



CITY OF NOOKSACK

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Planning Process

The City of Nooksack process of reviewing, updating and adopting the 2015 update of the Whatcom County Natural Hazard Mitigation Plan (NHMP or Plan) included review by multiple City departments and formal adoption by the City Council. Review of the prior plan began in the spring of 2014. The City Planner reviewed the previous plan, which addressed the city of Nooksack in combination with the adjacent city of Everson. In October 2014 the City Planner attended a coordination meeting hosted by the County Division of Emergency Management (DEM). Initial guidance was received from DEM and the County’s consultant regarding the update schedule and the main areas to focus on as part of the update. During November and December of 2014 the City Planner prepared draft revisions to the NHMP and met with the Public Works Director and the Mayor to review the draft revisions and receive additional input. City staff also coordinated with the Everson Chief of Police regarding details contained in the Nooksack portion of the Plan because the Everson Police Department provides police protection services to the city of Nooksack on a contract basis.

The final draft revisions to the NHMP addressing the city of Nooksack, incorporating input received from the Public Works Director, Mayor and Chief of Police, were submitted to DEM in late December 2014. In August 2015, the Nooksack City Council reviewed the draft NHMP dated June 1, 2015 and formally adopted the Plan on August 17, 2015 through Resolution No. 294.

Key Contributor List
Rollin Harper, City Planner
Mayor Jim Ackerman
Bob Skillman, Public Works Director
Everson Chief of Police, Dan MacPhee

Meeting Dates and Attendees
November 10, 2014 – Harper, Ackerman and Skillman
December 2, 2014 – Harper and Skillman
December 9, 2014 – Harper and MacPhee

The information contained in the Natural Hazard Mitigation Plan update regarding hazards, risks, vulnerability and potential mitigation is based on the best available science and technology currently available to the city. This information and related data on natural hazards potentially impacting the city of Nooksack will be used as a tool when the City updates other plans and programs, such as the following:



- Comprehensive plan required by the Growth Management Act (GMA);
- Development regulations required by the GMA;
- Critical areas ordinance;
- Capital improvement program;
- Capital facilities planning; and
- Water Resource Inventory Area planning.

As additional information becomes available from other planning sources that could enhance the Plan, that information will be incorporated through the periodic update process.

Presence of Hazards

Hazard	Present? (yes if checked)
Earthquake	√
Flooding	√
Geologic Hazards	√
Severe Storm	√
Tsunami	
Volcano	√
Wild Land Fire	

Hazard Descriptions

Earthquake The city is subject to seismic activity.

Flooding This hazard occurs frequently and can be severe, especially due the presence of isolated areas. Major flooding occurred in 1989, 1990, and 1995. Flooding begins in the west side of the City and moves east and north up Highway 9, toward Sumas. A dike was extended in 1991 with money from mitigation. The dike runs parallel to the Nooksack River on the West side, ending on Emerson Road. It prevents water from going to Washington St. and on through to Main Street. The dike diverts Nooksack River overflow it to the floodway. The Sumas River can flood east of the City, but does not cause severe problems.

Geologic Hazards Seismically-sensitive soils.

Severe Storm Nooksack is subject to severe storms year-round.

Volcano All of the area within the city limits would be affected by a Mount Baker lahar.



City of Nooksack Critical Facility List

Facility Name	Facility Type	Location
Elementary School - Dist. 506	Evacuation Center	Refer to Maps
Nooksack City Hall	Government	103 West Madison St
Nooksack Water Tanks	Utility: Water	8386 Gillies Rd.
Post Office	Mail	605 Nooksack Ave
Pump-Station #1	Utility: Sewer	105 Garfield St.
Pump-Station #2	Utility: Sewer	610 Nooksack Ave.
Pump-Station #3	Utility: Sewer	1216 Nooksack Ave.
Starvin' Sams	Fuel	102 Columbia St.
Pump Station #12	Utility: Sewer	305A West Third St.
Water Booster Pump	Utility: Water	1014 Gillies Rd.
Pacific Pride	Fuel	204 Nooksack Ave.
Whatcom Farmers Co-op Energy	Fuel Propane Depot	508 Madison Ave.
Water Pump Station	Utility: Water	503 E. Madison St.

Geography

Population	1,435 (2014 estimate)
Total area	.66 mi (within city limits)

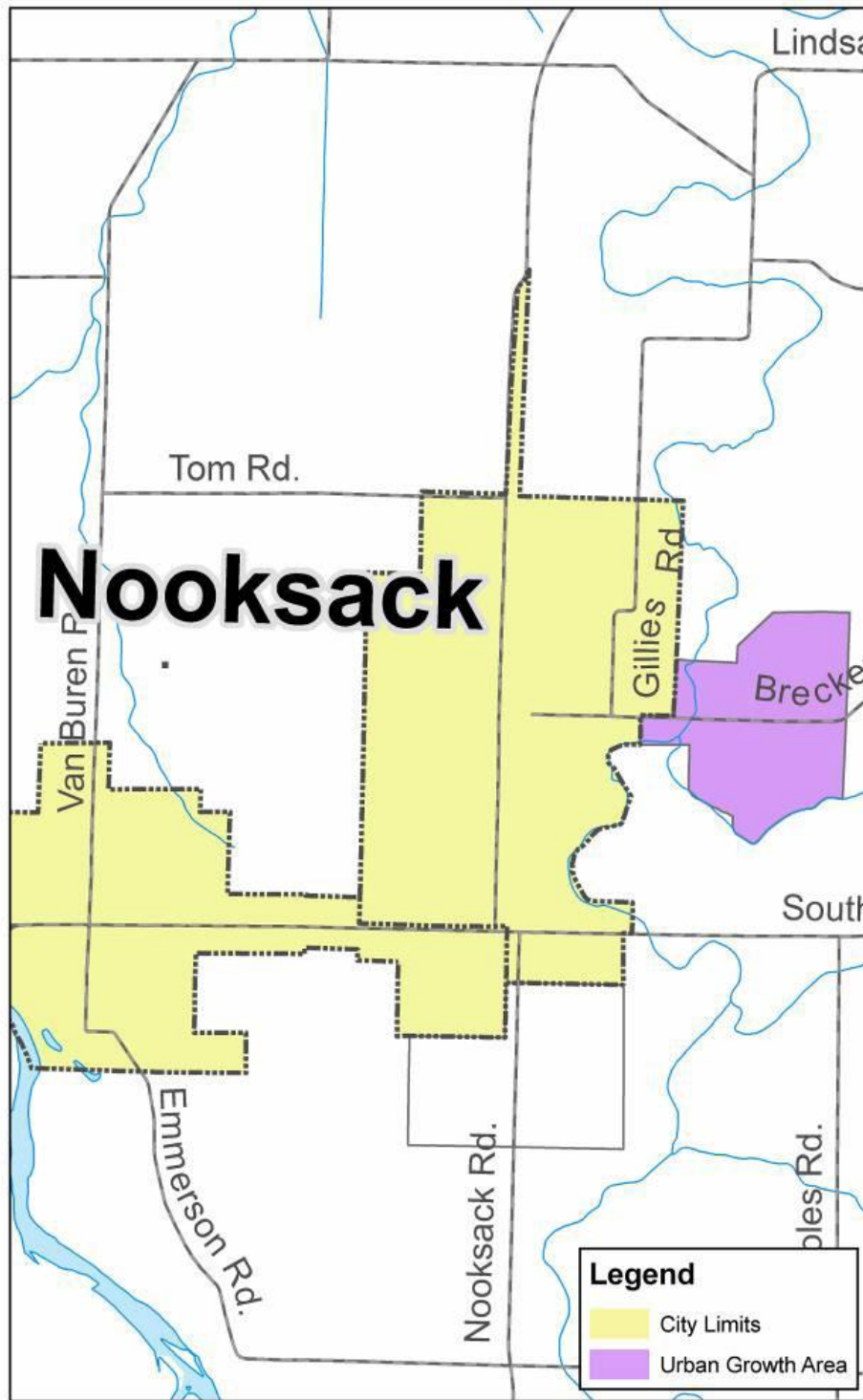
Areas Impacted, Per Hazard Growth Trends

Hazard	# Structures Impacted	Area Affected (mi ²)	Percent of Total Area
Earthquake	366	0.66 mi	100%
Flooding	101	0.32 mi	45.5%
Geologic Hazards	313	0.597 mi	90.5%
Severe Storm	366	0.66 mi	100%
Volcano	366	0.66 mi	100%

This map on the following page displays the UGA for the City of Nooksack, as designated by the Whatcom County Comprehensive Plan. The City experienced an increase in growth and housing in the 1990s, with many new manufactured homes.

Growth Trends

This map displays the UGA for the City of Nooksack, as designated by the Whatcom County Comprehensive Plan. The City experienced an increase in growth and housing in the 1990s, with many new manufactured homes.





Critical Facility Rankings for the City of Nooksack

Facility Name	Facility Type	FL	EQ	GH	SS	TSUN	VOL	WF	Total Hazards	Rank Assessment
Nooksack City Hall	Government		✓	✓	✓		✓		4	1
Nooksack Water Tanks	Utility: Water		✓	✓	✓		✓	✓	5	1
Pump Station #12	Utility: Sewer	✓	✓	✓	✓		✓		5	1
Water Booster Pump	Utility: Water		✓	✓	✓		✓		4	1
Water Pump Station	Utility: Water	✓	✓	✓	✓		✓		5	1
Pump-Station #1	Utility: Sewer		✓	✓	✓		✓		4	2
Pump-Station #2	Utility: Sewer		✓	✓	✓		✓		4	2
Pump-Station #3	Utility: Sewer		✓	✓	✓		✓		4	2
Whatcom Farmers Co-op Energy Fuel	Propane Depot		✓	✓	✓		✓		4	2
Starvin Sams	Fuel		✓		✓		✓		3	3
Pacific Pride	Fuel		✓	✓	✓		✓		4	3
Elementary School - Dist. 506	Evacuation Center	✓	✓		✓		✓		4	4
Post Office	Mail		✓	✓	✓		✓		4	5

Notes: FL = Flooding; EQ = Earthquake; GH = Geologic Hazard; SS = Severe Storm; TSUN = Tsunami; VOL = Volcano; WF = Wildland Fire (The methodology used for ranking the critical facilities is described in the “Jurisdiction Overview” section)



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CITY OF EVERSON - NOOKSACK'S MITIGATION STRATEGIES AND PROJECTS 2010-2014

The cities of Everson and Nooksack chose to collaborate in their mitigation strategies because Everson provides Nooksack with police and sewer services. (Note: The following information is copied from Everson.)

General Hazard Mitigation Strategies

These provide guidance on the overall hazard mitigation goals for future planning within the Cities of Everson and Nooksack.

Provide for an increased level of safety to the citizens of Everson-Nooksack.

Responsible Entity:	Everson and Nooksack City Council
Funding Source:	Local sources, and state and federal grants
Timeline:	Current and ongoing
2010-2014 Status	On-Going/Unchanged—Perpetual or Annual

Provide for an increased level of protection for public infrastructure.

Responsible Entity:	Everson and Nooksack City Council
Funding Source:	Local sources, and state and federal grants
Timeline:	Current and ongoing
2010-2014 Status	On-Going/Unchanged—Perpetual or Annual

Work with neighboring jurisdictions to add additional flow capacity to the Nooksack River to minimize catastrophic flooding loss.

Responsible Entity:	Everson and Nooksack City Council
Funding Source:	Local sources, and state and federal grants
Timeline:	Current and ongoing
2010-2014 Status	On-Going/Unchanged—Perpetual or Annual

Potential Hazard Mitigation Projects

These mitigation projects provide guidance on suggesting specific activities that agencies, organizations, and residents in the Cities of Everson and Nooksack can undertake to reduce risk and prevent loss from the at-risk hazards. Each action item is followed by the suggested responsible entity and timeline, which can be used by local decision makers in pursuing strategies for implementation.

Following the potential projects is a description of the Cities' prioritization for implementation.



Flooding

Wastewater Treatment Plant - Construct a ring dike, flood wall or otherwise mitigate the wastewater treatment plant against a 100-year flood event or volcanic lahars.

Responsible Entity:	Everson Public Works Department
Funding Source:	Sewer funds, other local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Everson and Nooksack City Halls, Everson Police Department in emergencies - The Everson City Hall, Police Department and Whatcom County Fire District 1's station are located in the 100-year floodplain. These should be mitigated in place or moved out of the floodplain.

Responsible Entity:	Everson and Nooksack City Councils Whatcom County Public Works Department, Whatcom County Fire District 1 Commissioners
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured) or sooner if grant funding allows.
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Riverside Park - Riverside Park is located at the west city limits, and adjacent to the Nooksack River and Everson Wastewater Treatment Plant. When flooded, this site is littered with debris from the floodwaters. This site should be mitigated in place or materials removed and disposed of properly.

Responsible Entity:	Everson Public Works Department
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Purchase Repetitive Loss Properties in the Floodplain - There are several properties in the floodplain that have been repeatedly damaged by past flood events. Most of these repetitive loss properties were in Whatcom County's jurisdiction and were purchased by the County.

Responsible Entity:	Whatcom County, Everson City Council
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Earthquake

Everson and Nooksack City Halls -Both Everson and Nooksack City Halls and Whatcom County Fire District 1's station would suffer significant damage in the event of an earthquake. These facilities should be retrofitted, replaced, or relocated so that they can survive a 6.0 magnitude or greater earthquake event.



Responsible Entity:	Everson and Nooksack City Councils, Whatcom County Building Department, Whatcom County Fire District 1 Commissioners
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Volcano

Lahar Early Warning System - The USGS has designed a number of systems that automatically detect lahars as they descend neighboring valleys. These systems then automatically trigger various types of early warning systems, such as sirens or telephone-based warning systems.

Responsible Entity:	Whatcom County Fire District 1, Everson Police Department, Whatcom County Department of Emergency Management, Whatcom County Public Works
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Completed and Deferred—Funding Availability (<i>reverse 911 telephone-based warning system has been secured, but there are no triggered warning systems or sirens installed around Mt. Baker.</i>)

Communications

Community Early Warning System - The City of Everson has an outdated civil defense siren that has not been in service or activated in several years. A new audible warning system located in Everson downtown, Strandell neighborhood, and also the City of Nooksack needs to be constructed. Such an early warning system would typically be a series of sirens that could be triggered in the event the Cities needed to be evacuated, or emergency information disseminated.

Responsible Entity:	Whatcom County Fire District 1, Everson Police Department, Everson/Nooksack Public Works
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Telephone-Based Early Warning System - A computerized early warning system that automatically dials each landline telephone number within a specified area, and plays a recorded message when the phone is answered is currently provided to the City by the Whatcom County Sheriff’s Office, Division of Emergency Management. A larger capacity system that can also contact cell phones through the use of a federally licensed COG would help address a variety of natural and manmade problems. Currently there is no funding available to fund the cell phone option.

Responsible Entity:	Everson Police Department, Whatcom County Department of
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	Emergency Management Funding Source: Local sources, and state and federal grants
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	<u>Completed</u> A computerized early warning system that automatically dials each landline telephone number within a specified area, and play a recorded message when the phone is answered is currently provided to the City by the Whatcom County Sheriff's Office Division of Emergency Management. A larger capacity system that can also contact cell phones through the use of a federally licensed COG would help to address a variety of natural and manmade problems. Currently there is no funding available to pay for the cell phone option.

Tone Radio Based Early Warning System -Tone Radios turn on when triggered by a central transmitter and then information or instructions are announced over the radio. Such a system is currently used for various types of weather radios, for tornados and severe storms hazard areas. A similar system could be put into place for warning of flooding, lahars, and other related natural hazards.

Responsible Entity:	Whatcom County Department of Emergency Management, NOAA Radio
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective

Earthquake Early Warning System -Such a system could warn residence of an impending earthquake. Technology doesn't currently exist for such a system, but will likely be possible in the future.

Responsible Entity:	Federal, State, County, and local entities
Funding Source:	Local sources, and state and federal grants
Timeline:	Long term (greater than 3 years after funding is secured)
2010-2014 Status	Deferred—Funding Availability; Not as Effective



**CITY OF NOOKSACK HAZARD MITIGATION STRATEGIES AND PROJECTS
2015-2020**

Please refer to the mitigation strategies and priorities outlined for the City of Everson’s section for Nooksack’s strategies. The cities of Everson and Nooksack chose to collaborate in their mitigation strategies because Everson provides Nooksack with police and sewer services. (Note: The following information is copied from Everson.)

Mitigation Measures And Action Items

1	Lead Agency	May be more than one lead agency indicating shared responsibility and coordination
2	Priority:	H (High); M (Medium); L (Low)
3	Timeline:	Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing
4	Funding Source:	Local; State; FEMA; Private; Other
5	Estimated Cost:	Actual; Estimated

Project Prioritization

In the past, both Everson and Nooksack have had community warning equipment (sirens) and plans in place. The citizens relied on this system to protect them from harm. The system no longer exists. The community's first priority is to re-establish a system of warning and start a new public information campaign to reacquaint the citizens with a warning system again. Sirens would be placed in strategic locations in both cities. This is considered the most important hazard mitigation strategy for these two cities and will take priority over any other. The Wastewater Treatment Plant has caused some concern in the past in a flood event. It is seen as important for public health to protect this facility and the effluent from it. A ring dike/floodwall around the Plant is the second priority for Everson/Nooksack. Any monies that would come to Everson and Nooksack would first be spent on studies to determine the best possible application. Both Cities are unsure of the direction they need to go with regards to Hazard Mitigation funds, but consider flooding/ volcanic eruption to be a major threats.

Cost Evaluation Projects for Jurisdictions

Priority	Facility	Jurisdiction	Nature	Brief Description



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MITIGATION MEASURES AND ACTION ITEMS 2015 – 2020

(Copied from Everson)

CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
GENERAL: ALL HAZARDS Education and Awareness Actions	These are actions that inform and educate citizens, elected officials, and property owners about hazards and ways to mitigate them.					
	Emergency preparedness education programs for schools.	Whatcom County Division of Emergency Management (DEM)	H	Annual	Annual budget / Member dues	Included in annual budget
	Drills, exercises in homes, workplaces, classrooms, etc.	DEM	H	Annual	Annual budget / Member dues	Included in annual budget
	Hazard awareness weeks.	DEM	H	Annual	Annual budget / Member dues	Included in annual budget
	Preparedness handbooks, brochures.	DEM	H	Annual	Annual budget / Member dues	Included in annual budget
	Newsletters, City Website and utility billing inserts	City Planning Dept. and City Public Works Dept.	H	Quarterly	City General Fund	Included in annual

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020							
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost	
Hazard	Action Items						
						budget	
Hazard Specific (Reference: Whatcom County Mitigation Ideas)	Actions communities should consider to identify and evaluate a range of potential mitigation actions for reducing risk to natural hazards and disasters.						
Dam/Levee Failures (See: Flooding)							
Droughts/Heat Waves	D-1	Assess Vulnerability to Drought Risk	City Planning Dept.	L	Once every few years	City Water Fund	Included in annual budget
	D-2	Monitor Drought Conditions	City Public Works Dept.	M	Ongoing	City Water Fund	Included in annual budget
	D-3	Monitor Water Supply	City Public Works Dept.	H	Ongoing	City Water Fund	Included in annual budget
	D-4	Plan for Drought	City Planning Dept.	L	Once every five years	City Water Fund	Included in annual budget
	D-5	Require Water Conservation During Drought Conditions	City Public Works Dept.	H	Ongoing	City Water Fund	Included in annual budget
	D-9	Educate Residents on Water Saving	City Administration	M	Annual	City Water	Included in

Priority:
H (High); M (Medium); L (Low)

Timeline:
Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing

Funding Source:
Local; State; FEMA; Private; Other

Estimated Cost:
Actual; Estimated



CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
	Techniques				Fund	annual budget
Earthquakes	EQ-1 Adopt and Enforce Building Codes	City Building Dept.	H	Ongoing	City General Fund	Included in annual budget
	EQ-2 Incorporate Earthquake Mitigation into Local Planning	City Planning Dept.	L	Every five years	City General Fund	Included in annual budget
	EQ-3 Map and Assess Community Vulnerability to Seismic Hazards	City Planning Dept.	L	Every five years	City General Fund	Included in annual budget
	EQ-4 Conduct Inspections of Building Safety	City Building Dept.	H	Ongoing	City General Fund	Included in annual budget
	EQ-5 Protect Critical Facilities and Infrastructure	City Building, Planning and Public Works Depts.	H	Ongoing	City General Fund	Included in annual budget
Flooding	F-1 Incorporate Flood Mitigation in Local Planning	City Planning Dept.	H	Annual	City General Fund	Included in annual budget
	F-2 Form Partnerships to Support Floodplain Management	City Planning and Public Works Depts.	H	Ongoing	City General Fund	Included in annual budget

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
	F-3 Limit or Restrict Development in Floodplain Areas	City Building and Public Works Depts.	H	Ongoing	City General Fund	Included in annual budget
	F-4 Adopt and Enforce Building Codes and Development Standards	City Building and Public Works Depts.	H	Ongoing	City General Fund	Included in annual budget
	F-5 Improve Stormwater Management Planning	City Planning Dept.	M	Annual	City General Fund	Included in annual budget
	F-7 Improve Flood Risk Assessment	City Public Works Dept.	M	Annual	City General Fund	Included in annual budget
	F-8 Join or Improve Compliance with NFIP	City Building and Planning Depts.	H	Ongoing	City General Fund	Included in annual budget
	F-9 Manage the Floodplain Beyond Minimum Requirements	City Planning Dept.	M	Ongoing	City General Fund	Included in annual budget
	F-11 Establish Local Funding Mechanisms for Flood Mitigation	County Flood Control Zone District	H	Annual	County Flood Fund	Included in annual budget
	F-13 Improve Stormwater Drainage System Capacity	City Public Works Dept.	H	Annual	City Street Fund	Included in annual

Priority:
H (High); M (Medium); L (Low)

Timeline:
Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing

Funding Source:
Local; State; FEMA; Private; Other

Estimated Cost:
Actual; Estimated



CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
						budget
	F-14 Conduct Regular Maintenance for Drainage Systems and Flood Control Structures	City Public Works Dept.	H	Ongoing	City Street Fund	Included in annual budget
	F-21 Preserve Floodplains as Open Space	City Planning Dept.	M	Bi-annual	City General Fund	Included in annual budget
Land Subsidence	SU-1 Map and Assess Vulnerability to Subsidence	City Planning Dept.	L	Every five years	City General Fund	Included in annual budget
	SU-2 Manage Development in High-Risk Areas	City Building Dept.	H	Ongoing	City General Fund	Included in annual budget
Winter Storms/ Freezes (Severe Winter Weather)	WW-1 Adopt and Enforce Building Codes	City Building Dept.	H	Ongoing	City General Fund	Included in annual budget
	WW-2 Protect Buildings and Infrastructure	City Public Works Dept.	H	Ongoing	City General, Water and Sewer	Included in annual budget
	WW-3 Protect Power Lines	City Public Works Dept.	M	Ongoing	City General Fund	Included in annual budget

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
	WW-4 Reduce Impacts to Roadways	City Public Works Dept.	M	Ongoing	City Street Fund	Included in annual budget
Severe Wind	SW-1 Adopt and Enforce Building Codes	City Building Dept.	H	Ongoing	City General Fund	Included in annual budget
	SW-4 Protect Power Lines and Infrastructure	City Public Works Dept.	H	Ongoing	City General Fund	Included in annual budget
	SW-6 Retrofit Public Buildings and Critical Facilities	City Public Works Dept.	M	Variable	City General Fund	Included in annual budget
Multiple Hazards	MU-1 Assess Community Risk	City Planning and Public Works Depts.	L	Annual	City General Fund	Included in annual budget
	MU-2 Map Community Risk	City Planning Dept.	L	Every five years	City General Fund	Included in annual budget
	MU-3 Prevent Development in Hazard Areas	City Building and Planning Depts.	H	Ongoing	City General Fund	Included in annual budget
	MU-4 Adopt Development Regulations in Hazard Areas	City Building and Planning Depts.	H	Annual	City General Fund	Included in annual

Priority:
H (High); M (Medium); L (Low)

Timeline:
Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing

Funding Source:
Local; State; FEMA; Private; Other

Estimated Cost:
Actual; Estimated



CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
						budget
	MU-5 Limit Density in Hazard Areas	City Planning Dept.	M	Ongoing	City General Fund	Included in annual budget
	MU-6 Integrate Mitigation into Local Planning	City Planning Dept.	M	Ongoing	City General Fund	Included in annual budget
	MU-7 Strengthen Land Use Regulations	City Planning Dept.	L	Annual	City General Fund	Included in annual budget
	MU-8 Adopt and Enforce Building Codes	City Building Dept.	H	Ongoing	City General Fund	Included in annual budget
	MU-11 Monitor Mitigation Plan Implementation	City Planning and Public Works Depts.	M	Ongoing	City General Fund	Included in annual budget
	MU-12 Protect Structures	City Building and Public Works Depts.	H	Ongoing	City General Fund	Included in annual budget
	MU-13 Protect Infrastructure and Critical Facilities	City Public Works Dept.	H	Ongoing	City General, Water and Sewer Funds	Included in annual budget

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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CITY OF NOOKSACK HAZARD-SPECIFIC ACTION ITEMS 2015-2020						
MITIGATION MEASURES		Lead Responsibility for Carrying out Measure	Priority	Timeline	Funding Source	Estimated Cost
Hazard	Action Items					
	MU-14 Increase Hazard Education and Risk Awareness	City Public Works Dept.	H	Annual	City General Fund	Included in annual budget
Advanced Mitigation Projects (Dream List)	Natural Hazard Early Warning Systems					
	Tone Radio Based Early Warning System					
	Natural Hazard Early Warning Systems					
	Purchase Repetitive Loss Properties					
	Mitigate against 100-year flood event or volcanic lahar					

Priority: H (High); M (Medium); L (Low)	Timeline: Short-Range (less than 2 years); Mid-Range (2-5 years); Long-Range (more than 5 years); Ongoing	Funding Source: Local; State; FEMA; Private; Other	Estimated Cost: Actual; Estimated
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HAZARD SPECIFIC ACTION ITEMS 2015–2020 ANNUAL REVIEW AND PROGRESS

(Copied from Everson)

Progress monitoring means tracking the implementation of the hazard specific action items over time. Each jurisdiction must identify how, when, and by whom action items will be monitored. The responsible agency assigned to each mitigation action is responsible for tracking and reporting on each of their actions. Appendix G includes an example worksheet for reporting progress on a mitigation action.

Annual review and progress reporting includes the following:

- Step One:** Identify mitigation actions that your planning team has identified for the annual review. The planning team has the option to address ALL action items, or only those that should be acted on during each review cycle.
- Step Two:** Use the table below to track annual progress. For each action item selected for annual review insert the appropriate letter that indicates the status of that action item.
- Step Three:** Complete a progress report form as illustrated in Appendix G for each mitigation action item selected for annual review
- Step Four:** Submit the completed form(s) to the Whatcom County DEM.

City of Nooksack Hazard-Specific Action Items 2015-2020 – Annual Review and Progress	
Action Items	Status <i>(Choose One & Enter Letter):</i> A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled
GENERAL: ALL HAZARDS	
Emergency preparedness education programs for schools.	
Drills, exercises in homes, workplaces, classrooms, etc.	
Hazard awareness weeks.	
Preparedness handbooks, brochures.	
Newsletters, City Website and utility billing inserts	
<i>Add New Action Items if Applicable</i>	
DROUGHT/HEAT WAVES	
D-1 Assess Vulnerability to Drought Risk	
D-2 Monitor Drought Conditions	
D-4 Plan for Drought	
D-5 Require Water Conservation During Drought Conditions	
D-9 Educate Residents on Water Saving Techniques	
EARTHQUAKES	
EQ-1 Adopt and Enforce Building Codes	



City of Nooksack Hazard-Specific Action Items 2015-2020 – Annual Review and Progress	
Action Items	Status (Choose One & Enter Letter): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled
EQ-2 Incorporate Earthquake Mitigation into Local Planning	
EQ-3 Map and Assess Community Vulnerability to Seismic Hazards	
EQ-4 Conduct Inspections of Building Safety	
EQ-5 Protect Critical Facilities and Infrastructure	
<i>Add New Action Items if Applicable</i>	
FLOODING	
F-1 Incorporate Flood Mitigation in Local Planning	
F-2 Form Partnerships to Support Floodplain Management	
F-3 Limit or Restrict Development in Floodplain Areas	
F-4 Adopt and Enforce Building Codes and Development Standards	
F-5 Improve Stormwater Management Planning	
F-7 Improve Flood Risk Assessment	
F-8 Join or Improve Compliance with NFIP	
F-9 Manage the Floodplain Beyond Minimum Requirements	
F-11 Establish Local Funding Mechanisms for Flood Mitigation	
F-13 Improve Stormwater Drainage System Capacity	
F-14 Conduct Regular Maintenance for Drainage Systems and Flood Control Structures	
F-21 Preserve Floodplains as Open Space	
<i>Add New Action Items if Applicable</i>	
LAND SUBSIDENCE	
SU-1 Map and Assess Vulnerability to Subsidence	
SU-2 Manage Development in High-Risk Areas	
<i>Add New Action Items if Applicable</i>	
WINTERSTORMS/FREEZES	
WW-1 Adopt and Enforce Building Codes	
WW-2 Protect Buildings and Infrastructure	
WW-3 Protect Power Lines	
WW-4 Reduce Impacts to Roadways	
<i>Add New Action Items if Applicable</i>	
SEVERE WIND	
SW-1 Adopt and Enforce Building Codes	
SW-4 Protect Power Lines and Infrastructure	
SW-6 Retrofit Public Buildings and Critical Facilities	



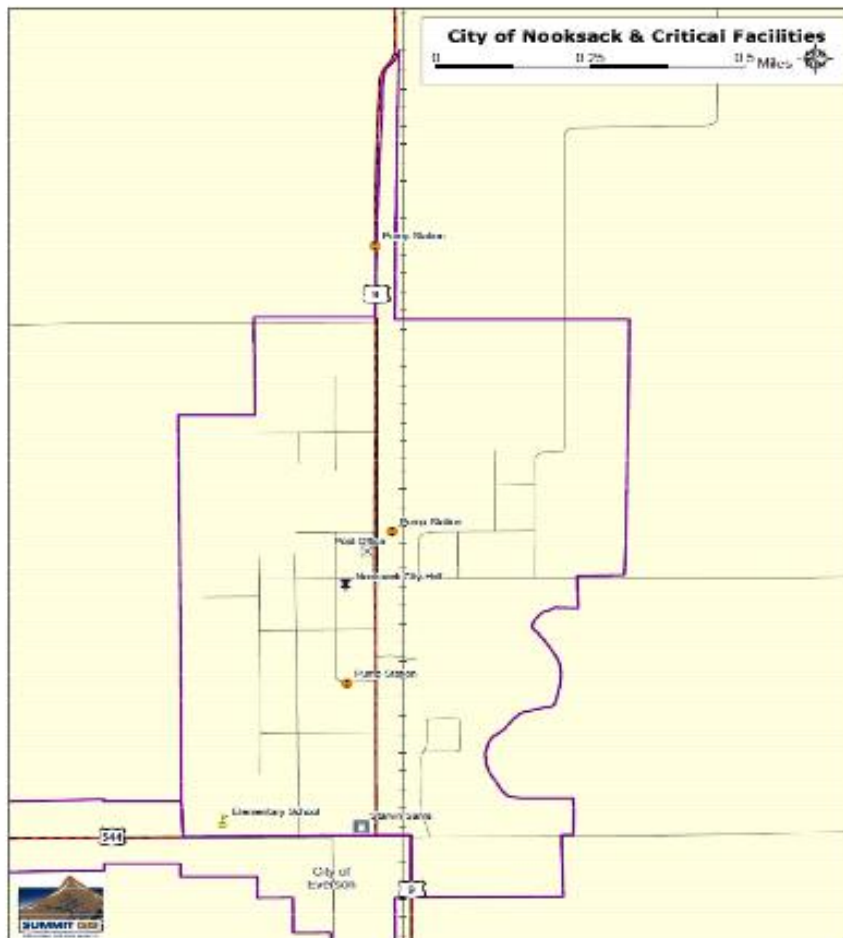
City of Nooksack Hazard-Specific Action Items 2015-2020 – Annual Review and Progress	
Action Items	Status (Choose One & <i>Enter Letter</i>): A. Completed; B. In Progress (on schedule); C. In Progress (delayed); D. Delayed Until Funding Available; E. Canceled
MULTIPLE HAZARDS	
MU-1 Assess Community Risk	
MU-2 Map Community Risk	
MU-3 Prevent Development in Hazard Areas	
MU-4 Adopt Development Regulations in Hazard Areas	
MU-5 Limit Density in Hazard Areas	
MU-6 Integrate Mitigation into Local Planning	
MU-7 Strengthen Land Use Regulations	
MU-8 Adopt and Enforce Building Codes	
MU-11 Monitor Mitigation Plan Implementation	
MU-12 Protect Structures	
MU-13 Protect Infrastructure and Critical Facilities	
MU-14 Increase Hazard Education and Risk Awareness	
<i>Add New Action Items if Applicable</i>	

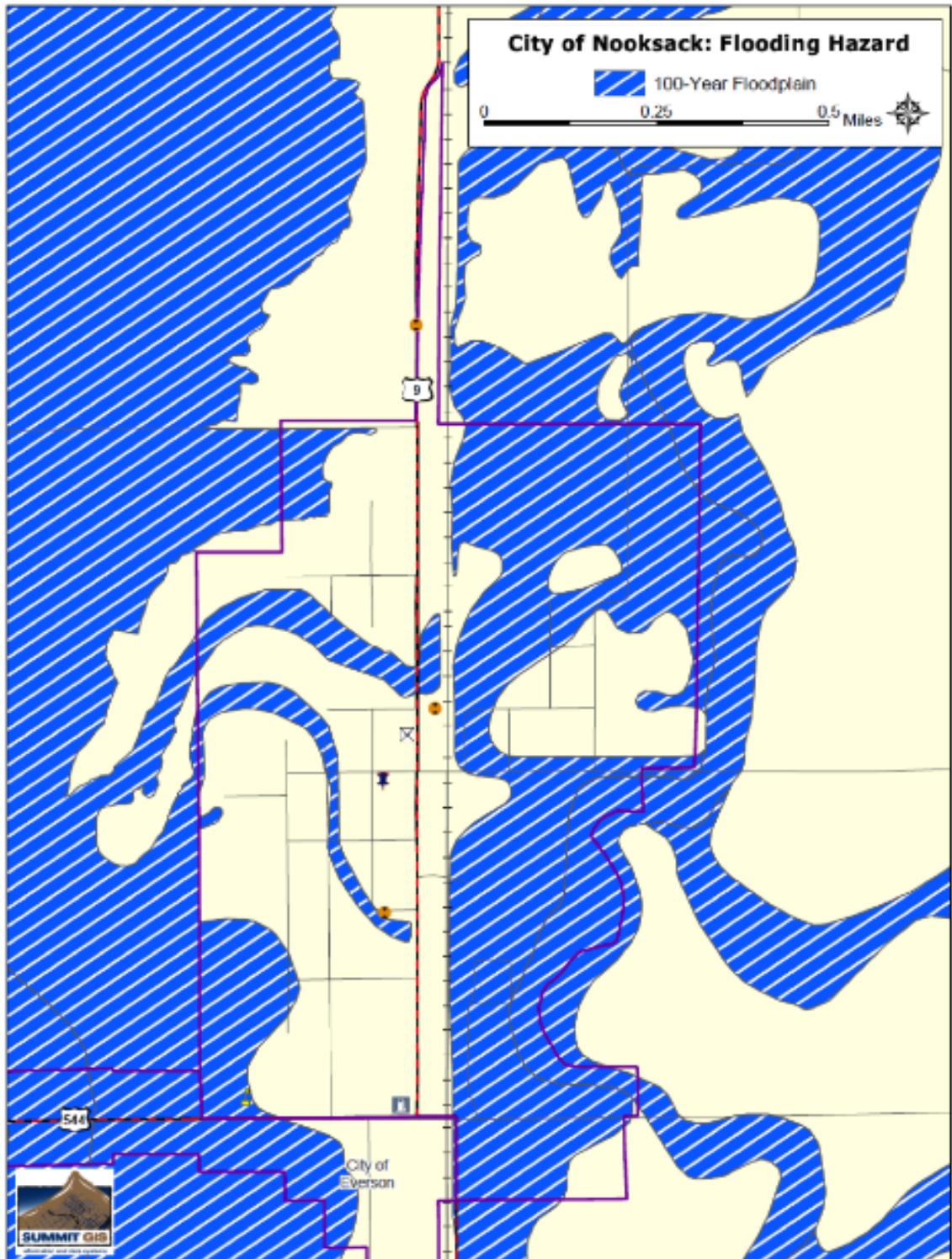


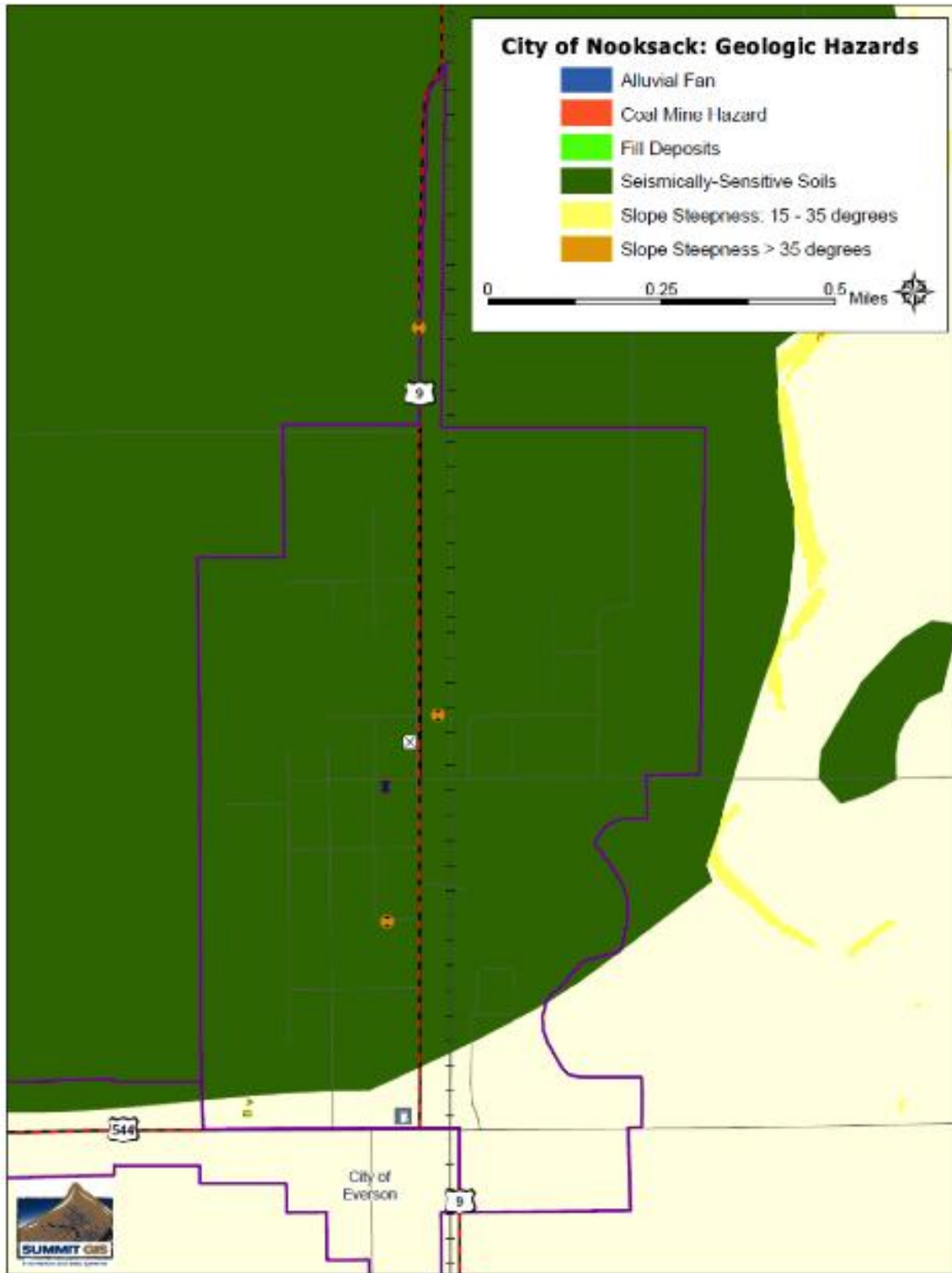
Natural Hazard Maps

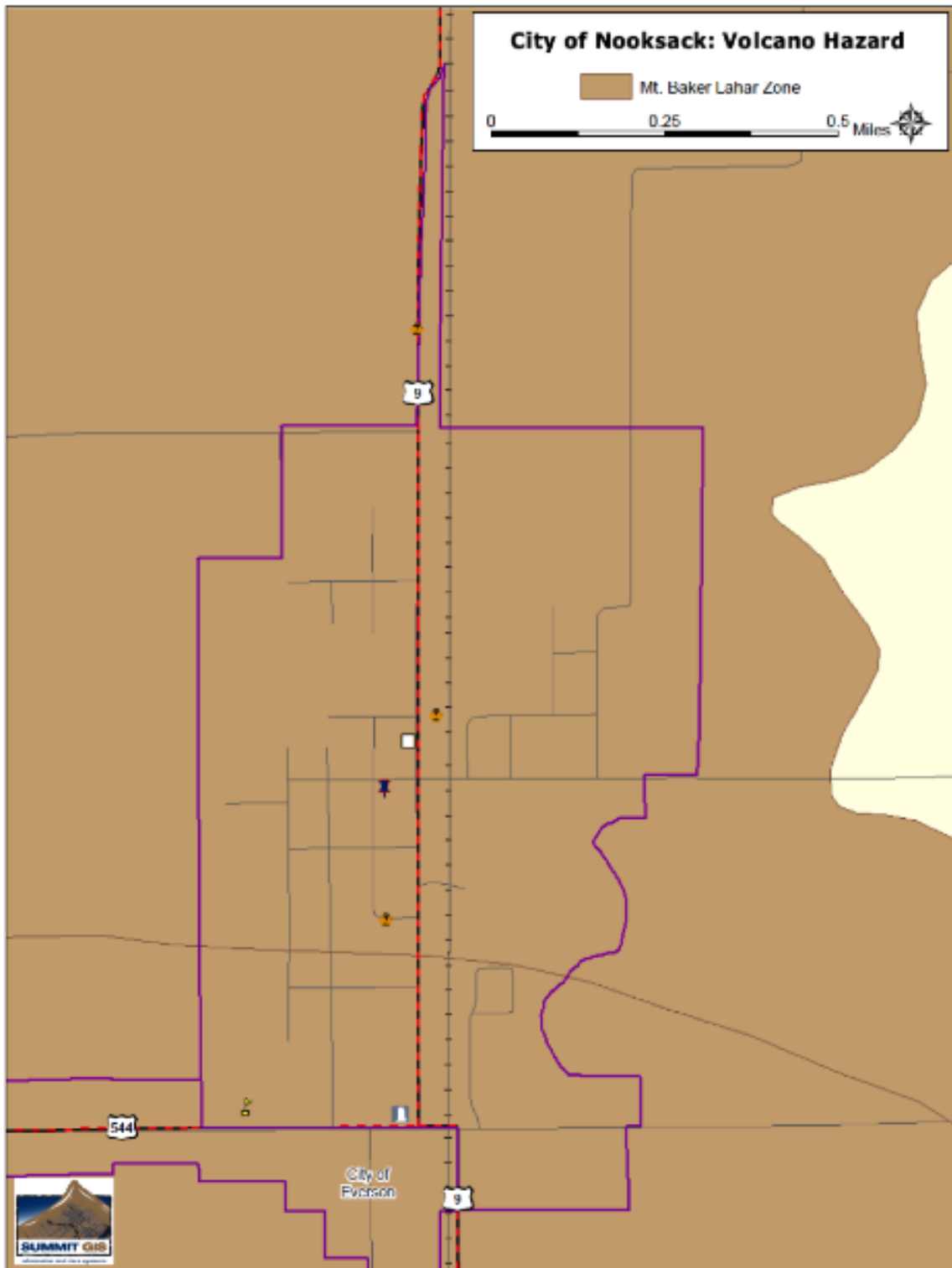
The following figures depict the natural hazards present within the jurisdiction and show the approximate location of each critical facility relative to each hazard. It is assumed that the figures used in this version of the Plan contain the most recent hazard information and any updates will be reflected in the figures provided by the participating jurisdiction or in the following text:

- Since the 2011 Plan, the City of Nooksack has revised the list of critical facilities. The revised list of facilities can be found in the table at the beginning of this section and has not been updated in the following figures.











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