enter "High," "Medium" or "Low" as follows:

  - **High Priority**—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
  - **Medium Priority**—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years), once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
  - **Low Priority**—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions are generally "wish-list" actions. They may be eligible for grant funding from programs that have not yet been identified.

- **Grant Pursuit Priority**— Enter "High," "Medium" or "Low" as follows:

- **High Priority**—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
- **Medium Priority**—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
- **Low Priority**—An action that has not been identified as meeting any grant eligibility requirements.

This prioritization is a simple way to determine that your identified actions meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM /FMA action grants. The prioritization will identify any actions whose probable benefits will not exceed the probable costs. Those actions identified as high-priority grant funding actions should be closely reviewed for consideration when grant funding opportunities arise.

Note: If a jurisdiction wishes to identify an action as high priority that is outside of the prioritization scheme for high priorities. A note indicating so should be inserted and a rationale should be provided.

Please see the example below based off the recommended actions:

Table 0-9. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Action Grant-Eligible?	Can Action Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
EX-1	3	High	High	Yes	Yes	No	Medium	High
EX-2	7	Medium	Low	Yes	No	Yes	High	Low
EX-3	2	Low	Medium	No	No	Maybe	Low	Low
EX-4	10	Low	Low	Yes	No	Yes	High	Low
EX-5	3	Low	Low	Yes	No	Yes	High	Low
EX-6	6	Medium	Low	Yes	No	Yes	High	Low
EX-7	3	Medium	Low	Yes	No	Yes	High	Low
EX-8	1	Medium	Medium	Yes	Yes	No	Medium	High
EX-9	2	Medium	Low	Yes	No	Yes	High	Low
EX-10	7	Medium	Low	Yes	No	Yes	High	Medium
EX-11	3	High	Medium	Yes	Yes	No	Medium	High

Analysis of Mitigation Actions

Complete the table titled "Analysis of Mitigation Actions" summarizing the mitigation actions by hazard of concern and the following eight mitigation types. Please note that an action can be more than one mitigation type:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

- **Public Education and Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilient**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

Please see the example below based off the recommended actions, but please note that these recommendations are heavy on generalized actions on the prevention spectrum and light in other areas and specificity. Planning partners should aim to identify at least one action in each category (although this is not required) and should make sure there is at least one action to address "high" and "medium" ranked hazards:

Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Dam Failure	EX-2, 3, 4, 5, 6	EX-1, 6	EX-4, 6		EX-8, 11			EX-3, 4, 8, 9, 10
Drought	EX-2	EX-1	EX-4					EX-3, 4, 8, 9, 10
Earthquake	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9
Flooding	EX-2, 3, 4, 5, 6, 7	EX-1, 6, 7	EX-4, 6	EX-9	EX-8, 11			EX-3, 4, 8, 9, 10
Landslide	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9, 10
Severe weather	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4		EX-8, 9, 11			EX-3, 4, 8, 9, 10
Wildland fire	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4, 9	EX-9	EX-8, 11			EX-3, 4, 8, 9, 10

REVIEW AND INCORPORATION OF INFORMATION FOR THIS ANNEX

This section should describe what resources you used to complete the annex and how you used them. This may seem trivial or unimportant, but it is a requirement to pass the state and FEMA review process.

This section will ultimately describe all information sources used to develop this annex. The sources used for Phases 1 and 2 should have been entered previously. Additional sources are be added with the preparation of the Phase 3 annex. At this point, review to ensure that all relevant materials are identified.

FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. Please note that this section is optional.

ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. Please note that this section is optional.

THIS COMPLETES PHASE 3

Annex Templates and Instructions for Special-Purpose Districts

1. DISTRICT NAME

1.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Alternate Point of Contact
Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Development of this annex was carried out by the members of the local mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Mitigation Planning Team Members

Name	Title

1.2 JURISDICTION PROFILE

1.2.1 Overview

Insert Narrative Profile Information, per Instructions.

The __[name of adopting body]___ assumes responsibility for the adoption of this plan; __[name of oversight agency]__ will oversee its implementation.

All fire districts should include the following sentence (non-fire special purpose districts may delete the sentence):

The District participates/does not participate in the Public Protection Class Rating System and currently has a rating of #.

1.2.2 Service Area and Trends

The district service area covers ___[area in square miles]___, serving a population of _ population_.

Insert summary description of service trends.

1.2.3 Assets

Table 1-2 summarizes the critical assets of the district and their value.

Table 1-2. Special Purpose District Assets

Asset	Value
Property	
number acres of land	$_value_
Equipment	
description	$_value_
description	$_value_
description	$_value_
description	$_value_
description	$_value_
Total:	*$_value_*
Critical Facilities and Infrastructure	
description – Include Address	$_value_
description – Include Address	$_value_
description – Include Address	$_value_
description – Include Address	$_value_
description – Include Address	$_value_
description – Include Address	$_value_
Total:	*$_value_*

1.3 CAPABILITY ASSESSMENT

An assessment of the district's current capabilities was conducted to identify opportunities to expand, initiate or integrate capabilities in order to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions.

1.3.1 Planning and Regulatory Capabilities

Jurisdictions develop plans and programs and implement rules and regulations to protect and serve residents. When effectively prepared and administered, these plans, programs and regulations can support the implementation of mitigation actions. Table 1-3 summarizes existing codes, ordinances, policies, programs or plans that are applicable to this hazard mitigation plan.

Table 1-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Name of code, ordinance, policy, program or plan	____	____
Name of code, ordinance, policy, program or plan	____	____
Name of code, ordinance, policy, program or plan	____	____

Name of code, ordinance, policy, program or plan	____	____
Name of code, ordinance, policy, program or plan	____	____

1.3.2 Fiscal, Administrative and Technical Capabilities

Fiscal capability is an indicator of a jurisdiction's ability to fulfill the financial needs associated with hazard mitigation projects. An assessment of fiscal capabilities is presented in Table 1-4. Administrative and technical capabilities represent a jurisdiction's staffing resources for carrying out the mitigation strategy. An assessment of administrative and technical capabilities is presented in Table 1-5.

Table 1-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Federal Grant Programs	Yes/No
Other	Yes/No (if yes, please specify)

Table 1-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes/No	Insert appropriate information
Engineers or professionals trained in building or infrastructure construction practices	Yes/No	Insert appropriate information
Planners or engineers with an understanding of natural hazards	Yes/No	Insert appropriate information
Staff with training in benefit/cost analysis	Yes/No	Insert appropriate information
Surveyors	Yes/No	Insert appropriate information
Personnel skilled or trained in GIS applications	Yes/No	Insert appropriate information
Scientist familiar with natural hazards in local area	Yes/No	Insert appropriate information
Emergency manager	Yes/No	Insert appropriate information
Grant writers	Yes/No	Insert appropriate information
Other	Yes/No	Insert appropriate information

1.3.3 Education and Outreach Capabilities

Outreach and education capability identifies the connection between government and community members, which opens a dialogue needed for a more resilient community. An assessment of education and outreach capabilities is presented in Table 1-6.

Table 1-6. Education and Outreach

Criterion	Response
Do you have a public information officer or communications office?	Yes/No
Do you have personnel skilled or trained in website development?	Yes/No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe	Yes/No Insert appropriate information
Do you use social media for hazard mitigation education and outreach? • If yes, please briefly describe	Yes/No Insert appropriate information
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify	Yes/No Insert appropriate information
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe	Yes/No Insert appropriate information
Do you have any established warning systems for hazard events? • If yes, please briefly describe	Yes/No Insert appropriate information

1.3.4 Adaptive Capacity for Climate Change

Given the uncertainties associated with how hazard risk may change with a changing climate, a jurisdiction's ability to track such changes and adapt as needed is an important component of the mitigation strategy. Table 1-7 summarizes the jurisdiction's adaptive capacity for climate change.

Table 1-7. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating[a]
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts *Comment:*	High/Medium/Low
Jurisdiction-level monitoring of climate change impacts *Comment:*	High/Medium/Low
Technical resources to assess proposed strategies for feasibility and externalities *Comment:*	High/Medium/Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory *Comment:*	High/Medium/Low
Capital planning and land use decisions informed by potential climate impacts *Comment:*	High/Medium/Low
Participation in regional groups addressing climate risks *Comment:*	High/Medium/Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes *Comment:*	High/Medium/Low
Identified strategies for greenhouse gas mitigation efforts *Comment:*	High/Medium/Low

Criterion	Jurisdiction Rating[a]
Identified strategies for adaptation to impacts	High/Medium/Low
Comment:	
Champions for climate action in local government departments	High/Medium/Low
Comment:	
Political support for implementing climate change adaptation strategies	High/Medium/Low
Comment:	
Financial resources devoted to climate change adaptation	High/Medium/Low
Comment:	
Local authority over sectors likely to be negative impacted	High/Medium/Low
Comment:	
Public Capacity	
Local residents knowledge of and understanding of climate risk	High/Medium/Low
Comment:	
Local residents support of adaptation efforts	High/Medium/Low
Comment:	
Local residents' capacity to adapt to climate impacts	High/Medium/Low
Comment:	
Local economy current capacity to adapt to climate impacts	High/Medium/Low
Comment:	
Local ecosystems capacity to adapt to climate impacts	High/Medium/Low
Comment:	

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

1.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.4.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description

- **Plan or Program Name**—Description
- **Plan or Program Name**—Description

1.4.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description

1.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-8 lists past occurrences of natural hazards for which specific damage was recorded in ___[jurisdiction name]___. Other hazard events that broadly affected the entire planning area, including ___[jurisdiction name]___, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 1-8. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____

1.6 HAZARD RISK RANKING

Table 1-9 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 1-9. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	_____	_____	High/Medium/Low
2	_____	_____	High/Medium/Low
3	_____	_____	High/Medium/Low
4	_____	_____	High/Medium/Low
5	_____	_____	High/Medium/Low
6	_____	_____	High/Medium/Low
7	_____	_____	High/Medium/Low
8	_____	_____	High/Medium/Low
9	_____	_____	High/Medium/Low

1.7 JURISDICTION-SPECIFIC VULNERABILITIES

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Insert as appropriate.
- Insert as appropriate.
- Insert as appropriate.

Mitigation actions addressing these issues were prioritized for consideration in the action plan presented in this annex.

1.8 STATUS OF PREVIOUS PLAN ACTIONS

Table 1-10 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-10. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Insert Action Number & Text				
Comment:				
Insert Action Number & Text				
Comment:				
Insert Action Number & Text				
Comment:				
Insert Action Number & Text				
Comment:				
Insert Action Number & Text				
Comment:				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				
Insert Action Number & Text *Comment:*				

1.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 1-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 1-12 identifies the priority for each action. Table 1-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action xxx-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: Earthquake, flooding, landslide, tsunami, wildfire						
Existing	3, 4, 10	TBD	TBD	High	HMGP, PDM, FMA	Short-term
Action xxx-2—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: All hazards						
New & Existing	1, 5, 8	TBD	TBD	Low	Staff Time, General Funds	Short-term
Action xxx-3—Purchase generators for critical facilities and infrastructure that lack adequate backup power, including _____.						
Hazards Mitigated: Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	2, 6, 9					
Action xxx-4—Description						
Hazards Mitigated: TBD						
Action xxx-5—Description						
Hazards Mitigated: TBD						

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action xxx-6—Description *Hazards Mitigated:* TBD						
Action xxx-7—Description *Hazards Mitigated:* TBD						
Action xxx-8—Description *Hazards Mitigated:* TBD						
Action xxx-9—Description *Hazards Mitigated:* TBD						

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

See the introduction to this volume for list of acronyms used here.

Table 1-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
TBD	3	High	High	Yes	Yes	No	Medium	High
TBD	3	Low	Low	Yes	No	Yes	High	Low
TBD	3	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 1-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
High-Risk Hazards								
Medium-Risk Hazards								
Low-Risk Hazards								

a. See the introduction to this volume for explanation of mitigation types.

1.10 REVIEW AND INCORPORATION OF RESOURCES FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT PLAN/PROGRAM AND DESCRIPTION OF HOW IT WAS USED>

The following **o**utside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- <INSERT DOCUMENT AND DESCRIPTION OF HOW IT WAS USED>

1.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Insert text, if any; otherwise, delete section

1.12 ADDITIONAL COMMENTS

Insert text, if any; otherwise, delete section

INSTRUCTIONS FOR COMPLETING SPECIAL PURPOSE DISTRICT ANNEX TEMPLATE

- The jurisdictional annex templates for the *2020 Sonoma County Hazard Mitigation Plan* update will be completed in three phases. **This document provides instructions for completing all three phases of the template for special purpose districts.**

The target timeline for phase completion is as follows:

- **Phase 1**—Profile, Trends and Previous Plan Status
  - Deployed: Month xx, xxxx
  - Due: Month xx, xxxx
- **Phase 2**—Capability Assessment and Information Sources
  - Deployed: Month xx, xxxx
  - Due: Month xx, xxxx
- **Phase 3**—Risk Ranking, Action Plan, and Information Sources
  - Deployed: Month xx, xxxx
  - Due: Month xx, xxxx

Please direct any questions and return your completed Phase 3 template by April __, 2021 to:

Bart Spencer
Tetra Tech, Inc.
(650) 324-1810
E-mail:bart.spencer@tetratech.com

A Note About Formatting:

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner.

Content should be entered within the yellow, highlighted text that is currently in the template, rather than creating text in another document and pasting it into the template. Text from another source will alter the style and formatting of the document.

The numbering of sections and tables in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of this numbering.

IMPORTANT! READ THIS FIRST

Phase 1 and Phase 2 templates were previously provided to your jurisdiction for completion.

If your jurisdiction returned the completed Phase 1 & 2 templates:

- The Phase 1 & 2 content you provided is already incorporated into your Phase 3 template.
- Please review the template to see if we have inserted any comments requesting further work to be done on Phase 1 or 2
  - ***If any comments are included, please address them.*** Then, begin your work on Phase 3 following the Phase 3 instructions beginning on page 12.
  - If no comments are included, then you **DO NOT** need to do any further work on the Phase 1 or Phase 2 content. ***Go directly to the instructions for Phase 3, beginning on page 12.***

If your jurisdiction has **NOT** yet done any work on the Phase 1 or Phase 2 template:

- Follow the instructions below for providing the Phase 1 and Phase 2 information.
- Then proceed with the Phase 3 instructions.

If your jurisdiction started work on the Phase 1 or 2 template but never completed and submitted it, please copy the work you had completed so far into the new template. Then complete Phases 1, 2, and 3 following the instructions provided here.

PHASE 1 INSTRUCTIONS

1.1 CHAPTER TITLE

You jurisdiction's name has already been entered as the title of the chapter. Please review and correct if needed.

1.2 HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, please let the planning team know by inserting a comment into the document.

1.3 JURISDICTION PROFILE

1.3.1 Overview

Please provide a brief summary description of the following:

- The purpose of the jurisdiction
- The date of inception
- The type of organization
- The number of employees
- The mode of operation (i.e., how operations are funded)
- The type of governing body, and who has adoptive authority.

This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide information similar to the following example:

> The Johnsonville Community Services District is a special district created in 1952 to provide water and sewer service. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. The District currently employs a staff of 21. Funding comes primarily through rates and revenue bonds.

Complete the table providing the names and titles of members of the local mitigation planning team responsible for completion of this annex. Team membership should consist of agencies with authority to regulate development and enforce local ordinances or regulatory standards, such as building/fire code enforcement, emergency management, emergency services, floodplain management, parks and recreation, planning/community

development, public information, public works/engineering, stormwater management, transportation, or infrastructure.

Service Area and Trends

Please provide a brief summary description of the following:

- A description of who the district's customers are
- An approximation of area served in square miles
- A geographical decription of the service area
- An overview of current service area trends, including an approximation of current users/subscribers,
- A summary description of previous growth trends in the service area and anticipated future increase/decrease in services (if applicable)

This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide information similar to the following example:

> The Johnsonville Community Services District originally was formed to serve the unincorporated area east of the City of Smithburg known as Johnsonville. The District's designated service area expanded throughout the years to include other unincorporated areas of Jones County: Creeks Corner, Jones Hill, Fields Landing, King Salmon, and Freshwater. As of April 30, 2016, the District serves 7,305 water connections and 6,108 sewer connections, with a total service area of 3.3 square miles.

1.4 STATUS OF PREVIOUS PLAN ACTIONS

Please note that this section only applies to jurisdictions that are conducting updates to previously approved hazard mitigation plans. If your jurisdiction has not previously participated in an approved plan, please enter a note stating this, and we will remove this section in your final annex.

Also note that this section is further back in the annex than the rest of the Phase 1 content. Some Phase 2 sections are included before it.

All action items identified in prior mitigation planning efforts must be reconciled in this plan update. Action items must all be marked as **ONE** of the following; check the appropriate box (place an X) and provide the following information:

- **Completed**—If an action has been completed since the prior plan was prepared, please check the appropriate box and provide a date of completion in the comment section. If an action has been initiated and is an ongoing program (e.g. annual outreach event), you may mark it as completed **and note that it is ongoing in the comments**. If an action addresses an ongoing program you would like to continue to include in your action plan, please see the Carried Over to Plan Update bullet below.
- **Removed**—If action items are to be removed because they are no longer feasible, a reason must be given. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. **Place a comment in the comment section explaining why the action is no longer feasible or barriers that prevented the action from being implemented (e.g., "Action no longer considered feasible due to lack of political support.").** If the wording and/or

intent of a previously identified action is unclear, this can be a reason for removal. A change in community priorities may also be a reason for removal and should be discussed in the comments.

- **Carried Over to Plan Update**—If an action is in progress, is ongoing, or has not been initiated and you would like to carry it over to the plan update, please check the "Check if Yes" column under "Carried Over to Plan Update." Selecting this option indicates that the action will be included in the mitigation action plan for this update. **If you are carrying over an action to the update, please include a comment describing any action that has been taken or why the action was not taken (specifically, any barriers or obstacles that prevented the action from moving forward or slowed progress).** Leave the last column, "Action # in Update," blank at this point. This will be filled in after completing the updated action plan in Phase 3.

Please ensure that you have provided a status and a comment for each action.

THIS COMPLETES PHASE 1!

PHASE 2 INSTRUCTIONS

DISTRICT CRITICAL ASSETS

Please provide an approximate value for the noted areas within the table. Include the sum total value for identified assets for each section in the "Total" line for the section.

Property

Provide an approximate value for the land owned by the District.

Equipment

List categories of equipment **owned by the District** that are used in times of emergency or that, if incapacitated, have the potential to severely impact the service area. Provide an approximate **aggregate replacement value** for each. For water and sewer, include mileage of pipeline under this category.

Critical Facilities and Infrastructure

List District facilities and infrastructure vital to maintain services to the designated service area. Include the address of each facility. Provide an approximate **aggregate replacement value** for each line. The Steering Committee has decided upon the following definition of critical facilities for this planning process:

- A local (not state or federal) facility in either the public or private sector that is critical to the health and welfare of the population and that is especially important following hazard events, including but not limited to the following:
  - Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic and/or water-reactive materials
  - Hospitals, nursing homes, and housing facilities likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a natural hazard event
  - Mass gathering facilities that may be utilized as evacuation shelters
  - Infrastructure such as roads, bridges and airports that provide sources for evacuation before, during and after natural hazard events
  - Police stations, fire stations, government facilities, vehicle equipment and storage facilities, hardware stores and emergency operation centers that are needed for response activities before, during and after a natural hazard event
  - Public and private utility facilities that are vital to maintaining and restoring normal services to damaged areas before, during and after natural hazard events.

Please use this definition as a guideline when selecting critical facilities the District owns.

NOTE:

Placeholders in the table of assets request **ADDRESSES** for critical facilities. These addresses will not be included in the final published annex, but are needed in order to perform risk mapping and risk analysis for the hazard mitigation plan. Include the addresses in the table if convenient. If not, then provide a separate document listing all critical facilities and addresses for use in development of the hazard mitigation plan.

Sample Completed Table – Special District Assets	
Asset	Value
Property	
11.5 Acres	$5,750,000
Equipment	
Total length of pipe 40 miles ($1.32 million per mile X 40 miles)	$52,800,000
4 Emergency Generators	$250,000
Total:	***$53,050,000***
Critical Facilities and Infrastructure	
Administrative Buildings – 357 S. Jones Street	$2,750,000
Philips Pump Station – 111 Fifth Avenue N.	$377,000
Total:	***$3,127,000***

1.5 CAPABILITY ASSESSMENT

1.5.1 Planning and Regulatory Capability

List any federal, state, local or district laws, ordinances, codes and policies that govern your jurisdiction that include elements related to hazard mitigation. List any other plans, studies or other documents that address hazard mitigation issues for your jurisdiction. Please provide the date of last update and any comments as appropriate. A few examples follow:

Plan, Study or Program	Date of Most Recent Update	Comment
District Design Standards	2010	
Capital Improvement Program	Updated and approved annually	covers 5 year timeframe
Emergency Operations Plan	2000	
Facility Maintenance Manual	1990	
State Building Code	2016	
Division of State Architects		Review and approval of all building and site design features is required prior to construction
Habitat Conservation Plan		All development impacting critical habitat must meet federal and state requirements pertaining to the protection of endangered species

1.5.1 Fiscal, Administrative and Technical Capabilities

Fiscal Capability

Complete the table titled "Fiscal Capability" by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter "Yes" if the resource is fully accessible to your jurisdiction. Enter "No" if there are limitations or prerequisites that may hinder your use of this resource.

Administrative and Technical Capability

Complete the table titled "Administrative and Technical Capability" by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter "Yes" or "No" in the column labeled "Available?". If yes, then enter the department and position title in the right-hand column. If you have contract support staff with these

capabilities, you can still answer "Yes." Indicate in the department column that this resource is provided through contract support.

1.5.2 Education and Outreach Capabilities

Complete the table titled "Education and Outreach" to indicate your jurisdiction's capabilities and existing efforts regarding hazard mitigation education and outreach.

Adaptive Capacity for Climate Change

Consider the climate change impact concerns identified for the planning area:

- Reduced snowpack
- Increased wildfires
- Sea level rise and inland flooding
- Threats to sensitive species (e.g. coho salmon)
- Loss in agricultural productivity (e.g. forestry, wine grapes, nursery products, dairy)
- Public health and safety.

With those impacts in mind, complete the table titled "Adaptive Capacity for Climate Change" by indicating that your jurisdiction's capacity for each listed criterion as follows:

- **High**—The capacity exists and is in use.
- **Medium**—The capacity may exist, but is not used or could use some improvement.
- **Low**—The capacity does not exist or could use substantial improvement.
- **Unsure**—Not enough information is known to assign a rating.

This is a subjective assessment, but providing a few words of explanation is useful. It is highly recommended that you complete this table with an internal planning team after reviewing the results of the other capability assessment tables.

1.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. The goal of integration is to ensure that the potential impact of hazards is considered in planning for future development. FEMA recommends integration as follows:

- Integrate hazard mitigation plan goals with community objectives (e.g. incorporate the goals for risk reduction and safety into the policies of other plans).
- Use the risk assessment to inform plans and policies (e.g. incorporate risk assessment findings into land use plans, site plan review, emergency operations plans).
- Implement mitigation actions through existing mechanisms (e.g. include mitigation projects in the capital improvement plan).

- Think about mitigation before and after a disaster (e.g. build recovery planning on existing mitigation plans and goals).

After reviewing the plans, programs and ordinances identified in the capability assessment, identify all plans and programs that have already been integrated with the goals and recommendations of the hazard mitigation plan, and those that offer opportunities for future integration.

1.6.1 Existing Integration

Provide a brief description of integrated plans or ordinances and how each is integrated. Consider listing items marked as Completed in the "Status of Previous Plan Actions" table if they were indicated as being ongoing actions. Examples are as follows:

- **Capital Improvement Plan**—The capital improvement plan includes projects can help mitigate potential hazards. The District will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Emergency Operations Plan**—The results of the risk assessment were used in the development of the emergency operations plan.
- **Facilities Plan**—The results of the risk assessment and mapped hazard areas are used in facility planning for the district. Potential sites are reviewed for hazard risks and appropriate mitigation measures are considered in building and site design.

1.6.2 Opportunities for Future Integration

List any plans or program that offer the potential for future integration and describe the process by which integration will occur. Examples follow:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The District does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Consider other programs you may have in place in your jurisdiction that include routine consideration and management of hazard risk. Examples of such programs may include: tree pruning programs, right-of-way mowing programs, erosion control or stream maintenance programs, etc. Please add any such programs to the integration discussion and provide a brief description of how these program manage (or could be adapted to manage) risk from hazards.

REVIEW AND INCORPORATION OF INFORMATION FOR THIS ANNEX

Please note that this section will ultimately describe all information sources used to develop this annex, but that only the sources used for Phases 1 and 2 will be listed at this point. Additional sources will be added with the preparation of the Phase 3 annex.

This section should describe what resources you used to complete the annex and how you used them. Several items are started for you, but please be sure to update and enhance any descriptions. This may seem trivial or unimportant, but it is a requirement to pass the state and FEMA review process.

THIS COMPLETES PHASE 2!

PHASE 3 INSTRUCTIONS

JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

In the table titled "Past Natural Hazard Events," list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction. Include the date of the event and the estimated dollar amount of damage it caused. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Please refer to the table below that lists hazard events in Sonoma County as recognized by the County, the state, and the federal government.

Presidential Disaster Declarations for Sonoma County

Year	Dates	Event Name	County EOC Activated	Gubernatorial Declaration	Presidential Declaration
2020	Sept. 4 – Nov. 17	Wildfires			X
2020	Aug. 14 – Sept. 26	Wildfires			X
2020	Jan. 20 – present	COVID-19 Pandemic	X	X	X
2019	October	PG&E Power Shutoff	X		
2019	Oct. 23 – Nov. 7	Kincade Fire	X	X	
2019	Feb. 24 – Mar. 1	Severe Winter Storms, Flooding, Landslides, Mudslides	X		X
2018	October	PG&E Power Shutoff	X		
2017	October	LNU Complex Fires	X		
2017	Oct. 8-31	Wildfires			X
2017	Feb. 1-23	Severe Winter Storms, Flooding, Mudslides	X		X
2017	Jan. 3-12	Severe Winter Storms, Flooding, Mudslides	X		X
2014-2016	Feb. 25	Drought		X	
2015	Sep. 12-25	Valley Fire	X	X	X
2014	Dec. 11-12	December Winter Storm	X		
2014	Aug. 24	South Napa Earthquake	X	X	X
2013	Oct. 29 and Nov. 5	Lopez Protests	X		
2012	Dec. 2	Holiday Decoration Flood	X		
2011	Mar. 11	Great Tohoku Tsunami	X	X	X
2009	Apr.-May	H1N1 Influenza Pandemic			
2007	Nov. 7	SF Oil Spill		X	
2006	Mar. 29-Apr. 16	Late Spring Storms		X	X
2005-2006	Dec. 31, 05–Jan. 3, 06	New Year's Floods	X	X	X
2004	Sept. 3-8	Geysers Fire	X		
2002-2003	Dec. 17, 02–Apr. 8, 03	December Winter Storms			
1998-2000	Feb. 2, 1998–Jan. 4, 2000	Flood of '98/ Rio Nido Debris Flow	X	X	X
1999	Feb. 8-10	February Winter Storm		X	
1997	Jan. 25	Superbowl Flood	X		
1996-1997	Dec. 30, 96–Jan. 4, 97	New Year's Flood	X	X	X
1996	Oct. 27-28	Porter Creek Fire	X		
1996	Jul. 31–Aug. 20	Cavedale Fire	X		
1996	Jul. 31–Aug. 20	Jenner Sandbarrier			
1996	Feb. 4-5	February Winter Storm	X		

Year	Dates	Event Name	County EOC Activated	Gubernatorial Declaration	Presidential Declaration
1995	Dec. 11-12	December Winter Storm	X		
1995	Mar. 7-15	Flood of '95, Part II	X	X	X
1995	Jan. 8-31	Flood of '95, Part 1	X	X	X
1994	May–Sep.	Fishing Emergency		X	X
1993	Jan. 20-25	Flood of '93	X	X	X
1990-1991	Dec. 90–Feb. 91	Freeze of '91		X	X
1986	Feb. 12 – Mar. 10	Severe Storms, Flooding			X
1983	Jan. 21 – Mar. 30	Coastal Storms, Floods, Slides, Tornadoes			X
1981-1982	Dec. 19 – Jan. 8	Severe Storms, Flood, Mudslides, High Tide			X
1969	Jan. 26	Severe Storms, Flooding			X
1964	Dec. 24	Heavy Rains and Flooding			X

We recommend including most large-scale disasters, unless you know that there were no impacts on your jurisdiction. Specifically, we recommend that you include these events if you have damage estimate information or can provide a brief description of impacts that occurred within your community. In addition to these events, please refer to the NOAA storm events database included in the tool kit. We recommend conducting a search for the name of your jurisdiction in order to identify events with known impacts. Other potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Resident input.

If you do not have estimates for dollars of damage caused, please list "Not Available" in the appropriate column or simply list a brief description of the damages (e.g. Main Street closed as a result of flooding, downed trees and residential damages). Please note that tracking such damages is a valid and useful mitigation action if your jurisdiction does not currently track such information.

HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and, therefore, needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy.

The risk ranking for each jurisdiction is included in the Risk Ranking Summary tab in the Loss Matrix included in the toolkit. Tetra Tech has filled in the results for each jurisdiction. If this risk ranking exercise generates results other that what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template and include what you believe the rank should

be and why. For example, drought was ranked as low; however, the jurisdiction's economy is heavily reliant on water using industries, such as agriculture or manufacturing, so you believe it should be ranked as medium.

Also keep in mind that one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. **You will need to have at least one true mitigation action for each hazard ranked as "high" or "medium."** This is discussed in more detail in the Hazard Mitigation Action Plan section of these instructions.

The instructions below describe the methodology for how these rankings were derived. Please review before providing any comments.

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The risk ranking for each jurisdiction is included in the Risk Ranking Summary tab in the Loss Matrix included in the toolkit. Tetra Tech has filled in the results for each jurisdiction. If this risk ranking exercise generates results other that what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template and include what you believe the rank should be and why. For example, drought was ranked as low; however, the jurisdiction's economy is heavily reliant on water using industries, such as agriculture or manufacturing, so you believe it should be ranked as medium.

Also keep in mind that one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. **You will need to have at least one true mitigation action for each hazard ranked as "high" or "medium."** This is discussed in more detail in the Hazard Mitigation Action Plan section of these instructions.

The instructions below describe the methodology for how these rankings were derived. Please review before providing any comments.

Risk Ranking Methodology

Review Risk Ranking in Template

Review the hazard risk ranking information that Tetra Tech has provided. The hazard with the highest risk rating is listed at the top of table titled "Hazard Risk Ranking" in your template and was given a rank of 1; the hazard with the second highest rating is listed second with a rank of 2; and so on. Two hazards with equal risk ratings were given the same rank. "High," Medium," and "Low" assignments were given for each hazard of concern based on the total score (probability x impact). It is important to note, that this is determined by the scores rather than assigning a certain number of hazards to each category.

When reviewing the risk ranking results, it is important to remember that this exercise is about categorizing hazards into broad levels of risk (e.g. high, medium, low). It is not an exercise in precision.

Review Risk Ranking in Loss Matrix

The following sections discuss the methodology used to develop the results included in your template. Please refer to the Loss Matrix provided in your tool kit in order to follow along.

Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. The probability of occurrence of a hazard event is generally based on past hazard events in an area, although weight can be given to expected future probability of occurrence based on established return intervals and changing climate conditions. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category. Each hazard was assigned a probability factor as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

Potential Impacts of Each Hazard

The impact of each hazard is divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories are also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1.

Impact factors for each category (people, property, economy) are described below:

- **People**—Values are assigned based on the percentage of the total ***population exposed*** to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. Impact factors were assigned as follows:
  - High—25 percent or more of the population is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the population is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the population is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the population is exposed to a hazard (Impact Factor = 0)
- **Property**—Values are assigned based on the percentage of the total ***property value exposed*** to the hazard event:
  - High—25 percent or more of the total replacement value is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the total replacement value is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the total replacement value is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the total replacement value is exposed to a hazard (Impact Factor = 0)
- **Economy**—Values were assigned based on the percentage of the total ***property value vulnerable*** to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total replacement value of the property exposed to the hazard. For some hazards, such as wildland fire and landslide, vulnerability may be considered to be the same or a portion of exposure due to the lack of loss estimation tools specific to those hazards.
  - High—Estimated loss from the hazard is 10 percent or more of the total replacement value (Impact Factor = 3)

- Medium—Estimated loss from the hazard is 5 percent to 9 percent of the total replacement value (Impact Factor = 2)
- Low—Estimated loss from the hazard is 4 percent or less of the total replacement value (Impact Factor = 1)
- No impact—No loss is estimated from the hazard (Impact Factor = 0).

Impacts on People

The percent of the total population exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **green highlighted column.** For those hazards that do not have a defined extent and location the entire population or a portion of the population is considered to be exposed, depending on the hazard. For the drought hazard, it is common for jurisdictions to list "low" or "none," because all people in the planning area would be exposed to drought, but impacts to the health and safety of individuals are expected to be minimal.

Impacts on Property

The percent of the total value exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **blue highlighted column.** For those hazards that do not have a defined extent and location (e.g. severe weather) the entire building stock is generally considered to be exposed. For the drought hazard, it is common for jurisdictions to list "low" or "none," because all structures in the planning area would be exposed to drought, but impacts to structures are expected to be minimal.

Impacts on the Economy

The loss estimates for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the loss estimate matrix in the **purple highlighted column.** For those hazards that have a defined extent and location, but do not have modelled loss results, loss estimates can be the same as exposure or a portion thereof. For example, a large percentage of the building stock may be exposed to landslide or wildland fire risk, but it would not be expected that one event that resulted in loss to all exposed structures would occur. For those hazards that do not have a defined extent and location, exposure is based on the hazard type.

Risk Rating for Each Hazard

A risk rating for each hazard was determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

Risk Rating = Probability Factor x Weighted Impact Factor {people + property + economy}

This is the number that is shown in the risk ranking table in your template. Generally, score of 30 or greater receive a "high" rating, score between 15 and 30 receive a "medium" rating, and score of less than 15 receives a "low" rating.

JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of $1,000 in any rolling 10-year period since 1978. In the space provided, Tetra Tech has inserted the following information based on data provided by FEMA:

- The number of any FEMA-identified repetitive-loss properties in your jurisdiction.

- The number of any FEMA-identified severe-repetitive-loss properties in your jurisdiction.
- The number (if any) of repetitive-loss or severe-repetitive-loss properties in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure.

Please note that if your jurisdiction has any repetitive loss properties, we would strongly encourage you to include a mitigation action that addresses mitigating these properties.

Other Vulnerabilities

We would strongly encourage you to review the results of the risk assessment included in the tool kit, your jurisdiction's natural events history, and any relevant public comments/input and develop a few sentences that discuss specific risks. You do not need to develop a sentence for every single parameter, but review the results and identify a few issues you would like to highlight. For example:

- Only about 2 percent of the jurisdiction's population is estimated to reside in the 1 percent annual chance flood hazard area; however, 45 percent of the population is estimated to reside in the 0.2 percent annual chance flood hazard area where flood insurance is generally not required.
- A magnitude 7.5 earthquake on the Smithburg Fault may produce nearly 1 million tons of structure debris.
- Over the past 10 years, the jurisdiction has experienced more than $6 million in estimated damages from severe storm events.
- More than 50 buildings are located in areas that will be permanently inundated with 12 inches of sea level rise.
- The results of the public survey indicated that 40 percent of Smithburg residents would not be able to be self-sufficient for 5 days following a major event.

In addition, please list any noted vulnerabilities in your jurisdiction related to hazard mitigation that may not be apparent from the risk assessment and other information provided. This may include things such as the following:

- An urban drainage issue that results in localized flooding every time it rains.
- An area of the community that frequently loses power due to a lack of tree maintenance.
- A critical facility, such as a police station, that is not equipped with a generator.
- A neighborhood that has the potential to have ingress and egress cut off as the result of a hazard event, such as a flood or earthquake (e.g. bridge only access).
- Substantial number of buildings in one area of the community are unreinforced masonry or soft-story construction.
- An area along the river is eroding and threatening public and/or private property.
- A large visitor population that may not be aware of tsunami risk.

Spending some time thinking about the results of the risk assessment and other noted vulnerabilities will be a big help in the development of your mitigation strategy. Tetra Tech has inserted a few items in this section to get you started. In addition, two examples are shown in the table below.

Noted Vulnerability	Example Mitigation Action
Only about 2 percent of the jurisdiction's population is estimated to reside in the 1 percent annual chance flood hazard area; however, 45 percent of the population is estimated to reside in the 0.2 percent annual chance flood hazard area where flood insurance is generally not required.	Develop and implement an annual public information initiative that targets residents in the 0.2 percent annual chance flood hazard area. Provide information on the availability of relatively low cost flood insurance policies.
An urban drainage issue that results in localized flooding every time it rains.	Replace undersized culverts that are contributing to localized flooding. Priority areas include: • The corner of Main Street and 1st Street • Old Oak subdivision.

HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

This section is where you will identify the actions your jurisdiction would like to pursue with this plan. All of the work that you have done thus far should provide you with a plethora of ideas for actions. With this in mind, we recommend that you review the following and develop a list of potential actions:

- **Capability Assessment Section of Annex**—Review the Legal and Regulatory Capability table, the Fiscal Capability table, the Administrative and Technical Capability table, the Education and Outreach table, and the Community Classification table.
  - ➢ For any capability that you indicated that you did not have, ask yourself – should we have this capability? If yes, consider including an action to develop/acquire the capability. Example: Ensure a staff person from public works and planning are trained in the use of FEMA's benefit-cost analysis software.
  - ➢ Review the Legal and Regulatory capabilities. If any have not been reviewed and updated in more than 10 years, consider an action to review and update the capability and, as appropriate, incorporate hazard mitigation principles or information obtained in the risk assessment (Note: actions such as this should also be identified in the opportunities for future integration section). Also, consider including projects or actions that have been identified in other plans and programs such as Capital Improvement Plans, Strategic Plans, etc. as actions in this plan.
  - ➢ For any capability that you indicated you do have, consider how this capability can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- **Adaptive Capacity for Climate Change Section of this Annex**—Consider your responses to this section. For those criterion that you listed as medium or low, think of ways you could improve this rating (see adaptive capacity portion of the mitigation best practices catalog). For those criterion you listed as high, think about how you can leverage this capacity to improve or enhance mitigation or continue to improve this capacity. For those criterion that you were unable to provide responses for, consider ways you could improve your understanding of this capacity (see mitigation best practices and adaptive capacity catalog).
- **Opportunities for Future Integration Section in this Annex**—Review the items you identified in this section. For those items that address land use include them in the prepopulated Action in your template that reads as follows: Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including _____. For other items listed in this section, consider an action that specifically says what the plan, code, ordinance etc. is and how it will be integrated.

- **Jurisdiction-Specific Vulnerabilities Section in this Annex**—Review the items that you have identified in this section and consider actions that will help reduce these vulnerabilities (see mitigation best practices catalog).
- **Mitigation Best Practices Catalog**—A catalog that includes FEMA and other agency identified best practices, steering committee and other stakeholder recommendations was developed as part of the plan development process and included in your tool kit. Review the catalog and identify those actions that your jurisdiction should consider including in its action plan.
- **Public Input**—Review input received during the process, specifically the public survey results included in your toolkit.
- **Prior Mitigation Planning Efforts**—If your jurisdiction participated in a previous hazard mitigation plan, please be sure to remember to include any actions that were identified as "carry over" actions. Once you have carried them over, return to the Status of Previous Actions table and record the new action number (see discussion below).

We strongly recommend that every planning partner include specific actions that are common to all. These have already been included in the action plan table provided with the annex template. These actions should be included in every annex and should not be removed.

Action Item Numbering:

Please use the following action item numbering conventions:

- Sonoma County—SCO-1
- Cotati City—COT-1
- Santa Rosa City—SRO-1
- Sonoma City—SCI-1
- Windsor Town—WIN-1
- Cloverdale Fire—CLO-1
- Gold Ridge RCD—GOL-1
- N. Sonoma Coast FPD—NSC-1
- N. Sonoma County Fire—NFR-1
- Rancho Adobe Fire—RAF-1
- Sonoma Co. Ag. & Open Space—SAO-1
- Sonoma RCD—SCR-1
- Sonoma Valley Fire—SVF-1
- Timber Cover Fire—TIM-1

Recommended Actions

Complete the table titled "Hazard Mitigation Action Plan Matrix" for all the actions you have identified and would like to include in the plan:

- Enter the action number and description. If the action is carried over from your previous hazard mitigation plan, return to the "Status of Previous Plan Actions" table you completed in Phase 1 and enter the new action number in the column labeled Action # in Update.
- Indicate whether the action mitigates hazards for new and/or existing assets.
- Identify the specific hazards the action will mitigate (note: you must list the hazards, simply indicating all hazards is not deemed acceptable).
- Identify by number the mitigation plan objectives that the action addresses (see toolkit).
- Indicate who will be the lead in administering the action. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department, please ensure that it is clear who the lead agency will be and list supporting agencies in the appropriate column.
- Enter an estimated cost in dollars if known; otherwise, enter "High," "Medium" or "Low" as determined for the prioritization process described in the following section.
- Identify funding sources for the action. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment to identify possible sources of funding and refer to the table below for project eligibility for FEMA's hazard mitigation assistance grant program.
- Indicate the time line as "short-term" (1 to 5 years) or "long-term" (5 years or greater) or "ongoing" (a continual program)

Eligible Activities	HMGP	PDM	FMA
Mitigation Projects			
Property Acquisition and Structure Demolition	√	√	√
Property Acquisition and Structure Relocation	√	√	√
Structure Elevation	√	√	√
Mitigation Reconstruction	√	√	√
Dry Floodproofing of Historic Residential Structures	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√
Generators	√	√	
Localized Flood Risk Reduction Projects	√	√	√
Non-Localized Flood Risk Reduction Projects	√	√	
Structural Retrofitting of Existing Buildings	√	√	√
Non-structural Retrofitting of Existing Buildings and Facilities	√	√	√
Safe Room Construction	√	√	
Wind Retrofit for One- and Two-Family Residences	√	√	
Infrastructure Retrofit	√	√	√
Soil Stabilization	√	√	√
Wildland fire Mitigation	√	√	
Post-Disaster Code Enforcement	√		
Advance Assistance	√		
5 Percent Initiative Projects*	√		
Aquifer and Storage Recovery**	√	√	√
Flood Diversion and Storage**	√	√	√
Floodplain and Stream Restoration**	√	√	√
Green Infrastructure**	√	√	√
Miscellaneous/Other**	√	√	√
Hazard Mitigation Planning	√	√	√
Technical Assistance			√
Management Costs	√	√	√

Notes: HMGP = Hazard Mitigation Grant Program; PDM = Pre-Disaster Mitigation; FMA = Flood Mitigation Assistance

* FEMA allows increasing the 5% Initiative amount up to 10% for a Presidential major disaster declaration under HMGP. The additional 5% Initiative funding can be used for activities that promote disaster-resistant codes for all hazards. As a condition of the award, either a disaster-resistant building code must be adopted or an improved Building Code Effectiveness Grading Schedule is required.

**Indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

Source: https://www.fema.gov/hazard-mitigation-assistance-mitigation-activity-chart

Please see the table below for examples of some the recommended actions.

Example Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
EX-1—**Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard areas.**							
Existing	Dam failure, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	3, 4, 10	Planning		High	HMGP, PDM, FMA	Short-term
EX-2—**Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community including _____.**							
New and Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 3, 4, 5, 7, 8, 10	Planning		Low	Staff Time, General Funds	Ongoing
EX-3—**Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.**							
Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	4, 8	Emergency Management		Medium	Staff Time, General Funds	Short-term
EX-4—**Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.**							
New and Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Lead Contact Department for Plan	Any Supporting Departments	Low	Staff Time, General Funds	Short-term
EX-5—**Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.**							
New and Existing	Dam failure, Drought, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 5, 8	Lead Contact Department for Plan	Any Supporting Departments	Low	Staff Time, General Funds	Short-term
EX-6—**Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: Enforcement of the flood damage prevention ordinance Participate in floodplain identification and mapping updates Provide public assistance/information on floodplain requirements and impacts.**							
New and Existing	Flood, Dam Failure	1, 3, 5, 7, 8, 10	Floodplain Administration Department		Low	Staff Time, General Funds	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
EX-7—**Work with building officials to identify ways to improve the jurisdictions' BCEGS classification.**							
New	Earthquake, Flooding, Landslide, Severe weather, Wildland fire	1, 4, 7	Building and Development Services		Low	Staff Time, General Funds	Short-term
EX-8—**Develop a post-disaster recovery plan and a debris management plan.**							
Existing	Dam failure, Earthquake, Flooding, Landslide, Severe weather, Wildland fire	9	Emergency Management		Medium	EMPG	Long-term
EX-9—**Participate in programs such as Firewise, StormReady and the Community Rating System.**							
New and Existing	Dam Failure, Flooding, Severe weather, Wildland fire	3, 4	Emergency Management	Public Works	Low	Staff Time, General Funds	Short-term
EX-10—**Identify and pursue strategies to increase adaptive capacity to climate change including _____.**							
New and Existing	Dam failure, Drought, Flooding, Landslide, Severe weather, Wildland fire	1, 3, 4, 5, 6, 7, 8	Planning		Low	Staff Time, General Funds	Short-term
EX-11—**Purchase generators for critical facilities and infrastructure that lack adequate back-up power including _____.**							
New and Existing	Dam failure, Flooding, Landslide, Severe weather, Wildland fire	2, 6, 9	Planning		Low	Staff Time, General Funds	Short-term

Prioritization of Mitigation Actions

Complete the information in the table titled "Mitigation Strategy Priority Schedule" as follows:

- **Action #**—Indicate the action number from the previous annex table (Hazard Mitigation Action Plan Matrix).
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter "High," "Medium" or "Low" as follows:

  - High: Action will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Action will have a long-term impact on the reduction of risk exposure to life and property, or action will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the action are difficult to quantify in the short term.

- **Costs**—Enter "High," "Medium" or "Low" as follows:

- High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed action.
- Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
- Low: Possible to fund under existing budget. Action is or can be part of an existing ongoing program.
- If you know the estimated cost of an action because it is part of an existing, ongoing program, indicate the amount.

- **Do Benefits Exceed the Cost?**—Enter "Yes" or "No." This is a qualitative assessment. Enter "Yes" if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter "No" if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Action Grant-Eligible?**—Enter "Yes" or "No." Refer to the fact sheet on HMGP, PDM and FMA and the table above.
- **Can Action Be Funded Under Existing Program Budgets?**—Enter "Yes" or "No." In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**— Enter "High," "Medium" or "Low" as follows:

  - **High Priority**—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
  - **Medium Priority**—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years), once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
  - **Low Priority**—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions are generally "wish-list" actions. They may be eligible for grant funding from programs that have not yet been identified.

- **Grant Pursuit Priority**— Enter "High," "Medium" or "Low" as follows:

  - **High Priority**—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
  - **Medium Priority**—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
  - **Low Priority**—An action that has not been identified as meeting any grant eligibility requirements.

This prioritization is a simple way to determine that your identified actions meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM /FMA action grants. The prioritization will identify any actions whose probable benefits will not exceed the probable costs. Those actions identified as high-priority grant funding actions should be closely reviewed for consideration when grant funding opportunities arise.

Note: If a jurisdiction wishes to identify an action as high priority that is outside of the prioritization scheme for high priorities. A note indicating so should be inserted and a rationale should be provided.

Please see the example below based off the recommended actions:

Table 0-9. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Action Grant-Eligible?	Can Action Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
EX-1	3	High	High	Yes	Yes	No	Medium	High
EX-2	7	Medium	Low	Yes	No	Yes	High	Low
EX-3	2	Low	Medium	No	No	Maybe	Low	Low
EX-4	10	Low	Low	Yes	No	Yes	High	Low
EX-5	3	Low	Low	Yes	No	Yes	High	Low
EX-6	6	Medium	Low	Yes	No	Yes	High	Low
EX-7	3	Medium	Low	Yes	No	Yes	High	Low
EX-8	1	Medium	Medium	Yes	Yes	No	Medium	High
EX-9	2	Medium	Low	Yes	No	Yes	High	Low
EX-10	7	Medium	Low	Yes	No	Yes	High	Medium
EX-11	3	High	Medium	Yes	Yes	No	Medium	High

Analysis of Mitigation Actions

Complete the table titled "Analysis of Mitigation Actions" summarizing the mitigation actions by hazard of concern and the following eight mitigation types. Please note that an action can be more than one mitigation type:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

- **Climate Resilient**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

Please see the example below based off the recommended actions, but please note that these recommendations are heavy on generalized actions on the prevention spectrum and light in other areas and specificity. Planning partners should aim to identify at least one action in each category (although this is not required) and should make sure there is at least one action to address "high" and "medium" ranked hazards:

Analysis of Mitigation Actions

	Action Addressing Hazard, by Mitigation Type[a]							
Hazard Type	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Dam Failure	EX-2, 3, 4, 5, 6	EX-1, 6	EX-4, 6		EX-8, 11			EX-3, 4, 8, 9, 10
Drought	EX-2	EX-1	EX-4					EX-3, 4, 8, 9, 10
Earthquake	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9
Flooding	EX-2, 3, 4, 5, 6, 7	EX-1, 6, 7	EX-4, 6	EX-9	EX-8, 11			EX-3, 4, 8, 9, 10
Landslide	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9, 10
Severe weather	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4		EX-8, 9, 11			EX-3, 4, 8, 9, 10
Wildland fire	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4, 9	EX-9	EX-8, 11			EX-3, 4, 8, 9, 10

REVIEW AND INCORPORATION OF INFORMATION FOR THIS ANNEX

This section should describe what resources you used to complete the annex and how you used them. This may seem trivial or unimportant, but it is a requirement to pass the state and FEMA review process.

This section will ultimately describe all information sources used to develop this annex. The sources used for Phases 1 and 2 should have been entered previously. Additional sources are be added with the preparation of the Phase 3 annex. At this point, review to ensure that all relevant materials are identified.

FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. Please note that this section is optional.

ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. Please note that this section is optional.

THIS COMPLETES PHASE 3