

**CITY OF MARYSVILLE AGENDA BILL**

**EXECUTIVE SUMMARY FOR ACTION**

**CITY COUNCIL MEETING DATE: 01/25/2016**

<b>AGENDA ITEM:</b> Revised and Updated Snohomish County Hazard Mitigation Plan 2015	
<b>PREPARED BY:</b> Diana Rose <b>DEPARTMENT:</b> Executive	<b>DIRECTOR APPROVAL:</b>
<b>ATTACHMENTS:</b> City of Marysville and Fire District #12 Annex Snohomish County Hazard Mitigation Plan Volume 1 & 2 <a href="http://snohomishcountywa.gov/2429/Hazard-Mitigation-Plan">http://snohomishcountywa.gov/2429/Hazard-Mitigation-Plan</a>	
<b>BUDGET CODE:</b>	<b>AMOUNT:</b>
<b>SUMMARY:</b>	

The Disaster Mitigation Act of 2000 (Public Law 106-390) mandates the update of the Snohomish County Hazard Mitigation Plan (SC HMP) every 5 years. This resolution is to approve the adoption of the SC HMP. Adoption of this plan as specified must occur in order for

1. City of Marysville to have a FEMA approved Hazard Mitigation Plan.
2. The city to be eligible for any federal hazard mitigation assistance programs.

<b>RECOMMENDED ACTION:</b> Staff recommends Council approve the adoption of the Snohomish County Hazard Mitigation Plan Volume 1 in its entirety and the following portions of Volume 2: Part 1, the city of Marysville annex in Part 2 and all Volume 2 appendices.
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CITY OF MARYSVILLE  
Marysville, Washington

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE CITY OF MARYSVILLE ADOPTING THE UPDATED  
AND REVISED SNOHOMISH COUNTY HAZARD MITIGATION PLAN

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

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

WHEREAS, The Disaster Mitigation Act of 2000 (Public Law 106-390) established new requirements for pre-disaster and post-disaster hazard mitigation programs; and

WHEREAS, a coalition of Snohomish County, Tribes, Cities, and Special Purpose Districts with like planning objectives has been formed to pool resources and create consistent mitigation strategies within the county; and

WHEREAS, the 2010 edition of the Snohomish County Hazard Mitigation Plan has been updated, 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; and

WHEREAS, the coalition has completed a planning process that reviewed and/or revised the risk assessment, goals and objectives, action plan, and reengaged the public; and

WHEREAS, the Federal Emergency Management Agency (FEMA) has completed pre-adoption review of the revised Snohomish County Hazard Mitigation Plan pursuant to 44 CFR Part 201, and City Council adoption must occur for the city of Marysville to have a FEMA approved Hazard Mitigation Plan; and

WHEREAS, a Hazard Mitigation Plan will enhance the safety of the citizens of Marysville.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARYSVILLE AS FOLLOWS:

A. The Marysville City Council --

1. Adopts Volume 1 in its entirety and adopts the following portions of Volume 2: Part 1, the city of Marysville annex in Part 2; and all Volume 2 appendices of the Snohomish County Hazard Mitigation Plan (SC HMP). A copy of said documents shall be available for review with the City Clerk or can be viewed on the Snohomish County Website at <http://snohomishcountywa.gov/2429/Hazard-Mitigation-Plan>.
2. Will use the adopted portions of the SC HMP to guide pre-disaster and post-disaster mitigation of the hazards identified.

3. Will coordinate the strategies identified in the SC HMP with other planning programs and mechanisms under its jurisdictional authority.
4. Will continue support of the Planning Coalition and continue to participate in the Coalition Partnership as described in the SC HMP.
5. Will help promote and support mitigation successes of all SC HMP Planning Partners.

B. It is the purpose of the Resolution to provide for the health, welfare, and safety of the general public, and not to create or otherwise establish or designate a particular class or group of persons who will or should be especially protected or benefited by the terms of this Resolution. No provision or term used in this Resolution is intended to impose any duty whatsoever upon the City or any of its officers, agents, or employees for whom the implementation of this Resolution shall be discretionary and not mandatory.

C. Nothing contained in this Resolution is intended to be, nor shall be construed to create or form the basis for, any liability on the part of the City or its officers, agents, and employees for any inquiry or damage resulting from the failure to comply with the provisions of this Resolution or be a reason or a consequence of any inspections, notice, or order, in connection with the implementation or enforcement of the Resolution, or by reason of any action of the City related in any manner to enforcement of this Resolution by its officers, agents, or employees.

ADOPTED by the City Council and APPROVED by the Mayor this \_\_\_ day of \_\_\_\_\_, 2016.

CITY OF MARYSVILLE

By \_\_\_\_\_  
Jon Nehring, MAYOR

ATTEST:

\_\_\_\_\_  
April O'Brien, Deputy City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Jon Walker, City Attorney

# 12 CITY OF MARYSVILLE AND FIRE DISTRICT #12 ANNEX

## 12.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Diana Rose, Risk/Emergency Manager  
1049 State Avenue  
Marysville, WA 98270  
Telephone: 360-363-8096  
e-mail: drose@marysvillewa.gov

### Alternate Point of Contact

Jeff Laycock, City Engineer  
80 Columbia Avenue  
Marysville, WA 98270  
Telephone: 360-363-8274  
e-mail Address: jlaycock@marysvillewa.gov

## 12.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1891
- **Current Population**—62,600 as of December 31, 2014
- **Population Growth**—Based on the Snohomish County Tomorrow 2013-2014 Growth Monitoring Report, Marysville experienced a 4.3 percent average annual increase in population from 2010 through 2014. The City is impacted by the Washington State Growth Management Act (GMA) and is compliant with the provisions of this State mandate.
- **Location and Description**—The City of Marysville is located with the Tulalip Indian Reservation to the west and the foothills of the Cascade Mountains to the east. The City and the immediate area are primarily suburban and rural-residential, with supporting retail and commercial enterprises. Light industrial and manufacturing businesses are located in the north and south portions of the City, with vacant property in the north end emerging as a key location for economic development plans to attract light-industrial companies.
- **Brief History** - The City, incorporated in 1891, has experienced continued growth from businesses and individuals drawn to the area by the availability of buildable property and accessibility to water and sewer services. For these reasons, and because of its proximity to the population centers of Everett and Seattle, continued growth is expected.

Local industrial payrolls and agricultural activities provide a portion of the area's economic base, which is supplemented by "commuter payrolls" in Everett. Planners classify Marysville as a service-oriented community with no major industry of its own. Therefore, the economy of Marysville is highly influenced by the industry of the surrounding area, the most significant of which is the Boeing Company's manufacturing facilities in Everett.

- **Climate**—Marysville’s weather is typical of Western Washington, summers are cool and comparatively dry and winters are mild, wet, and cloudy. The average number of clear or only partly cloudy days each month varies from four to eight in winter, eight to 15 in spring and fall, and 15 to 20 in summer. The percent of possible sunshine received each month ranges from approximately 25 percent in winter to 60 percent in summer. In the interior valleys, measurable rainfall is recorded on 150 days each year and on 190 days in the mountains and along the coast. Thunderstorms over the lower elevations occur on four to eight days each year and over the mountains on seven to 15 days. Damaging hailstorms rarely, if ever, occur in most localities of western Washington. During July and August, the driest months, it is not unusual for two to four weeks to pass with only a few showers; however, in December and January, the wettest months, precipitation is frequently recorded on 20 to 25 days or more each month.
- **Governing Body Format**—The City of Marysville is governed by a Council–Mayor form of government consisting of seven elected council members and a full-time elected mayor. A Chief Administrative Officer oversees day-to-day operation of City-sponsored services, which include: Executive, Administrative Services, Finance, Community Development, Police, Fire, Parks and Recreations, Public Works and Community Information.
- **Development Trends**—Over the years, the greater Marysville area has realized an increase in commercial and industrial growth along I-5 in central Marysville and north of the City in the Smokey Point region. Many of these commercial facilities are oriented toward the automobile-driving public. Residential development has picked up in 2013 and 2014 due to the improving economy. With the City having adopted a Downtown Master Plan and Smokey Point Master Plan, the focus will be on mixed uses, affordable housing and commercial/industrial uses leading to local job creation and security.

Washington State Law (RCW 36.70) requires that counties that meet specified population criteria, and the cities within those counties, to prepare and adopt a comprehensive long-range plan to serve as a guide for community development. The plan must consist of an integrated and internally consistent set of goals, policies, and implementation measures. In addition, the plan must focus on issues of the greatest concern to the community and be written in a clear and concise manner. City actions, such as those relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with such a plan. The City of Marysville is in compliance and good standing with the provisions of RCW 36.70 and adopted its most recent general plan in 2005, and is currently in the processing of updating the plan with an anticipated adoption in the summer of 2015. The City will review and amend its Comprehensive Plan in the future as necessary. Future growth and development will be managed as identified in this plan.

Marysville Fire District #12 (MFD) is a separate legal entity but will be included in the City of Marysville Natural Hazard Mitigation Plan. MFD was formed in 1992 and was the result of an interlocal agreement between the City of Marysville Fire Department and Fire District #12. MFD serves approximately 70,000 residents and covers approximately 54 square miles. MFD’s service area includes the City of Marysville, Quil Ceda Village (a federal city on the Tulalip Indian Reservation), and unincorporated areas of both Tulalip Indian Reservation and also FD #12, which includes the suburban and rural communities of the Seven Lakes, Smokey

Point, and Lakewood. MFD has five (5) strategically placed fire stations that respond to more than 10,000 emergencies annually.

### 12.3 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 12-1 lists all past occurrences of natural hazards within the jurisdiction. Repetitive loss records are as follows:

- Number of FEMA Identified Repetitive Flood Loss Properties: None
- Number of Repetitive Flood Loss Properties that have been mitigated: None

### 12.4 HAZARD RISK RANKING

Table 12-2 presents the ranking of the hazards of concern.

### 12.5 CAPABILITY ASSESSMENT

The assessment of the jurisdiction's legal and regulatory capabilities is presented in Table 12-3. The assessment of the jurisdiction's administrative and technical capabilities is presented in Table 12-4. The assessment of the jurisdiction's fiscal capabilities is presented in Table 12-5. Classifications under various community mitigation programs are presented in Table 12-6.

### 12.6 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES

Table 12-7 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 12-8 identifies the priority for each initiative. Table 12-9 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

### 12.7 STATUS OF PREVIOUS PLAN INITIATIVES

Table 12-10 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

### 12.8 FUTURE NEEDS TO BETTER UNDERSTAND RISK

Mapping based on models with sufficient detail to accurately show the probable exposure to tsunami hazards are essential to better understand the risk and vulnerability of the community to these hazards.

### 12.9 HAZARD AREA EXTENT AND LOCATION

Hazard-area extent and location maps have been generated for the City of Marysville and are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

### 13.10 INTERNAL PLANNING PROCESS

The internal planning process is described in Appendix E of this document.

**TABLE 12-1.  
NATURAL HAZARD EVENTS**

Type of Event	FEMA Disaster #(if applicable)	Date	Preliminary Damage Assessment
Snow/Severe Weather	4056-DR (City)	1/2012	\$56,156.77
Severe Winter Storm	1825-DR (City)	12/08	\$50,201.85
Severe Weather	1159-DR (City)	1/97	\$80,593.00
Severe Weather	1159-DR (MFD)	1/97	\$1805.00
Severe Weather	1079-DR (MFD)	1/96	\$1,583.00

**TABLE 8-2.  
HAZARD RISK RANKING**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Description of Risk (Describe the community impacts)
1	Severe Weather	42	Potential for flooding in Residential and Industrial land as well as damage to Public Infrastructure. The Waste Water Treatment Plant and Public Works Facility are located in the flood plain and both facilities have flooded in the past.
1	Climate Change	42	The impacts would be much like they are for Severe Storm, but more extreme and more frequent.
2	Earthquake	36	With 20% of our downtown area unreinforced masonry those buildings are vulnerable to an earthquake. Transportation routes would be impacted by debris and Utility interruptions would impact services throughout the city.
3	Volcano/Lahar	34	We anticipate impacts to air quality from ash fall out.
4	Flood	33	The potential for flooding affects Residential and Industrial land and Public Infrastructure. The impacts would be the same as Severe Storm.
5	Landslide	12	Residents in the eastside of town could be impacted by a landslide.
6	Tsunami	6	Our Public Infrastructure that is in the flood plain by our waterfront could be impacted by a Tsunami. That includes our Water Treatment plant and Public Works Facility. In addition, there could be limited residential impacts.
6	Dam Failure	6	A breach of the Culmback Dam could impact the Public Works Facility and Waste Water Treatment plant. In addition, there could be limited residential impacts along the waterway.
N/A	Avalanche	0	
N/A	Wildland Fire	0	



**TABLE 12-3.  
LEGAL AND REGULATORY CAPABILITY**

	Local Authority	State or Federal Prohibitions	Other Jurisdictional Authority	State Mandated	Comments
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Y	N	N	Y	2012 International Building Code
Zonings	Y	N	N	Y	City Ordinance 2852 (2011)
Subdivisions	Y	N	N	Y	City Ordinance 2852 (2011)
Stormwater Management	Y	N	N	Y	City Ordinance 2816 (2010)
Post Disaster Recovery	N	N	N	N	
Real Estate Disclosure	N	N	N	N	
Growth Management	Y	N	N	Y	City Ordinance 2406 (2002), substantial update 2005 and pending substantial update 2015
Site Plan Review	Y	N	N	N	City Ordinance 2914 (2012)
Special Purpose (flood management, critical areas)	Y	Y	N	Y	Chapter 22E.020 (Moved in 2011 with Ord.2852) <i>State law prohibits residential construction in designated floodway.</i>
<b>Planning Documents</b>					
General or Comprehensive Plan	Y	N	N	Y	City Ordinance 2068 (2005) Update pending adoption by June 2015
Floodplain or Basin Plan	Y	N	Y	N	City Ordinance 2852 (2011) originally adopted through Ordinance 1339 (1984) WAC 173-806-173
Stormwater Plan	Y	N	N	Y	City Ordinance 2816 (2010)
Capital Improvement Plan	Y	N	N	N	Water Sewer Transportation
Habitat Conservation Plan	N	N	N	N	City Ordinance 2131 (1997); reorganized with City Ordinance 2852 (2011)
Economic Development Plan	Y	N	N	Y	City Ordinance 1298 (1983) and City Ordinance 2030 (1995)
Emergency Response Plan	Y	N	N	N	City Ordinance 1440 (1985)

Shoreline Management Plan	Y	N	N	Y	City Ordinance 859 (1975); substantial update 2006; reorganized with City Ordinance 2852 (2011)
Post Disaster Recovery Plan	N	N	N	N	
<b>Other</b>					
Other	Y	N	N	N	The City of Marysville Engineering Design and Development Standards

**TABLE 12-4.  
ADMINISTRATIVE AND TECHNICAL CAPABILITY**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department/Planning Director or Designee Engineering Department: City Engineer and staff
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Department/City Engineer and staff/Fire Marshall
Planners or engineers with an understanding of natural hazards	Yes	Engineering Department: City Engineer and staff
Staff with training in benefit/cost analysis	Yes	Public Works Engineering/Emergency Manager/Outside Contractor
Floodplain manager	Yes	Engineering Department: City Engineer and staff
Surveyors	Yes	Engineering Department and on-call PLS
Personnel skilled or trained in GIS applications	Yes	GIS Administrator; and GIS Analyst Several other Public Works and Community Development staff are familiar and proficient in GIS.
Scientist familiar with natural hazards in local area	No	The City keeps and updated list of qualified consultant for on-call services.
Emergency Manager	Yes	Diana Rose, Risk/Emergency Manager
Grant Writers	Yes	Engineering staff are familiar with grant writing and applications.

<b>TABLE 12-5. FISCAL CAPABILITY</b>	
<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
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
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	Council bonds, REET

**TABLE 12-6.  
COMMUNITY CLASSIFICATIONS**

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	2	5/1/2010
Fire Protection Rating	Yes	3	2/1/2015
Storm Ready	Yes	N/A	10/28/2013
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

**TABLE 12-7.  
HAZARD MITIGATION ACTION PLAN MATRIX**

Applies to new or existing assets	Hazards Mitigated	Objective s Met	Lead Department & Position	Estimated Cost	Sources of Funding	Timeline	Included in Previous Plan?
<b>M-1—Construct additional Regional Stormwater Detention Facilities to increase storage for a disaster.</b>							
New	Flood, Severe Weather	5,9	Public Works	High	FEMA Hazard Mitigation Grants, General fund	Short term	Yes
<b>M-2—Construct additional Reservoirs at Sunnyside and Whiskey Ridge to increase water storage capacity for a disaster.</b>							
New	Earthquake	9	Public Works	Medium	FEMA Hazard Mitigation Grants, Franchise Fund	Short term	Yes
<b>M-3—Construct 67th Ave. water main for an additional water distribution route for redundancy in a disaster.</b>							
New	Flood, Severe Weather, Earthquake	9	Public Works	Medium	FEMA Hazard Mitigation Grants, Franchise Fund	Short term	Yes
<b>M-4—Replace and upgrade culverts throughout the city to reduce vulnerability to severe flood events and earthquakes.</b>							
Existing	Flood, Severe Weather, Earthquake	5,9	Public Works	High	FEMA Hazard Mitigation Grants, Franchise Fund	Long term	No

<b>M-5—Install Generators at all Lift Stations for backup power supply to ensure sewage does not overflow during extended power outages during a disaster.</b>							
Existing	Severe Weather, Earthquake	5,9	Public Works	Low	FEMA Hazard Mitigation Grants, Franchise Fund	Short term	Yes
<b>M-6—Upgrade and retrofit Lake Goodwin Well Standpipe to protect redundant water source from failing in a disaster.</b>							
Existing	Earthquake	9	Public Works	Medium	FEMA Hazard Mitigation Grants, Franchise Fund	Short Term	Yes
<b>M-7—Improve 132nd St. Soldier Pile Wall construction to improve its ability to prevent the roadway from collapsing during an earthquake.</b>							
Existing	Earthquake	9	Public Works	Medium	FEMA Hazard Mitigation Grants, General Fund	Short term	Yes
<b>M-8 -Upgrade State Avenue Quilceda Creek Crossing to prevent the roadway from collapsing during an earthquake.</b>							
Existing	Earthquake	9	Public Works	Medium	General Fund	Long term	Yes
<b>M-9 -Install Earthquake valves at Cedarcrest, Getchell, Edward Springs, and Highway 9 Reservoirs.</b>							
Existing	Earthquake	9	Public Works	Medium	Franchise Fund	Short term	Yes
<b>M-10 -Upgrade 45 Road Water main from Asbestos Concrete (AC) to Ductile Iron (DI) to improve performance during an earthquake.</b>							
Existing	Earthquake	9	Public Works	High	Franchise Fund	Short term	Yes
<b>M-11 – Upgrade and retrofit Fire Station #61, which is co-located with the Public Safety Building, to meet current seismic standards to help withstand an earthquake.</b>							
Existing	Earthquake	9	Fire District #12 Board & Fire Chief	Low	FEMA Hazard Mitigation Grants, General Operating Fund	Short term	No
<b>M-12 – Mitigate impacts associated with the Qwuloolt Estuary Restoration Project and the levee breach.</b>							
Existing	Flooding	8	Public Works	Unknown	General Operating Fund	Short term	No
<b>M-13 - Improve Development Standards to include regulations to mitigate for natural hazards.</b>							
Existing	All Natural Hazards	1,3,5,6	Community Development	Low	General Fund	Short term, ongoing	Yes

<b>M-14</b> -Create or enhance public information programs that will promote preparedness and mitigation of risks.							
Existing	Earthquake	3,5,6,8	Executive Department, Community Development	Low	General Fund, Grants	Short term, ongoing	Yes
<b>M-15</b> -Continue to maintain compliance and good standing under the National Flood Insurance Program (NFIP).							
New and existing	Flooding	All	All Departments	Low	General Fund	Short term, ongoing	Yes
<b>M-16</b> —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority when applicable.							
Existing	All Hazards	All	Marysville, Fire District #12 Board & Fire Chief	High	FEMA Hazard Mitigation Grant funding with local match provided by property owner contribution	Long term, depends on funding	Yes
<b>M-17</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Chapter 7 of Volume 1.							
New and Existing	All Hazards	All	Emergency Management, Public Works, FD #12	Low	General Fund, FEMA Mitigation Grant Funding for 5-year update	Short term, ongoing	Yes
<b>M-18</b> —Integrate, where appropriate, risk assessment information from the Snohomish County Hazard Mitigation Plan into other planning mechanisms available to the City such as: the Capital Improvements Program, the Comprehensive planning process, and Shoreline Master planning.							
New and Existing	All Hazards	All	All Departments, Fire District #12 Board & Fire Chief	Low	General Fund	Short term, ongoing	Yes

**TABLE 12-8.  
MITIGATION STRATEGY PRIORITY SCHEDULE**

Initiative #	#of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority <sup>a</sup>
M-1	2	High	High	Exceed	Yes	Yes	High
M-2	1	High	Medium	Exceed	No	Yes	High
M-3	1	High	Medium	Exceed	No	Yes	Medium
M-4	2	Medium	High	Equal	Yes	Yes	Medium
M-5	2	High	Low	Exceed	Yes	Yes	High
M-6	1	High	Medium	Exceed	No	Yes	Medium
M-7	1	Medium	Medium	Equal	Yes	No	Medium
M-8	1	High	Medium	Exceed	Yes	No	Medium
M-9	1	High	Medium	Exceed	Yes	No	High
M-10	1	High	High	Equal	No	No	Medium
M-11	1	High	Low	Exceed	Yes	No	Medium
M-12	1	High	Unknown	Equal	Yes	Yes	High
M-13	4	Medium	Low	Exceed	No	Yes	High
M-14	4	Medium	Low	Exceed	Yes	Yes	High
M-15	All	Medium	Low	Exceed	No	No	Medium
M-16	All	High	High	Exceed	Yes	No	Low
M-17	All	Medium	Low	Exceed	Yes	Yes	High
M-18	All	High	Low	Exceed	No	Yes	High

a. Explanation of priorities

- High Priority: Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short-term project) once funded.
- Medium Priority: Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
- Low Priority: Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and timeline for completion is long term (5 to 10 years).

**TABLE 12-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Initiative Addressing Hazard, by Mitigation Type						
Hazard Type	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Avalanche						
Dam Failure	M-13, M-15, M-17	M-16, M-18	M-14			M-18
Earthquake	M-13, M-15, M-17	M-5, M-6, M-7, M-8, M-10, M-11, M-16, M-18	M-14	M-9, M-10, M-12	M-11	M-1, M-2, M-3, M-4, M-7, M-8, M-18
Flood	M-13, M-15, M-17	M-16, M-18	M-14			M-1, M-3, M-18
Climate Change	M-13, M-15, M-17	M-16, M-18				M-1, M-3
Landslide	M-13, M-15, M-17	M-16, M-18	M-14			M-18
Severe Weather	M-13, M-15, M-17	M-5, M-16, M-18	M-14			M-1, M-3, M-4, M-18
Tsunami	M-13, M-15, M-17	M-16, M-18	M-14			M-18
Volcano/ Lahar	M-13, M-15, M-17	M-16, M-18	M-14			M-18
Wildfire						



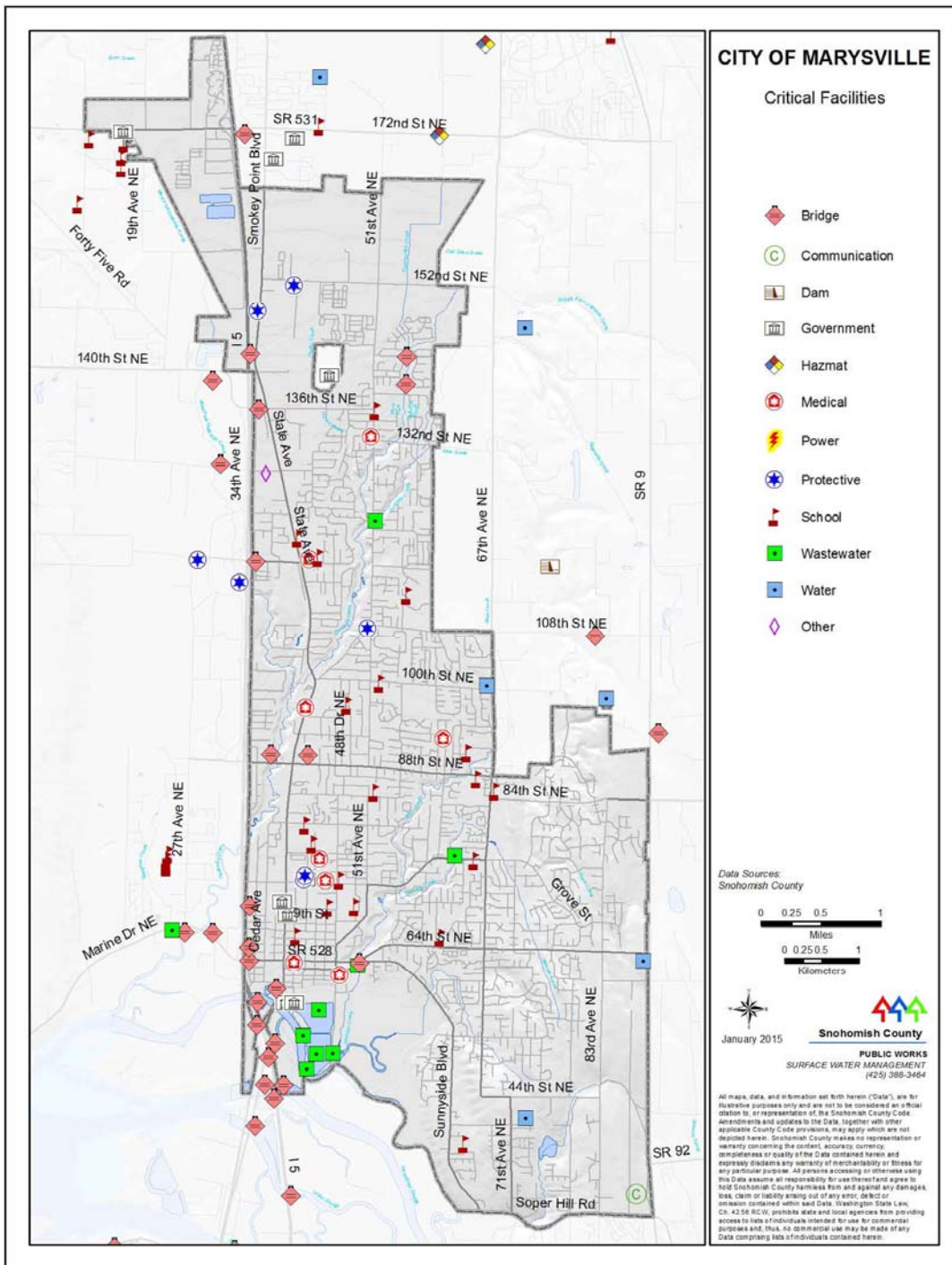
**TABLE 12-9.  
ANALYSIS OF MITIGATION INITIATIVES**

Notes:

1. 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.
2. 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.
3. Public Education and Awareness: Actions to inform citizens 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.
4. 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, and wetland restoration and preservation.
5. 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.
6. 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.

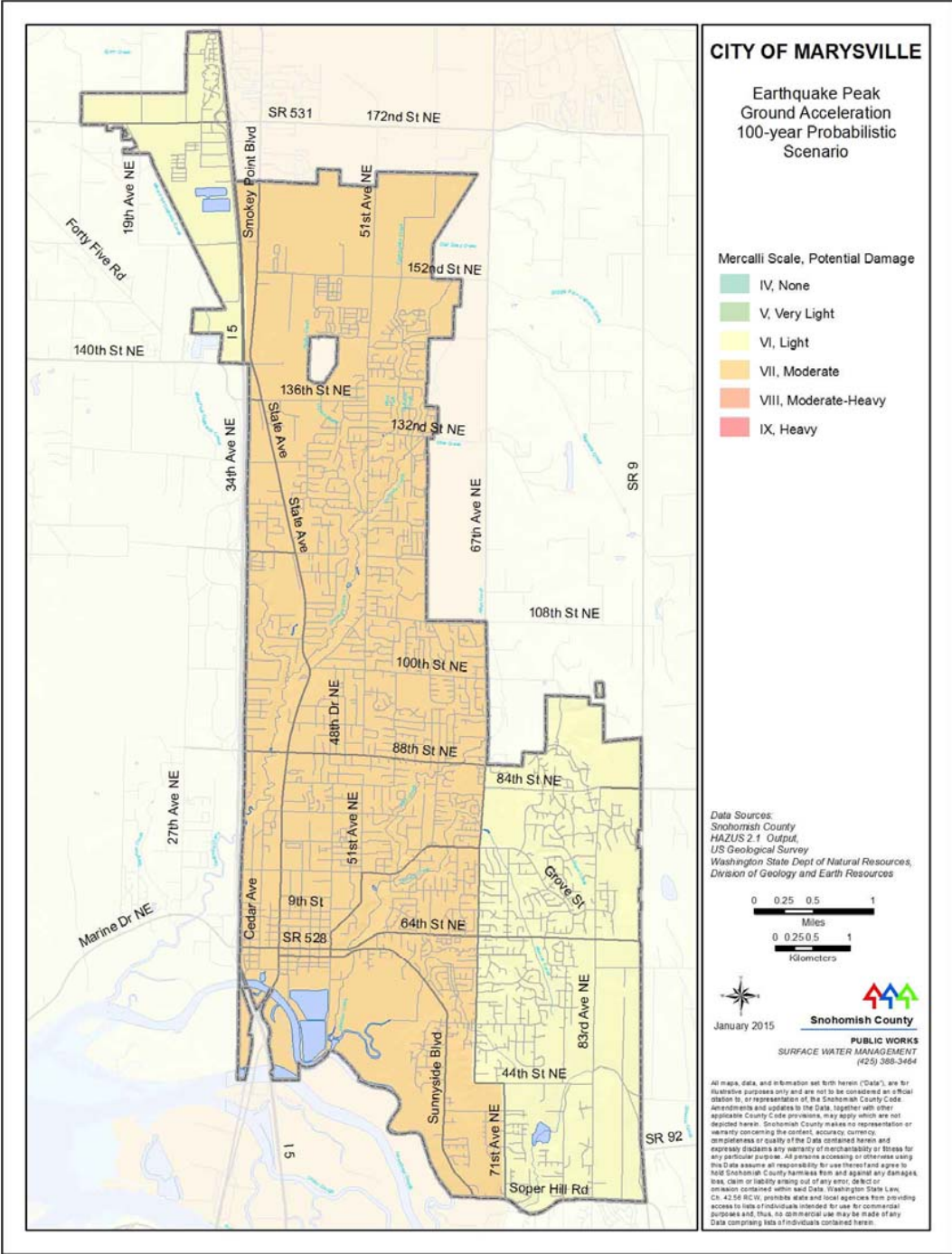
**TABLE 12-10.  
PREVIOUS ACTION PLAN IMPLEMENTATION STATUS**

Action #	Action Status			Comments
	Completed	Carry Over to Plan Update	Removed; No Longer Feasible	
M-1		✓		
M-2		✓		
M-3		✓		
M-4	✓			
M-5		✓		
M-6		✓		
M-7		✓		
M-8		✓		
M-9		✓		
M-10		✓		
M-11		✓		
M-12		✓		
M-13		✓		
M-14		✓		
M-15			✓	Participation in the Community Rating System (CRS) is not cost effective for the city at this time.
M-16		✓		
M-17		✓		
M-18		✓		



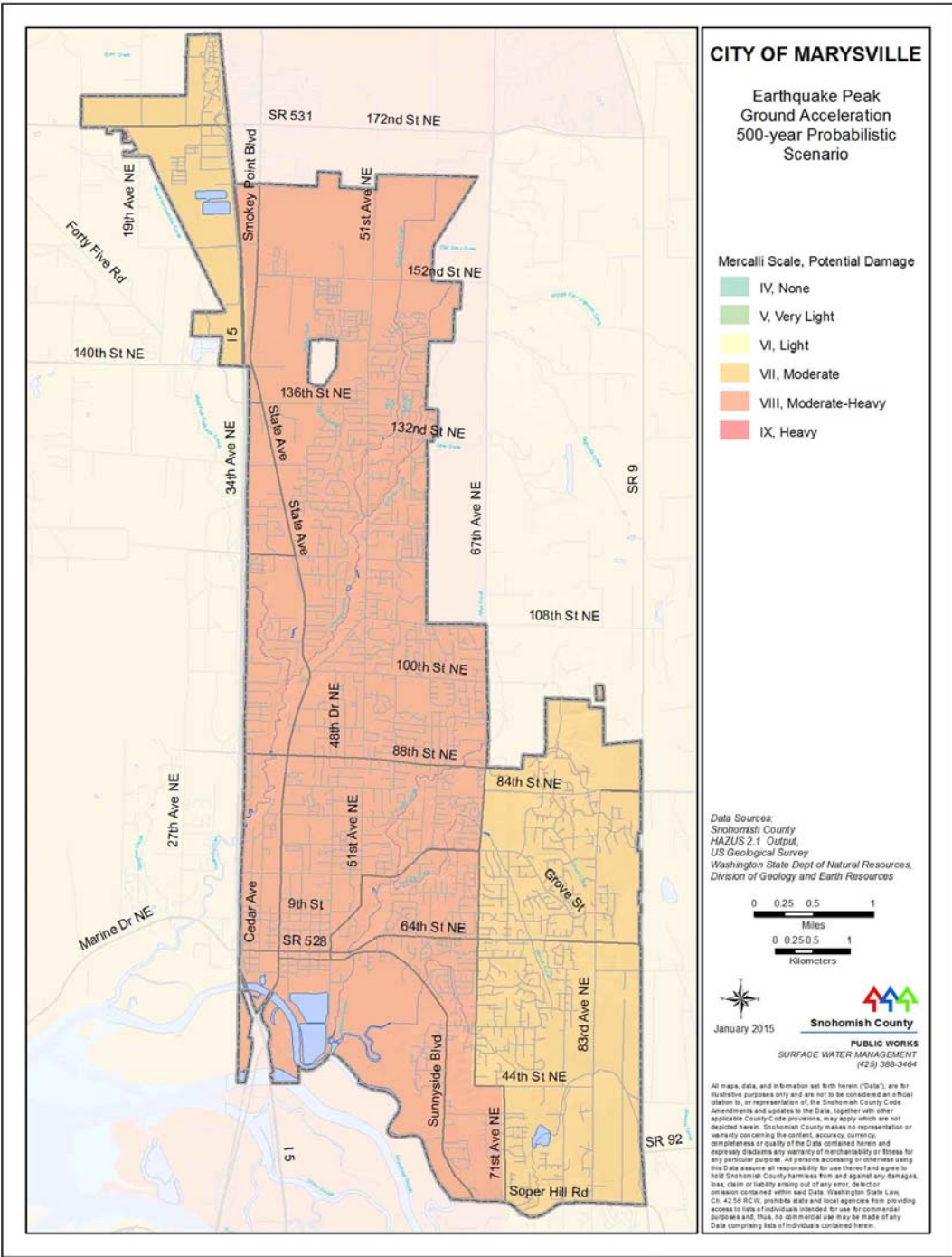
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Map 12-1. City of Marysville Critical Areas



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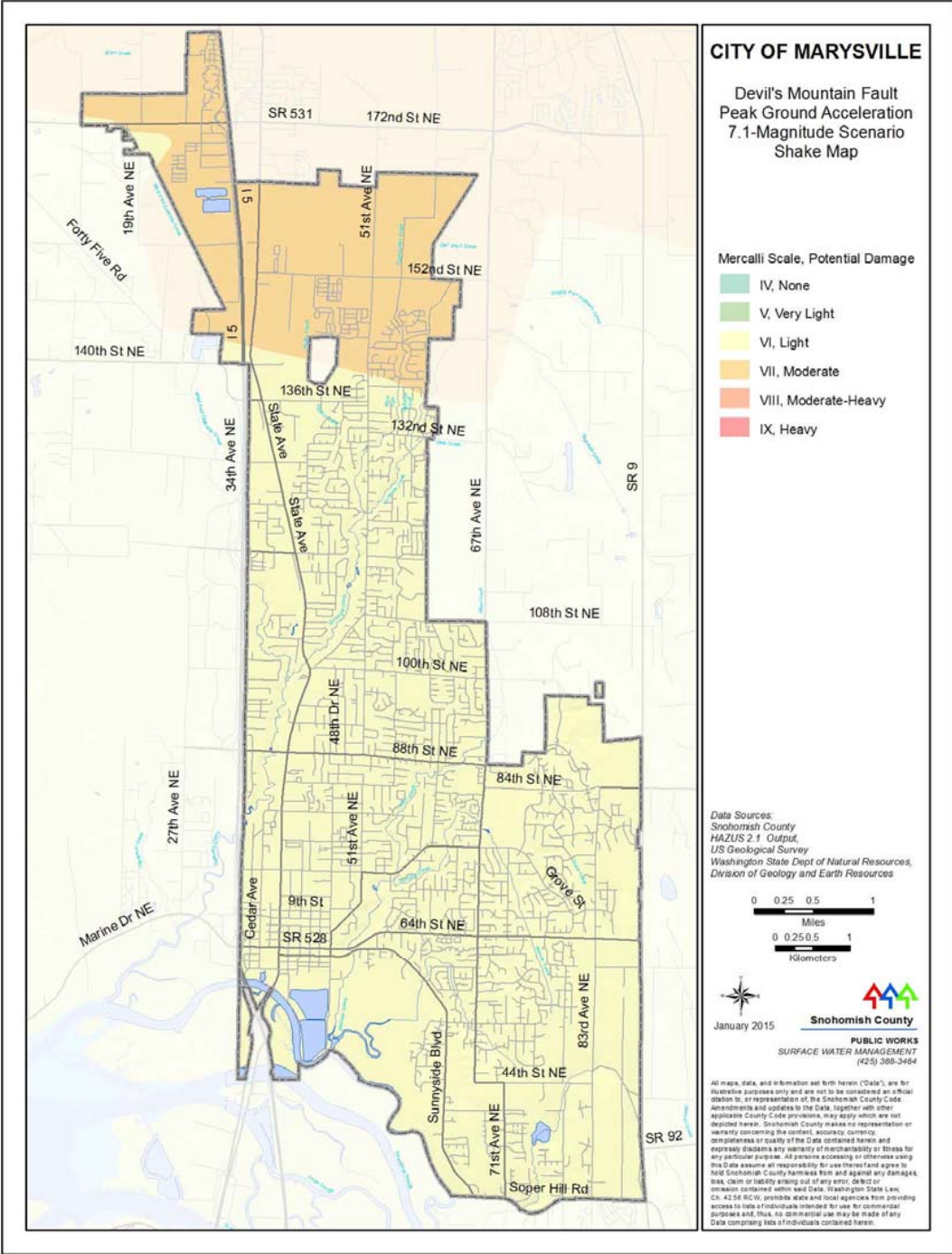
Map 12-2. City of Marysville 100-year Probabilistic Earthquake Scenario



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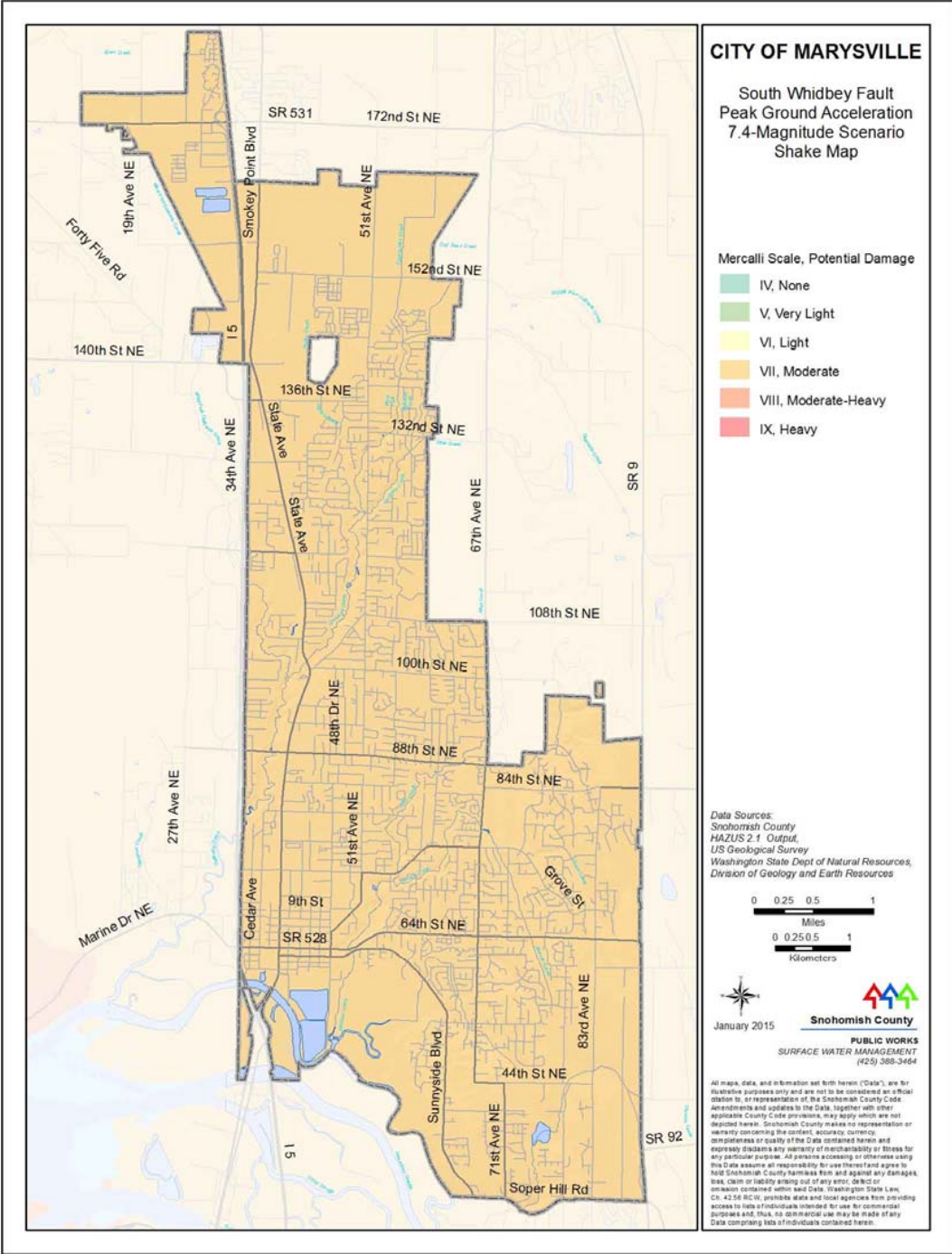
Map 12-3. City of Marysville 500-year Probabilistic Earthquake Scenario





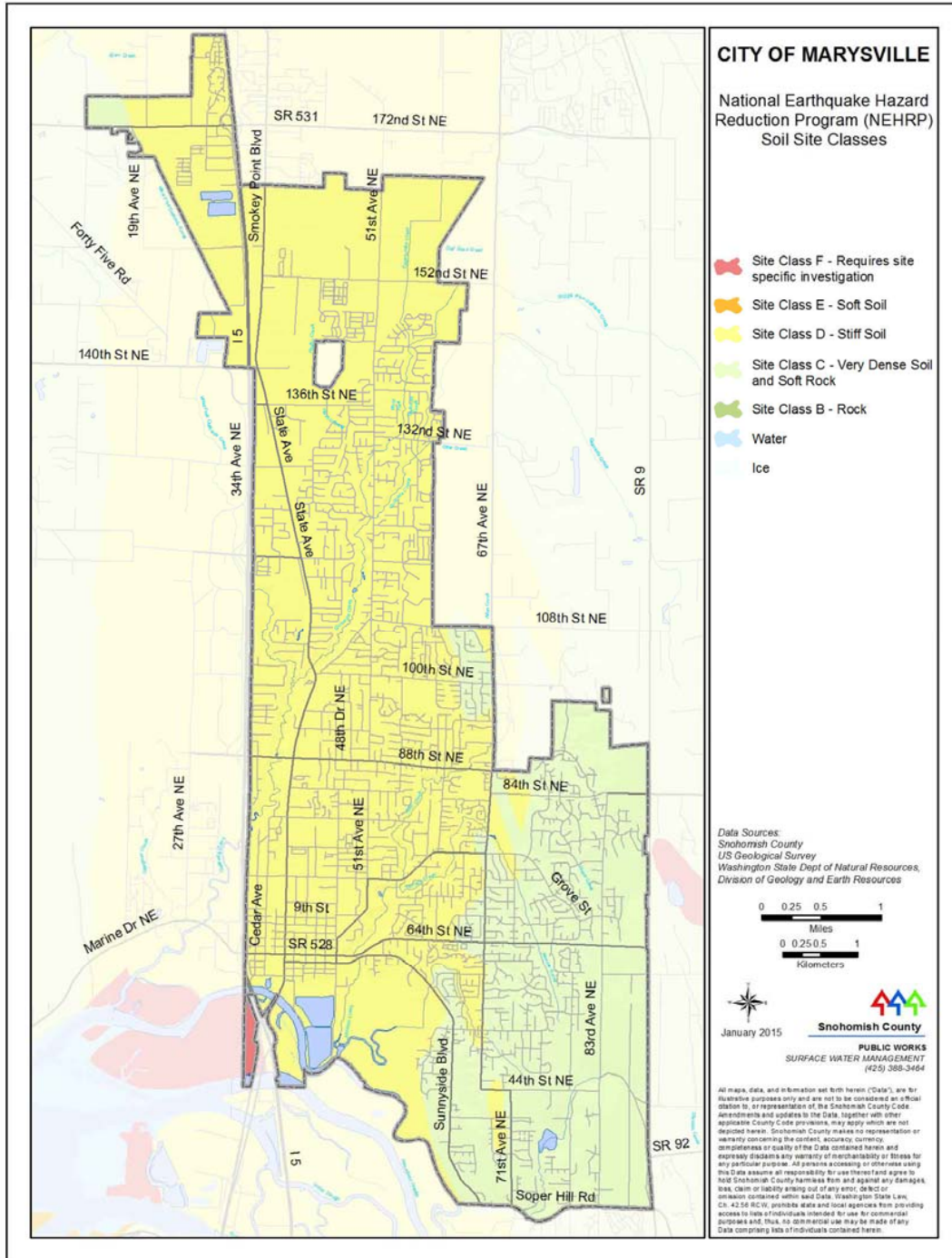
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Map 12-4. City of Marysville Devil's Mountain 7.1 Magnitude Earthquake Scenario



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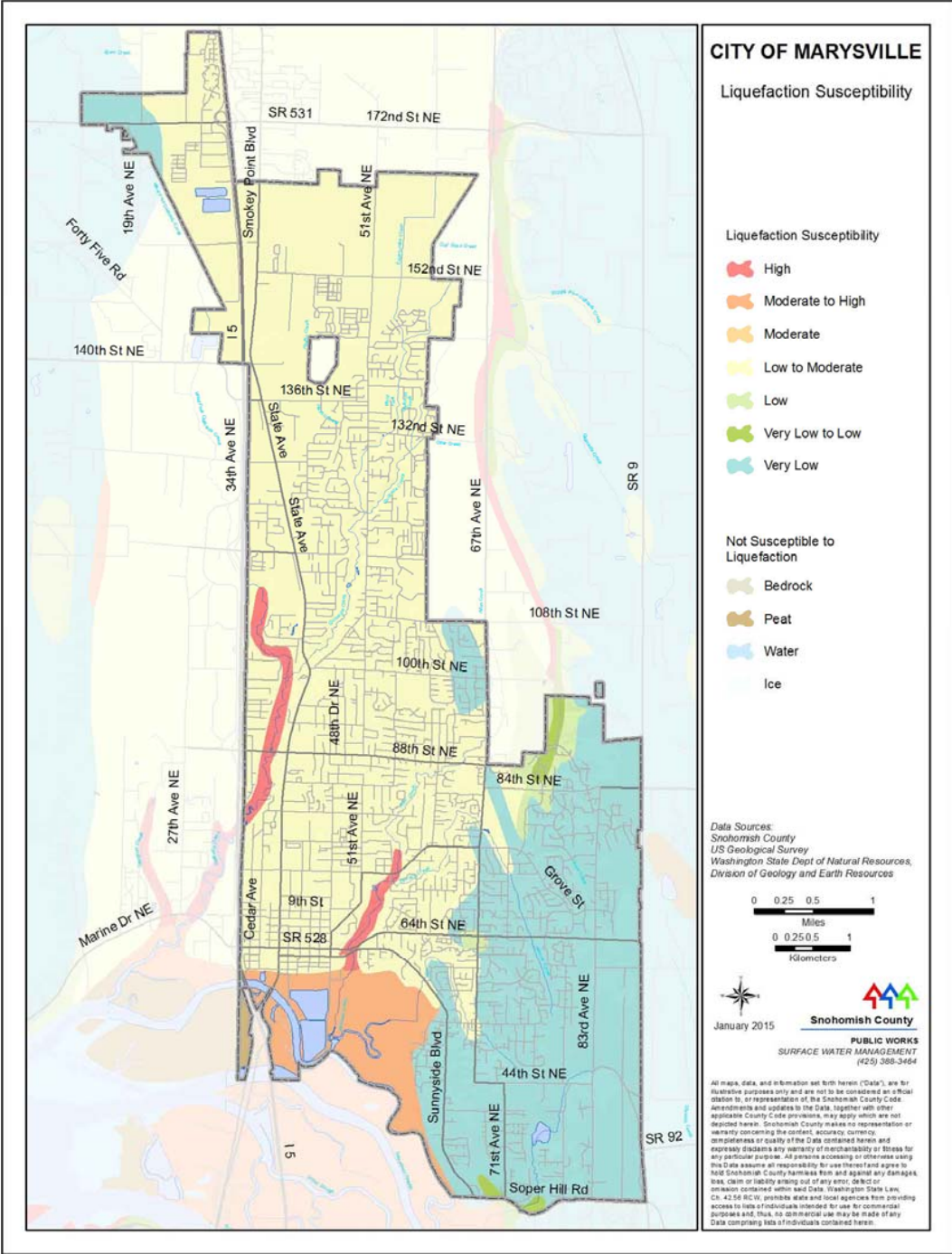
Map 12-5. City of Marysville South Whidbey 7.4 Magnitude Earthquake Scenario



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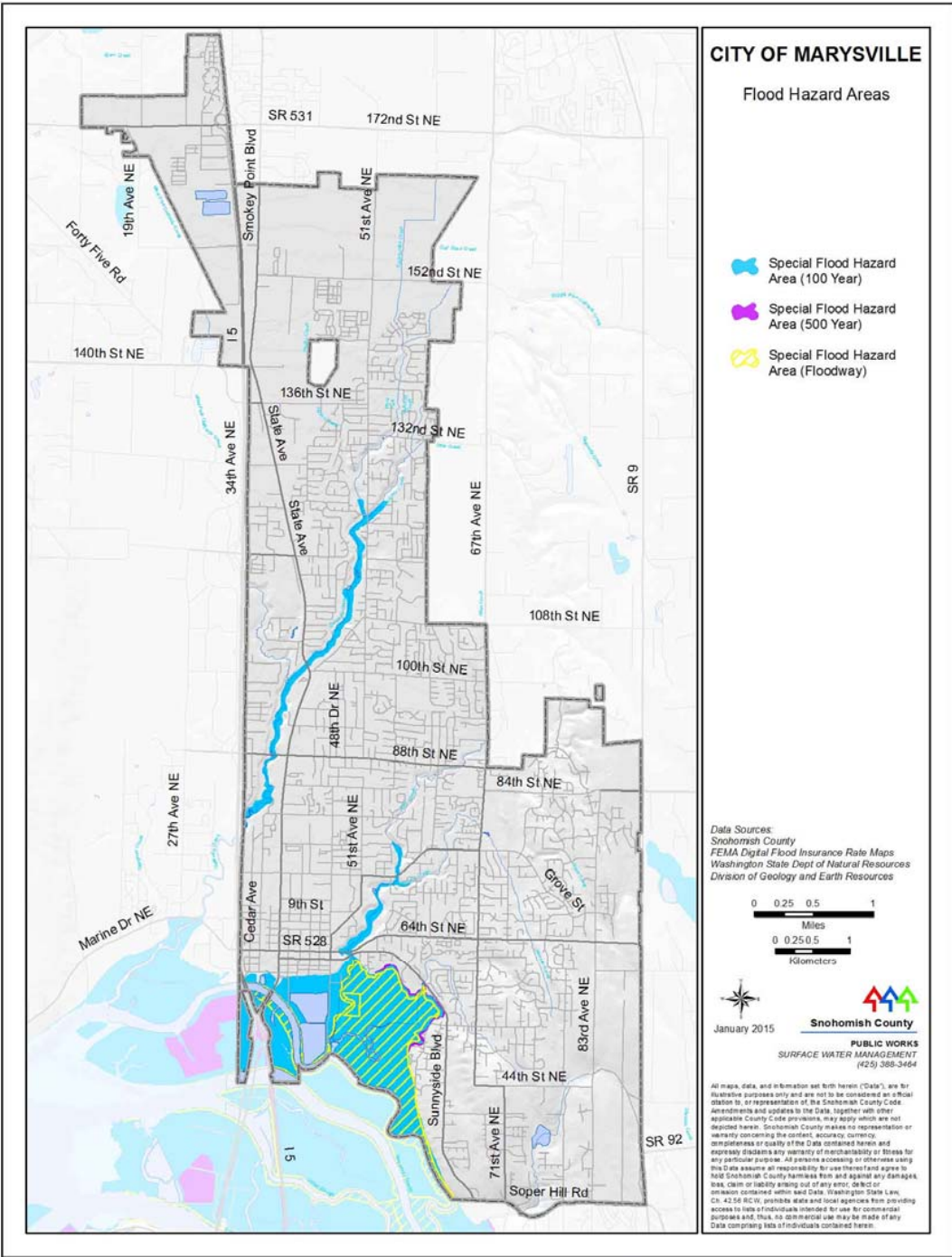
Map 12-6. City of Marysville National Earthquake Hazard Reduction Program Soil Classes





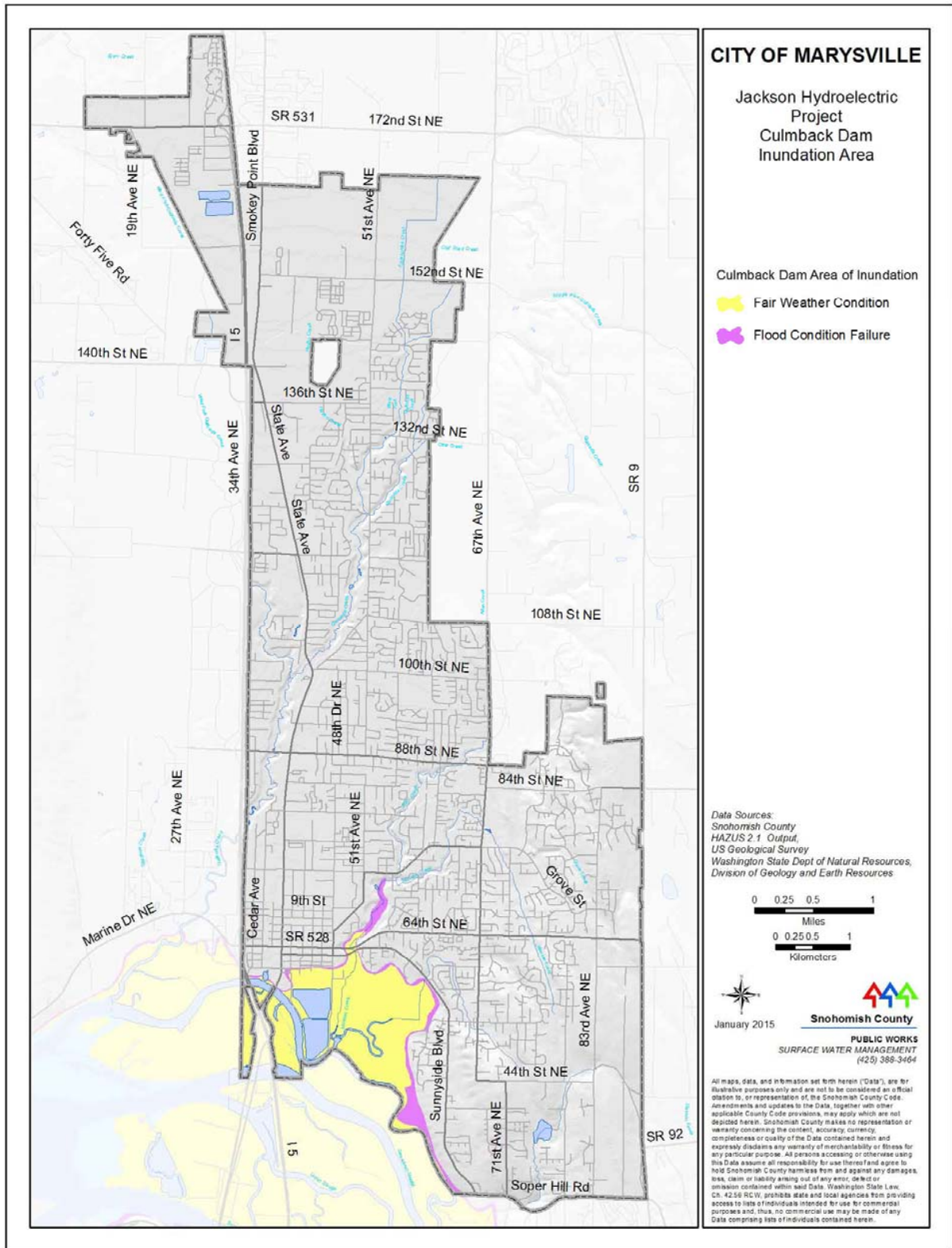
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Map 12-7. City of Marysville Liquefaction Susceptibility



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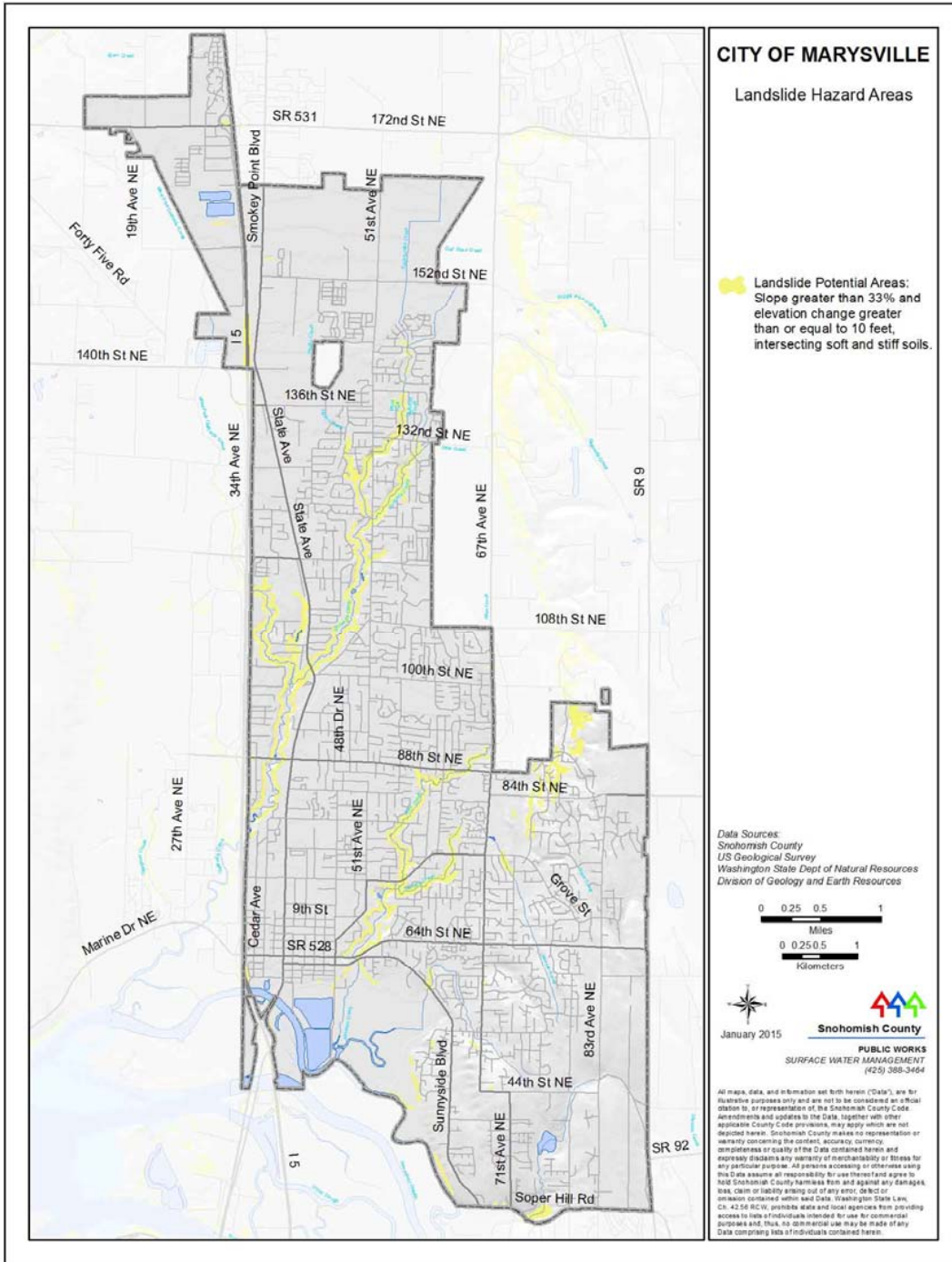
Map 12-8. City of Marysville Flood Hazard Areas



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Map 12-9. City of Marysville Culmback Dam Inundation Areas





Map 12-10. City of Marysville Landslide Hazard Areas

