

# 2020 City of Snoqualmie Hazard Mitigation Plan Jurisdictional Annex

## Introduction

The City of Snoqualmie is a picturesque community in eastern King County, Washington. Located just thirty miles from Seattle, this new and young community boasts affluence, a strong sense of community and history, and picturesque views of the cascade mountain range.

Over the past two decades, due to the annexation and development of two large master planned developments (Snoqualmie Ridge and Snoqualmie Ridge II), the City of Snoqualmie was one of the fastest growing cities in Washington according to the Office of Financial Management. Census estimates from April 1, 2013, estimated the total population to be 11,700, reflecting rapid growth from the development of the Snoqualmie Ridge area. This population increased to an estimated 13,670 in 2019 with build out nearing for Snoqualmie Ridge II.

The City's adopted Comprehensive Plan divides the City into the following planning subareas:

Historic Snoqualmie	Snoqualmie Falls
Meadowbrook	Snoqualmie Hills
Snoqualmie Ridge	Mill
Snoqualmie Ridge II	Rattlesnake Ridge

The 5,628-acre planning area includes 4,750 acres of incorporated land and 878 acres making up the city's remaining urban growth area outside the city limits. In the City's early days, residential development was compact and close to retail services, allowing easy access for pedestrians. The newer planning areas, such as Snoqualmie Ridge, have been designed to offer a similar compact, pedestrian-friendly development pattern, with modified grid streets and mixed land-use. Many of the residential neighborhoods mimic the historical city pattern, with smaller lots. The business park represents a large-scale contemporary commercial development designed to promote residents to live and work in close proximity.

Snoqualmie is located at an elevation of 410 feet (120 meters) above Mean Sea Level with a maritime temperate climate featuring dry summers and mild, wet winters. High winds are common in winter when major storms occur. Average daily temperatures since 1931 are as follows:

- Winter minimum average daily temperatures range from 32.6°F to 36.7°F
- Winter maximum average daily temperatures range from 44.7°F to 50.6°F
- Summer minimum average daily temperatures range from 46.4°F to 50.6°F
- Summer maximum average daily temperatures range from 69.5°F to 75.4°F.

Approximately two-thirds of annual precipitation occurs between mid-October and late February. Peaks occur in December, May and June. Annual precipitation since 1931 is 61.25 inches, including 11.5 inches of snowfall between November and April. Snowfall occurs most years, but snow normally remains on the

### City of Snoqualmie Profile

**Incorporated:** 1903

**Population:** 13,670

**Area:** 7.42 sq. mi.

**Government:** Council / Mayor

**Mayor:** Matthew R. Larson

**Assessed Value:** \$3 Billion





ground for a short time. Accumulations of snow are usually light, with occasional exceptions like a heavy winter 2018/2019 event involving several feet of snow requiring approximately a week of clearing activity.

The City of Snoqualmie is a non-charter code city operating under Revised Code of Washington (RCW) 35A, employing a mayor-council form of government. Seven council members act as policy makers, providing the mayor—the City's separately elected chief executive officer—with guidelines and performance objectives. The city administrator and city staff turn these goals into programs and services. All council members are elected citywide.

## Development Trends

The City of Snoqualmie had been rapidly growing since the Snoqualmie Ridge developments (SR and SR II) were approved, but these two master planned areas are essentially near build-out. The previously vacant commercial lots in the Snoqualmie Ridge Business Park are currently being developed with construction projects anticipated to be completed over the winter of '20/21. The remaining residential lot in SR II, Parcel S-22, is under review for construction and the one remaining commercial lot, S-21B near the Snoqualmie Valley Hospital, remains undeveloped. Two additional parcels in SR II remain undeveloped but are essentially land banked for a future church and a school.

In 2019, the City approved a separate master planned 50-acre area of the community known as the Salish Expansion for development of a 182-room luxury hotel, spa and fitness center, conference center and an additional residential unit to align with development standards and match the character of the existing Salish Spa and Hotel. In late 2019, just after City approval of a Master Plan, the Snoqualmie Indian Tribe purchased this undeveloped property and canceled the existing development agreement between the Muckleshoot Indian Tribe and the City. No development of this property is now anticipated.

One of the remaining developable areas located within the City limits encompasses the former Snoqualmie Mill Site. This 593-acre brownfield area was annexed into the City in 2012. This area may have approximately 350-acres of open space and the remaining 200-acres potentially re-developed as planned/commercial industry land. In 2017, the developer presented its master plan application to develop the area with tourism, retail, office, warehouse, and light industrial uses. The three-phase plan would include viniculture and spirit-distilleries. In late 2020, the area is in the environmental impact review process for the proposed master plan redevelopment.

### Jurisdiction Point of Contact:

Name: Mark Correia  
 Title: Emer. Management Director  
 Entity: City of Snoqualmie  
 Phone: 425-888-1551  
 Email: mcorreia@snoqualmiewa.gov

### Plan Prepared By:

Name: Gwyn Berry  
 Title: Planning Technician  
 Entity: City of Snoqualmie  
 Phone: 425-888-5337  
 Email: gberry@snoqualmiewa.gov

The remaining area of future anticipated growth for the City is in its urban growth area (UGA). This area is still under the jurisdiction of unincorporated King County, but is anticipated to be annexed to the City at some point in the future. In 2018, a developer approached the City to discuss incorporation to the City with a Letter of Intent for the Snoqualmie Hills West portion of the UGA. This proposed development was not accepted to go forward by the City Council. These developments above have increased the number of residents and tourists to the region. However, because each of these developments are developed under contemporary building and development codes, the hazard risk and vulnerability entailed has decreased. Additionally, along with these developments came additional staff and equipment that allows the City to respond to and mitigate disasters in a more robust and expedient way.

## Jurisdiction Risk Summary

### Hazard Risk and Vulnerability Summary

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<b>Avalanche</b>	The City has no identified avalanche threat.		
<b>Earthquake</b>	Earthquakes are generally short in duration but can cause widespread destruction. The Puget Sound region is susceptible to earthquake threats. The City of Seattle, the largest City in the Region has identified earthquakes as the most serious hazard facing the City.	The City of Snoqualmie is located 30 miles east of Seattle. The region and City are at risk to a Cascadia subduction earthquake and or the Seattle fault earthquake. Located in or around the City, the Rattlesnake Faultline, South Whidbey Faultline and Tokul Creek Fault line create risks for the region.	Impact and damages would be dependent on the severity of the earthquake. Damages would range from little impact with a few injuries, to widespread damages, liquefaction of the downtown area, and multiple fatalities and injuries.
<b>Flood</b>	22% of the total land area of the city is within the Special Flood Hazard Area (floodway/floodplain). The city has stringent floodplain management regulations and limits development in the floodway. However, there are numerous structures already present in the floodplain.	Historic Downtown Snoqualmie is in the floodway/floodplain. Approximately 400 residences lie in the Special Flood Hazard Area, including repetitive-loss properties along the Snoqualmie River. Tributaries of the Snoqualmie River, including Kimball Creek, contribute to flood risk.	In 2006, historic flooding damaged several residential structures, including historic structures. As climate change and development has changed the floodplain, more structures are thought to be at risk to a similar event today. Other historic flooding events occurred in 2009 and 1990.
<b>Landslide</b>	Being in the foothills of the Cascade Range, and in a river valley, the City is susceptible to landslide risk. These slides could begin either within the City limits or be affected by slides beginning in the County area around the City.	According to the Landslide threat map, areas surrounding the northern portions of Snoqualmie Ridge (mostly outside the City limit) are at potential risk.	In 2017, the City experienced a small landslide in an undeveloped area of the community. This slide did unearth a sanitary sewer line north of a portion of the golf course on Snoqualmie Ridge. No other large slides have been reported in recent history.
<b>Severe Weather</b>	The upper Snoqualmie Valley is susceptible to significant severe weather. Most frequent	October and November are the months when the risk of windstorm is most frequent. These incidents topple trees,	High wind events are frequent in the fall and early winter months. On January 1, 2019 the

	<p>weather events include wind storms and significant rain events. The region is also somewhat at risk to tornados.</p>	<p>knock out power, and put residents and visitors at risk.</p>	<p>region was hit by a major windstorm that left 100 residents without power. The two neighboring cities had 1/3<sup>rd</sup> of their communities without power.</p>
<b>Severe Winter Weather</b>	<p>Severe winter weather continues to be a threat to the community. Large rain events hit the community each year. Snow events hit the region on an occasional basis. The foothills of the Cascade Range are a rugged area and these storms can be unpredictable.</p>	<p>The City averages 54 inches of rain (US Average is 38 in.), and 6 inches of snow (US average is 28 in) each year. November through January are the wettest and coolest times of the year. December is the most likely season for snowfall.</p>	<p>Raining events during the winter months is a regular occurrence and the community is resilient to these events. Each year the city has one to two events that cause local flooding and road closures. About once a year the City experiences a significant snowfall event. Both rain and snow events create disruptions to the community and the snow events can last over week and require extensive clearing resources.</p>
<b>Tsunami</b>	<p>The City is not at risk to tsunami threat.</p>		
<b>Volcano</b>	<p>The City is not at risk to volcano threat.</p>		
<b>Wildfire</b>	<p>Wildfire risk is a contemporary fire service issue, growing in concern. Western Washington is becoming drier and the risk of these events is increasing. Red-flag days (high heat, low humidity, dry fuels) are becoming more frequent, and diminished air quality caused by wildfire smoke from Canada and Alaska, as well as Oregon, California and Eastern WA, is becoming more</p>	<p>Wildfire in western Washington is becoming more frequent. In 2019, Washington experienced 1,006 wildfire events with 30% occurring on the western side of the state. The City is surrounded on all sides by open space and larger timber filled areas. These areas, if not managed appropriately, can create large fast burning fires. Also, the city's densely populated areas butt-up against or jet out into these wilderness areas. These areas, known as the wildland urban interface (WUI), are at greater risk to urban-loss if a fire were to burn through the region. The region has seen an increase in</p>	<p>If a wildfire were to hit the WUI area, the event could be devastating. Many of the homes that sit in outer parts of the City are higher-end homes with higher assessed valuations. The Washington State Department of Natural Resources have identified the WUI areas around the City and staff is planning to better manage these areas. Within the City boundaries, other areas experience limited</p>

	<p>frequent. Wildfire events are destructive and cause millions of dollars in damage each year.</p>	<p>wildland fire risk, believed to be related to climate change. These risks are related to drought events, with strong eastern winds and high heat conditions.</p>	<p>wildland threat because of full development. In recent history, there have been two wildland fires that have occurred in the immediate region. One occurred in 2013 behind Mount Si – an area outside the City. This fire burned within 10-20 miles of the City. The other incident was the Sawmill Creek Fire in 2017. This fire burned in a remote area north of Mount Rainier, about 30 miles south of the City.</p>
<b>Civil Disturbance</b>	<p>Living in a densely populated area, and within the Puget Sound Region, the threat of civil disturbance is a potential. Annually, the City of Seattle experiences events of civil disobedience or social protest.</p>	<p>Civil disobedience events occur throughout the area and are generally confined to larger metropolitan areas. The threat or probability for a civil disturbance occurring within the City remains low.</p>	<p>There have been no known civil disturbances reported within the City. If an event were to occur the City can respond as needed and appropriate.</p>
<b>Cyber Attack</b>	<p>Cyber-attacks and ransom requests for lost data is becoming an increasing challenge for many governmental agencies. Attacks from bots and other sources occur at a disturbing rate across the country. Attack remains a real threat and challenge for many agencies, including the City of Snoqualmie.</p>	<p>Cyber-attacks are an increasing threat for the community. These incidents can cause many days or even months of lost productivity. Stalling of government activity or the breaching of sensitive information can cost local governments hundreds or even millions of dollars.</p>	<p>In 2015, one of the City’s contract agencies sustained a ransomware attack that required a significant expense. Since then, the City has shored up the network systems to minimize this from occurring. Cyber threats have the potential to cost the City hundreds of thousands of dollars and require diligence, preparation, and backup resources.</p>
<b>Dam Failure</b>	<p>The City is not at risk to dam failure threat.</p>		
<b>Hazardous Materials Incident</b>	<p>A hazardous materials incident can occur at any time and without warning. These incidents</p>	<p>The highest risk areas within Snoqualmie are either along SR 202, along Snoqualmie Parkway, or in the Snoqualmie Ridge</p>	<p>The present, the risk of a hazardous materials incident occurring within the City is low.</p>

	<p>can arise from fixed facilities where hazardous chemical are used, along freeways involving freight accidents, or along railway lines.</p>	<p>Business Park. SR 202 carries traffic which includes a high volume of trucks potentially transporting chemicals regionally. SR 202 is a shorter route for vehicles traveling from Monroe to I-90. The Snoqualmie Ridge Business Park is home to some light industry who potentially use hazardous chemicals. These agencies comply with Tier 2 reporting. The City is a partner agency with the Eastside Hazardous Materials Team. In a major hazmat incident, this team of highly trained responders would respond to contain and mitigate an incident.</p> <p>The City is also located just north of Interstate 90 and SR 18. Both of these transportation routes are major carriers of freight traveling from or to the Seattle Metropolitan and Tacoma Metropolitan area. These routes also connect the Port of Seattle and Port of Tacoma to freight traveling east or from the east.</p>	<p>There have been no reported incidents in the recent past.</p>
<p><b>Public Health Emergency</b></p>	<p>Public Health emergencies can be devastating to a community and create widespread fear. Mass spread of a communicable disease or fear of this can cause hysteria and stress on a community. These events rely on mass inoculation, education, and efforts led by local public health officials.</p>	<p>35% of the City of Snoqualmie residents are 18 years old or younger. Disease spread that threatens the young or infirmed could have a large impact to the community. Additionally, an event of this magnitude would impact the region and have a major impact on surge capacity at all local hospitals as well as EMS resources.</p>	<p>The region and world are currently deep into a public health emergency with the emergence and continued spread of the Covid 19 pandemic in 2020. This current public health emergency may be in its infancy and cannot be fully evaluated at this time, though it clearly has impacted the country, region, and City of Snoqualmie.</p>
<p><b>Structure Fire</b></p>	<p>Structure fires are a regular occurrence in most communities. These fires cause many</p>	<p>Historically, the City has experienced approximately 10 structure fires per year. These events range in damage from a</p>	<p>The City experienced less than 10 fires per year. Over the past three years the City has</p>

	dollars in fire loss and threaten the lives of residents. It also threatens neighboring properties and can create widespread fire-damage and panic.	few dollars and upwards of \$1 million.	experienced two significant fires, over the past five years have experienced three significant fires. These events all occurred in the Ridge neighborhoods and were to homes over \$1 million in assessed value. The total value of all three of these incidents neared \$3 million in damage. These events are common and remain a real threat to the community.
<b>Terrorism</b>	Terrorist type events have become a modern challenge to many local communities throughout world. These threats are both domestic and international. Additionally, these events strike with little warning and often striking target hazards within the community, and creating wide spread panic.	The City has identified the potential target hazards within the community to better prepare for a terrorist attack. Most of the hazards that have been identified are part of the community and region's critical infrastructure and include: <ul style="list-style-type: none"> <li>- PSE power plant</li> <li>- Schools</li> <li>- City buildings</li> <li>- Water and waste-water systems</li> <li>- Pumping stations</li> <li>- Network systems</li> </ul>	There have been no known terror attack attempts on the City of Snoqualmie.

## Hazard and Asset Overview Maps

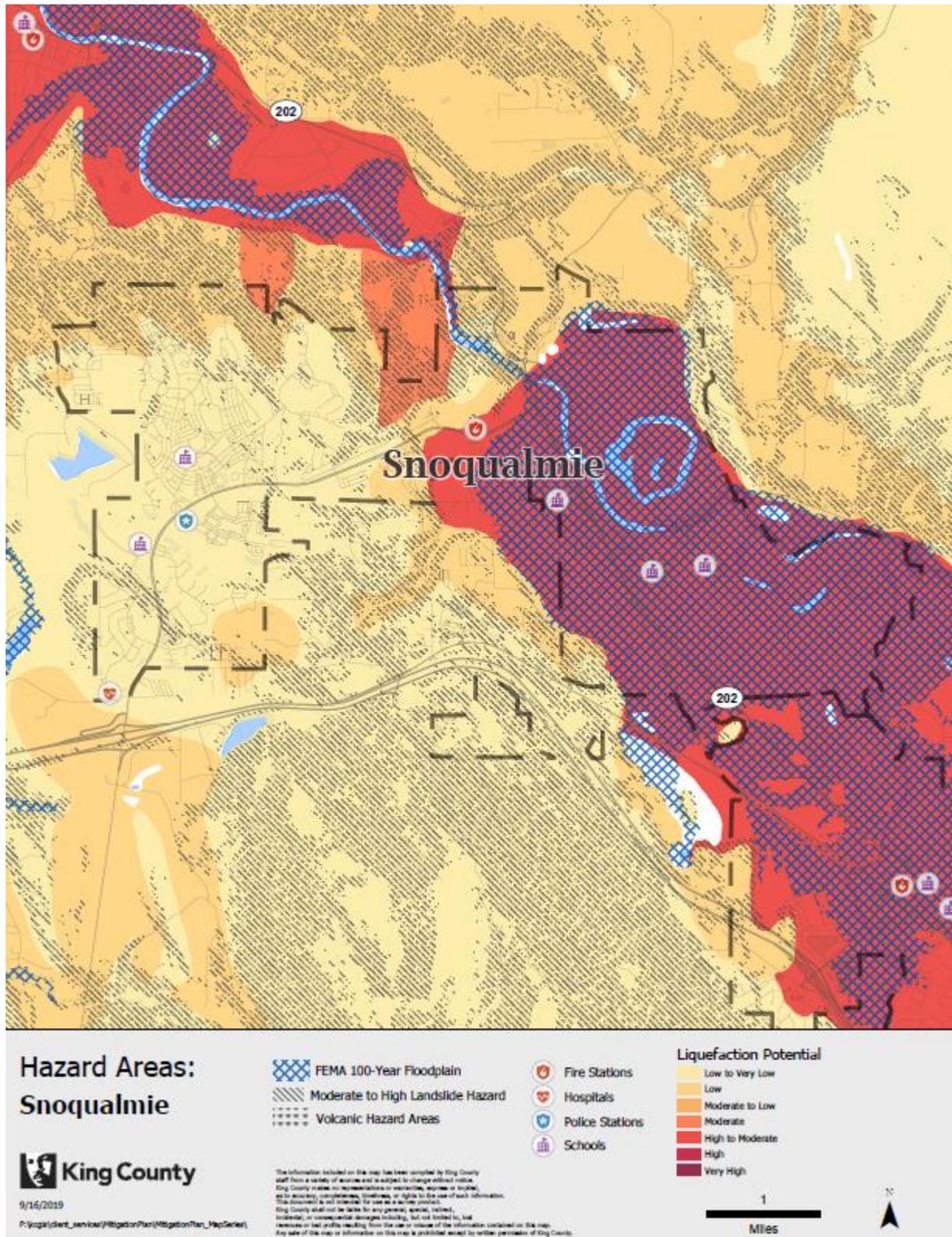


Figure 1: FEMA 100-year Floodplain Map. Moderate, High Risk Landslide Map and Liquefaction Risk Map

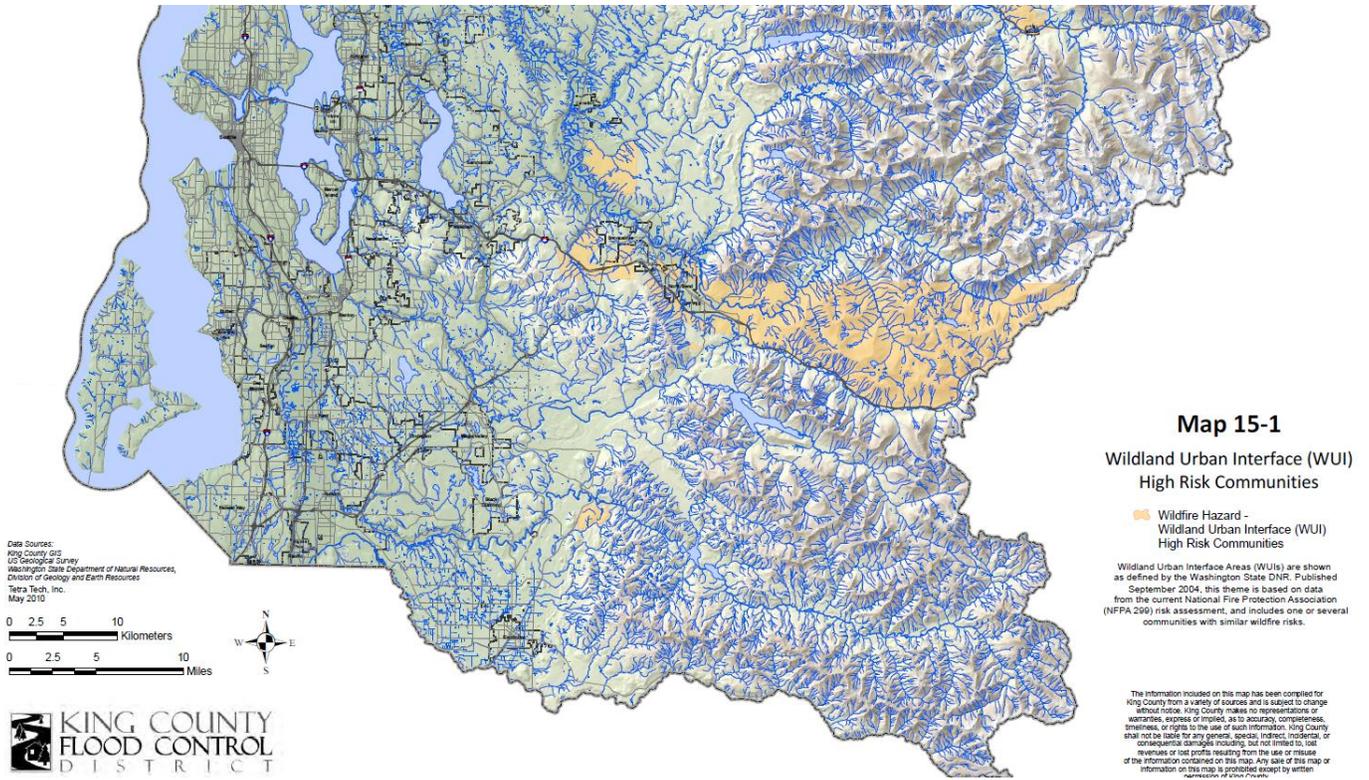


Figure 2: Wildland Urban Interface (WUI) Risk Map.

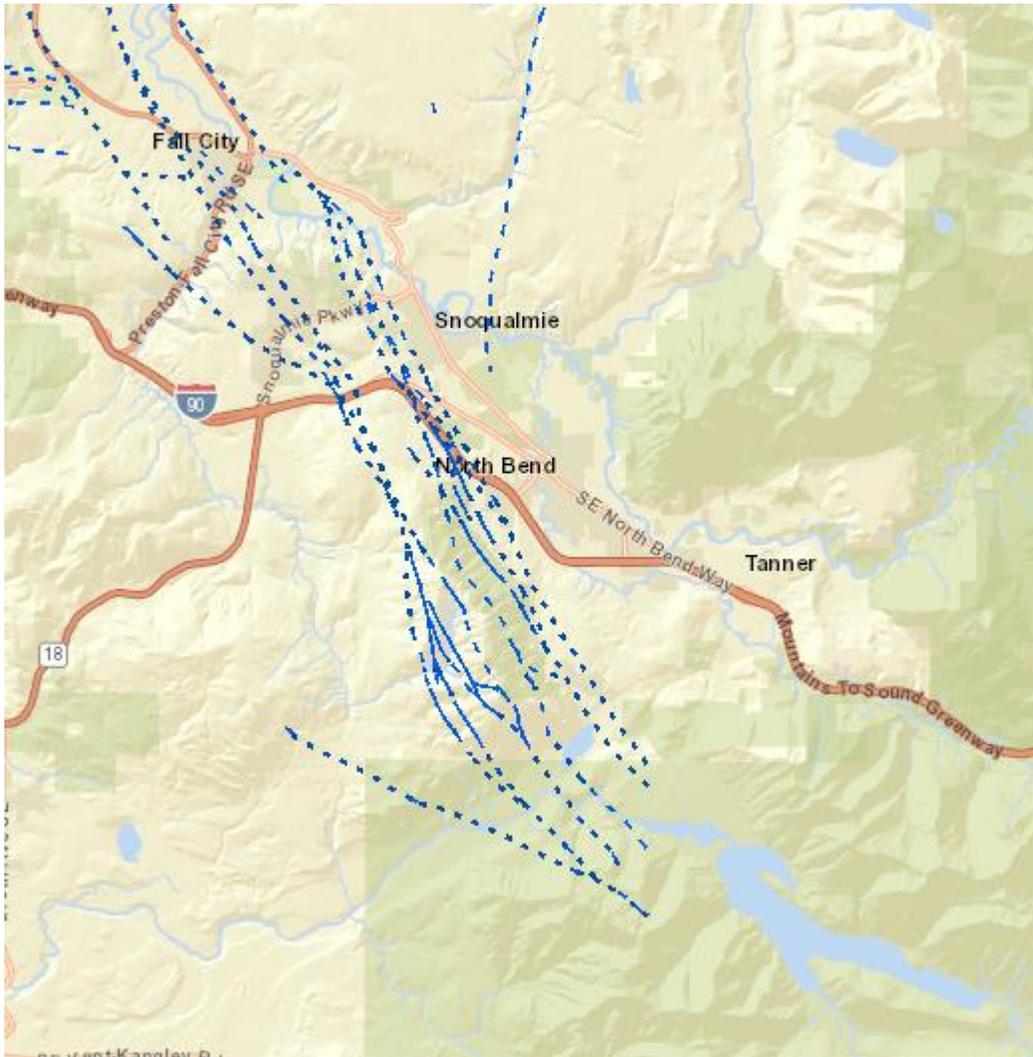


Figure 3: Fault Line and Fault fold Map.

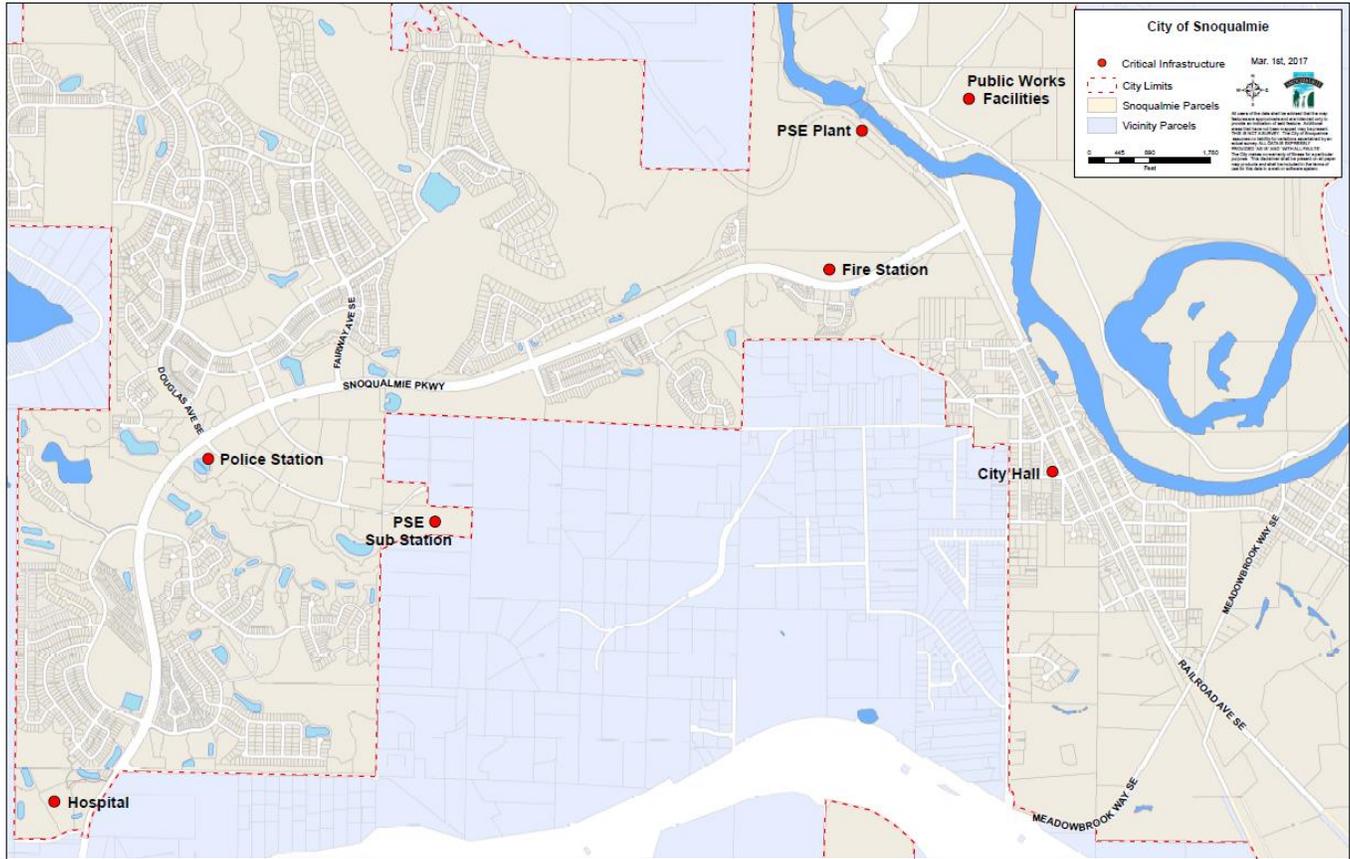


Figure 4: Critical Infrastructure Map\*

\* Does not include four school facilities

## Plan Update Process

The City of Snoqualmie has more recently become a significant active partner with King County on hazard mitigation planning efforts. Initially in 2014, the City drafted an annex to the King County Hazard Mitigation Plan. This supplementary document was authored by a former employee in the Planning Department of the City and focused heavily on flood mitigation.

In 2019, the Emergency Management Director, Mark Correira, led efforts to revise the 2014 jurisdictional annex. This was done in hopes of producing an all-hazards/risk plan. The revision effort allows the risk profile to expand into landslide, wildland fire urban interface, and technological hazards. To identify these risk categories, the City used the King County Hazard Identification and Vulnerability Assessment (HIVA) hazard analysis tool.

This 2020 City of Snoqualmie Hazard Mitigation Plan Jurisdictional Annex highlights risks that the community faces. The revisions to the 2014 Annex within this 2020 Annex relied on the tool mentioned above as well as the adopted 2020-2025 King County Regional Hazard Mitigation (base) Plan adopted in September, 2020. The Planning Team and relevant members of the City Staff (listed below) participated as technical experts to specifically identify risks to the community. The evaluations and staff's concerns are documented and added to this Plan Annex.

The City hosted two (2) hazard mitigation workshops to inform the public of the risks in the community and to gain feedback from citizens. Technical experts also attend the workshops and presented subject matters relevant to their expertise. This included a representative from the Federal Emergency Management Agency (FEMA) and a highly experienced, local, certified flood plain manager/insurance agent. The two workshop meetings were advertised on multiple mediums – and even with the added technical experts – the attendance was unfortunately low.

The information gathered from City Staff and community was coalesced into this Jurisdictional Annex.

### *Jurisdiction Planning Team*

NAME	TITLE	ORGANIZATION	CONTRIBUTION
<b>Mark Correira</b>	Emergency Management Director	City of Snoqualmie	Author
<b>Tomm Munro</b>	Emer. Mgt Admin II	City of Snoqualmie	Editor
<b>Gwyn Berry</b>	Planning Permit Technician	City of Snoqualmie	Outreach coordinator / flood mitigation specialist
<b>Dan Marcinko/ Brian Krause</b>	Public Works Directors	City of Snoqualmie	Asset Manager
<b>Robert Larson/ Rick Rudometkin</b>	City Administrators	City of Snoqualmie	Emergency Management Committee Member
<b>Perry Phipps</b>	Police Chief	City of Snoqualmie	Emergency Management Committee Member
<b>Brian Krause</b>	Parks and Public Works Director	City of Snoqualmie	Emergency Management Committee
<b>Phil Bennett</b>	Urban Forester	City of Snoqualmie	Forest Management
<b>Mark Hofman</b>	Community Development Director	City of Snoqualmie	Technical advisor
<b>Joan Pliego</b>	Communication's Coordinator	City of Snoqualmie	Community Outreach

### Plan Update Timeline

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
<b>Hazard Mitigation Kick Off</b>	May 6, 2019	King County and City met to discuss hazard mitigation planning process, documents, and deadlines.	Mark Correira COS Derrick Hiebert KC Tomm Munro COS
<b>Parks and PW Mitigation Meeting</b>	June 19, 2019	Discussion of hazard planning with public works projects.	Mark Correira COS Daniel Marcinko COS
<b>Public Outreach Planning Meeting</b>	September 17, 2019	Discussion of agenda for public outreach meetings.	Mark Correira COS Gwyn Berry COS Angela Donaldson, CFM – Hauglie Insurance
<b>Public Outreach Planning Meeting</b>	September 24, 2019	Discussion of agenda for public outreach meetings.	Mark Correira COS Gwyn Berry COS Angela Donaldson, CFM – Hauglie Insurance

### Public Outreach Events

EVENT	DATE	SUMMARY	ATTENDEES
<b>Hazard Mitigation Community Outreach Workshop – Fire Station</b>	September 17, 2019	Community outreach and interactive feedback on hazard mitigation planning, flood insurance, and FEMA disaster coverage.	4- community members 3- COS Staff 2- Private / Federal employees
<b>Hazard Mitigation Community Outreach Workshop – Cascade View Elementary</b>	September 25, 2019	Community outreach and interactive feedback on hazard mitigation planning, flood insurance, and FEMA disaster coverage.	2- community members 2- COS Staff 2- Private / Federal employees

## Jurisdiction Hazard Mitigation Program

Hazard mitigation strategies were developed through a two-step process. The City of Snoqualmie staff met with an internal planning team to identify a comprehensive range of mitigation strategies. These strategies were then prioritized using a process established at the county level and documented in the 2020-2025 King County Regional Hazard Mitigation Plan.

The City coordinates its planning regionally by engaging internal departments, developing plans using previous versions, and working with the County to develop an annex plan that aligns with the base-plan. Historically, the document was used to develop streets and public works projects. In more recent versions, this has changed to focus on all areas within the City. This version uses planning mechanisms and informs City departments of strategic mitigation goals.

### Plan Monitoring, Implementation, and Future Updates

King County leads the mitigation plan monitoring and update process and schedules the annual plan check-ins and bi-annual mitigation strategy updates. Updates on mitigation projects are solicited by the county for inclusion in the countywide annual report. As part of participating in the 2020 update to the Regional Hazard Mitigation Plan, every jurisdiction agrees to convene their internal planning team at least annually to review their progress on hazard mitigation strategies and to update the plan based on new data or recent disasters.

As part of leading a countywide planning effort, King County Emergency Management will send to each planning partner any federal notices of funding opportunity for the Hazard Mitigation Assistance Grant Program. Proposals from partners will be assessed according to the prioritization process identified in this plan and the county will, where possible, support those partners submitting grant proposals. This will be a key strategy to financially implement the plan.

The next plan update is expected to be due in April 2025. All jurisdictions, including the City of Snoqualmie, will submit letters of intent by 2023, at least two years prior to plan expiration. The county will lead the next regional planning effort, beginning at least 18 months before the expiration of the 2020 plan.

### Continued Public Participation

King County and its partner cities already maintain substantial public outreach capabilities, focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into public outreach efforts. This effort provides King County residents, already engaged in personal preparedness efforts, with context and the opportunity to provide feedback on the county's progress and priorities in large-scale mitigation. In the vertical integration of risk-reduction activities from personal to local to state and federal, it is important that the public understand how its activities support, and are supported by, larger-scale efforts.

### Plan Goals

1. Access to Affordable, Healthy Food
2. Access to Health and Human Services
3. Access to Parks and Natural Resources
4. Access to Safe and Efficient Transportation
5. Affordable, Safe, Quality Housing
6. Community and Public Safety
7. Early Childhood Development
8. Economic Development
9. Equitable Law and Justice System
10. Equity in Government Practices
11. Family Wage Jobs and Job Training
12. Healthy Built and Natural Environments
13. Quality Education
14. Strong, Vibrant Neighborhoods

The outreach and mitigation teams will also continue to work with media and other agency partners to publicize mitigation success stories and help explain how vulnerabilities would be fixed. When possible, public tours of mitigation projects will be organized to allow community members to see successful mitigation in action.

## Hazard Mitigation Authorities, Responsibilities, and Capabilities

### Plans

PLAN TITLE	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
<b>Comprehensive Plan</b>	Community Development	Mark Hofman, Community Development Director	The Comprehensive Plan provides policy to manage growth and development and allows mitigation strategies outlined in the Annex Plan to be incorporated into future development.
<b>Comprehensive Emergency Management Plan (CEMP)</b>	Emergency Management	Mark Correia, Emergency Management Director	The CEMP highlights how the City responds to a disaster and supports mitigation activities throughout the City.
<b>Capital Facilities Plan</b>	Finance Department	Robert Hamud, Finance Director	Capital facilities plan allows the City to incorporate mitigation strategies outlined in the plan into the City-owned facilities.
<b>Biennial Budget</b>	Finance Department	Robert Hamud, Finance Director	Funds mitigation projects and allows the City to plan for more expensive mitigation activities outlined in the plan.
<b>Continuity of Operations / Government Plan (COOP/COG)</b>	Emergency Management	Mark Correia, Emergency Management Director	The COOP/COG allows the government to adjust its services depending on the disaster. This supports the mitigation strategies when a disaster occurs.
<b>Forest Management Plan</b>	Public Works Department	Phil Bennett, City Arborist	Managing the urban forest is a mitigation strategy for preventing wildland fires and improves safety within the urban interface area.

*Programs, Policies, and Processes*

<b>PROGRAM/POLICY</b>	<b>RESPONSIBLE AGENCY</b>	<b>POINT OF CONTACT</b>	<b>RELATIONSHIP TO HAZARD MITIGATION PLAN</b>
<b>Municipal Code</b>	Mayor and City Council	Jodi Warren, City Clerk	City regulations
<b>Emergency Management Program</b>	Emergency Management	Mark Correia, Emergency Management Director	Disaster response
<b>Critical Areas Ordinance</b>	Community Development Department	Mark Hofman, Community Development Director	Regulates critical areas
<b>Building Codes</b>	Building Division, Community Development Department	John Cooper, Building Official and Fire Marshall	Regulates new construction, remodels and existing development
<b>Fire Code</b>	Fire Marshal's Office, Community Development Department	John Cooper, Building Official and Fire Marshall	Regulates fire codes
<b>City Budget</b>	Finance Department	Robert Hamud, Finance Director	Funding oversight

*Entities Responsible for Hazard Mitigation*

<b>AGENCY/ORGANIZATION</b>	<b>POINT OF CONTACT</b>	<b>RESPONSIBILITY(S)</b>
<b>Parks &amp; Public Works</b>	Brian Krause, Director	Technical Contributor
<b>Community Development</b>	Mark Hofman, Director Gwyn Berry, Planning Technician Dylan Gamble, Assistant Planner	Technical Contributor / Author
<b>Office of the Mayor</b>	Matthew R. Larson, Mayor Rick Rudometkin, City Administrator	Chief Executive Officer Chief of Staff
<b>Police Department</b>	Perry Phipps, Chief of Police	Technical Contributor
<b>Fire Department</b>	Mark Correia, Emergency Management Director	Technical Contributor
<b>Information Technology</b>	Kevin Smith, Director Brendon Ecker, GIS	Technical Contributor
<b>Emergency Management</b>	Mark Correia, Emergency Management Director	Technical Contributor / Author



## National Flood Insurance Program

The flood hazard areas of the city of Snoqualmie are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

The National Flood Insurance Program (NFIP) is a Federal program created by Congress to mitigate future flood losses nationwide through sound, community-enforced building and zoning ordinances and to provide access to affordable, federally backed flood insurance protection for property owners. The NFIP is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal Government that states that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses.

### National Flood Insurance Program Compliance

<b>What department is responsible for floodplain management in your community?</b>	Community Development Department
<b>Who is your community's floodplain administrator? (title/position)</b>	Community Development Director
<b>What is the date of adoption of your flood damage prevention ordinance?</b>	The most recent adoption to the flood hazard regulations was August 10, 2020.
<b>When was the most recent Community Assistance Visit or Community Assistance Contact?</b>	November 30, 2017
<b>Does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are?</b>	None.
<b>Do your flood hazard maps adequately address the flood risk within your community? If so, please state why.</b>	Yes, our flood maps show the public and agencies where our floodway and floodplain are located as well as areas of potential inundation. The City also maintains FIRM panels and the Flood Insurance Rate Maps to show BFE's.
<b>Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of training/assistance is needed?</b>	We could always use continued support to our relatively small department for our floodplain management program. Key- training staff on how to collect data following a potential flood event. We would also like to be proactively informed on all changes to FEMA policies so we know when and how to prepare, respond to, and recover from a disaster incident. Continued training on elevation certificates and available grant programs for home elevations and acquisitions remains essential.
<b>Does your community participate in the Community Rating System (CRS)? If so, what is your CRS Classification and are you seeking to improve your rating? If not, is your community interested in joining CRS?</b>	Yes. The City of Snoqualmie is currently a Class 5 and is preparing for a Class 4 review request.



How many Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties are located in your jurisdiction?	SRL: 26 RL: 113
Has your community ever conducted an elevation or buy out of a flood-prone property? If so, what fund source did you use? If not, are you interested in pursuing buyouts of flood prone properties?	Yes. We continue to use King County Flood Control District Funding and FEMA Hazard Mitigation Grant funding. The City will continue to buy out and elevate flood prone properties using these funding sources.

## 2014 Hazard Mitigation Strategies City of Snoqualmie

The primary focus of this plan update was the development of comprehensive, operationally viable hazard mitigation strategies and the establishment of a capability to supervise and promote their implementation. Plan strategies were developed in collaboration with the community, staff, and technical experts using the structure within the 2020-2025 King County Regional Hazard Mitigation Plan.

Mitigation Strategy Status Updates from the 2014 Jurisdictional Annex- The format for hazard mitigation strategies has changed in this 2020 plan update. All actions previously identified have been removed and/or incorporated into new mitigation strategies (Hazard Mitigation Strategy S-1 through S-18 individually included at the end of this document). The updated strategy format will better support tracking and implementation of mitigation strategies and their constituent actions.

The following table is taken from the annual progress report for the City of Snoqualmie Jurisdictional Annex. The new status (last column, right) for past strategies include: • Removed – Strategy is not carried forward into the new plan • Complete – Strategy is complete and not carried forward into the new plan • Updated – Strategy is updated and carried forward into the new jurisdictional mitigation plan.

2014 ACTION PLAN MATRIX AND STATUS				
Action Taken (Yes or No)	Time Line	Priority	Action	Status
<b>S-1 Develop a post-disaster action plan for all hazard of concern that address: debris management, historical data gathering, substantial damage assessment, and grants management. This plan would be an appendix to the City's Emergency management plan.</b>				
No	Short term, depends on funding	High	Grant funding will be applied through one of the FEMA Hazard Mitigation Assistance (HMA) grant programs and Department of Homeland Security. To date, the City's applications have been for home elevation projects, not planning projects.	Updated (2020 S-7)
<b>S-2 Incorporate and adopt by reference the updated City of Snoqualmie Hazard Mitigation Plan as an element of the City Comprehensive plan to assure linkage between the two documents.</b>				
Yes	Short term, ongoing	High	Completed	Complete
<b>S-3 Continue to acquire FEMA elevation certificates for all structures within the mapped floodplain for which the city does not currently have one.</b>				

Yes	Long term, ongoing	Med	Elevation certificates are currently being obtained as a result of the FEMA grant elevation programs and through new building permits for development in the Special Flood Hazard Area.	Updated (2020 S-8)
<b>S-4 Continue to pursue feasible, cost effective, home elevation projects, targeting identified repetitive loss or frequently flooded properties within the Snoqualmie floodplain.</b>				
Yes	Long term, depends on funding	Med	Up to 39 homes are currently under construction to elevate above the 100-year floodplain. City will continue to search for and partner in funding opportunities for additional home elevation projects. King County is also funding elevating homes within the City of Snoqualmie.	Updated (2020 S-12 and S-14)
<b>S-5 Consider the adoption of a “split-flow” floodway as an alternative to the regulatory floodway in effect for the City.</b>				
No	Short term, depends on funding	Med	Lack of city staff time to review this initiative and no funding.	Updated (2020 S-9)
<b>S-6 Re-map the City of Snoqualmie floodplain utilizing best available data and generating a mapped based product that will actively support hazard mitigation and land use decision making within the City</b>				
Yes	Long term, depends on funding	Med	The City has contracted with Northwest Hydraulic Consultants to look at updating the FIRM maps with best available data for a Letter of Map Revision. The City also adopted new FEMA maps in August, 2020.	Updated (2020 S-8)
<b>S-7 Consider amending the City’s flood damage prevention ordinance to add language that will track substantial improvements and damages cumulatively, to leverage Increased Cost of Compliance (ICC) opportunities for flood insurance policy holders.</b>				
No	long term	Med	Lack of city staff time to research this initiative in further detail.	Updated (2020 S-8)
<b>S-8 Consider adopting a higher regulatory freeboard standard above the current 1-foot standard.</b>				
Yes	Short term	High	City policy remains as one foot freeboard pursuant to Flood Ordinance adopted in August, 2020.	Updated (2020 S-8)
<b>S-9 Maintain Snoqualmie’s compliance and good standing under the National Flood Insurance program (NFIP)</b>				
Yes	Short term, ongoing	High	The City continues to implement our flood hazard regulations for all new development within the special flood hazard area.	Updated (2020 S-8)
<b>S-10 Continue to maintain or enhance the City’s classification under the Community Rating System (CRS)</b>				
Yes	Short term, ongoing	High	The City continues to implement flood activities throughout the year. The City maintains a current CRS classification of 5. City anticipates a request application for Class 4 consideration.	Updated (2020 S-8)
<b>S-11 Adopt the City of Snoqualmie Stormwater Management plan.</b>				
Yes	Short term	High	The consultant contract has been approved and implementation has begun for finishing the Stormwater Management Plan, which was completed in 2014. The most recent Stormwater Management Plan was updated in 2019.	Complete
<b>S-12 Continue to pursue feasible, cost-effective property acquisition opportunities along the Snoqualmie River front</b>				
Yes	Long term,	High	Five parcels were purchased during the reporting period. During this reporting period, the City continues to partner with King	Updated

	depends on funding		County to allocate Flood Control Zone District funding to assist the City in acquiring flood prone properties within the city limits.	(2020 S-12)
<b>S-13 Consider an increase in the building setback/spacing requirement for new construction in areas deemed susceptible to wildfire exposure</b>				
Yes	Short term	Low	City staff is currently reviewing the Wildland/Urban Interface Code book to consider requiring larger building setback/spacing requirements from wildfire areas.	Updated (2020 S-11)
<b>S-14 Join Firewise program by adopting Firewise programs and policies in the management of the urban/wildland interface areas within Snoqualmie</b>				
Yes	Short term	med	Although we have not formally adopted the Firewise program, the Fire Department has developed flyers, radio announcements and provided information to the regular City news mediums that follow the recommendation and best practices to reduce the Wild Fire threat in the City.	Updated (2020 S-4)
<b>S-15 Consider planting standards in Wildland buffer areas to use only loose branching habitats, non-resinous woody material, high moisture content leaves and limited seasonal dead debris and other varieties that possess fire resistive traits.</b>				
Yes	Short term	High	City staff is currently reviewing the Wildland/Urban Interface Code book for possibly adopting planting standards in Wildland buffer areas.	Updated (2020 S-4)
<b>S-16 Develop a public outreach program teaming with home improvement vendors educating the public on ways to protect their property from the potential impacts of all hazards of concern.</b>				
Yes	Short term	High	The Fire Department (FD) continues to discuss with resident's safety measures with information on the City website as well as the annual Citizen's Academy classes. The Fire Department, in conjunction with the Community Development Department consulted with representatives from FEMA and local flood insurance agents, held two public workshops about the Hazard Mitigation Plan update and flood insurance.	Updated (2020 S-13)
<b>S-17 Conduct seismic vulnerability study of critical facilities identified by City emergency managers.</b>				
No	Long term	Low	Action has not been taken due to lack of funding and the staff time to apply for grant funding.	Updated (2020 S-18)
<b>S-18 Promote the structural seismic retrofit of structures built before 1974 by a targeted outreach to the property owners of these structures.</b>				
No	Short term	Low	Action has not been taken due to the city budget constraints.	Updated (2020 S-18)
<b>S-19 Continue and/or enhance where feasible, the city's ongoing drainage system maintenance program to reduce or minimize the impacts from stormwater flooding within the City.</b>				
Yes	Short term	High	Drainage maintenance is performed annually. The City is currently working on complying with the future NPDES Phase II permit requirements, which include a higher level of maintenance and documentation for storm drainage.	Updated (2020 S-10)
<b>S-20 The City of Snoqualmie's North Well Field well # 6, 7 and 8 currently lack permanent back-up generation. A permanent standby generator needs to be installed to provide continuous service at this critical water service delivery facility</b>				
Yes	Short term	High	Included in the City's CIP budget. This item is complete.	Updated (2020 S-1)

<p><b>S-21 The Fisher Creek Booster Station currently lacks back up generation. A permanent standby generator needs to be installed to provide continuous service at this critical water service delivery facility. This site has space inside the building designed for a Generator.</b></p>				
Yes	Short term	High	Included in the City's CIP budget. There is a portable generator there now. Looking at where a permanent one could be placed.	Updated (2020 S-1)
<p><b>S-22 To alleviate stormwater flooding problems along Railroad Avenue SE between SE Fir Street and SE King Street:</b></p> <ul style="list-style-type: none"> <li>• Install new 12-inch diameter pipeline along Railroad Avenue SE from SE King Street to SE Fir Street. Connect to existing outfall to Snoqualmie River. Install new 12-inch diameter pipeline between Railroad Avenue SE and the Snoqualmie River.</li> </ul>				
Yes	Short term	High	The downtown Phase II project completed this issue.	Complete
<p><b>S-23 Address stormwater flooding problems due to undersized storm drain system in vicinity of Doone Avenue SE and SE Newton Street.</b></p> <ul style="list-style-type: none"> <li>• Replace existing storm drain pipeline on Doone Avenue SE with new 12- and 24-inch diameter pipeline. Connect to existing ditch at south end of Doone Avenue SE.</li> <li>• Install new 12-inch diameter pipeline along SE Newton from Olmstead Place SE to Doone Avenue SE.</li> </ul>				
Yes	Short term	High	The storm drainage will be addressed with the design of Newton Street. The storm drainage will also tie into Doone Ave SE.	Complete
<p><b>S-24 Address stormwater flooding problems due to lack of storm drain system on Railroad Avenue SE between SE Delta Street and SE 90th.</b></p> <ul style="list-style-type: none"> <li>• Install new 18-inch diameter storm drain pipeline along Railroad Avenue SE from SE Delta Street to SE 90th.</li> </ul>				
Yes	Short term	High	Funding included in the CIP budget during the last plan update was pulled.	Updated (2020 S-8)
<p><b>S-25 Address stormwater flooding problems due to lack of storm drain system on SE Northern Street and Railroad Place SE. Ponding on east side of Railroad Avenue SE for extended periods during heavy rain events. The existing storm drain system on west side of Railroad Place SE is blocked due to a pipe failure or and obstruction in the pipeline.</b></p>				
Yes	Short term	High	Included in the CIP budget.	Updated (2020 S-8)
<p><b>S-26 Address stormwater flooding problems due to lack of storm drain system on SE Alder Street, SE Hemlock Street, SE Spruce Street, SE Walnut Street, Mountain Ave SE and Meadowbrook Way SE.</b></p> <ul style="list-style-type: none"> <li>• Install new 12-inch diameter pipeline along SE Alder Street. Connect to existing storm drain at Meadowbrook Way SE.</li> <li>• Install new 12-inch diameter pipeline along SE Hemlock Street. Connect to existing storm drain at Meadowbrook Way SE.</li> <li>• Install new 12-inch diameter pipeline along SE Spruce Street. Connect to existing storm drain at Meadowbrook Way SE.</li> <li>• Install new 12-inch diameter pipeline along SE Walnut Street. Connect to existing storm drain at Meadowbrook Way SE.</li> <li>• Install new 12-inch diameter pipeline along Mountain Ave SE. Connect to existing storm drain at Meadowbrook Way SE.</li> <li>• Install new 36-inch outfall on Meadowbrook Way SE.</li> </ul>				
Yes	Short term	High	Included in the CIP budget.	Updated (2020 S-8)
<p><b>S-27 Address stormwater flood problems due to lack of drainage conveyance system on SE Maple Street and Maple Avenue SE.</b></p> <ul style="list-style-type: none"> <li>• Install new 18-inch diameter pipeline along SE Maple Street from Maple Avenue SE to Johnson Slough. Install new water quality treatment facility.</li> </ul>				

<ul style="list-style-type: none"> <li>• <b>Install new 18-inch diameter pipeline along Maple Avenue SE from 7900 block to SE Maple Street. Connect to new pipeline at SE Maple Street.</b></li> </ul>				
Yes	Short term	Low	Included in the CIP budget.	Updated (2020 S-8)
<b>S-28 Address stormwater flood problems due to lack of drainage conveyance system on SE Beta Street, SE Delta Street, SE Epsilon Street, and Falls Avenue SE.</b> <ul style="list-style-type: none"> <li>• <b>Install new 12-inch diameter pipeline along SE Delta Street from Falls Avenue SE to Schusman Avenue SE. Connect to existing storm drain at SE Schuman Avenue Street</b></li> </ul>				
Yes	Short term	High	New pipeline has been installed along Beta, Epsilon and Falls. Delta has been completed.	Complete
<b>S-29 Address stormwater flood problems due to lack of drainage conveyance system in vicinity of SE Fir Street, SE 80<sup>th</sup> St and Pine Avenue SE.</b> <ul style="list-style-type: none"> <li>• <b>Install new 12-diameter pipeline at Pine Avenue SE. Connect to new storm drain at Pickering Court SE.</b></li> <li>• <b>Install new 12-diameter pipeline at SE 80<sup>th</sup> Street. Connect to new storm drain at Pickering Court SE.</b></li> <li>• <b>Install new 12-diameter pipeline at SE Fir Street. Connect to new storm drain at Pickering Court SE.</b></li> <li>• <b>Install new 18-diameter pipeline at Pickering Court SE. Outfall to wetland area.</b></li> </ul>				
Yes	Short term	High	New pipeline has been installed at SE Cedar Street. Funding will be provided through the utility bill fee to fund this mitigation initiative.	Updated (2020 S-8)
<b>S-30 Develop a public outreach strategy that maximizes the City’s capabilities through its ongoing programs that provide multiple messages that support all phases of emergency management</b>				
Yes	Short term, ongoing	High	The City tests the emergency notification systems annually with published results. The City employs the Emergency Alert system and AM radio broadcast system, with signal notification for the public. In 2013, the Emergency management department entered into an agreement with Everbridge Community Alert company to replace the R911 system that had become unreliable and antiquated. This system can be used to issue any type of message to any group of people needed.	Updated (2020 S-15)
<b>S-31 Conduct a vulnerability assessment of water and wastewater utilities for exposure to all identified hazards of concern.</b>				
No	Short term, depends on funding	Low	Currently no staff time allocated to address this initiative.	Updated (2020 S-6)
<b>S-32 Review utility designs and standards for safety and competence under natural and human caused disasters.</b>				
No	Short term, ongoing	Low	Currently no staff time to look into this initiative.	Updated (2020 S-2)
<b>S-33 Participate in the Basin Technical Committee process of the King County Flood Control District to leverage resources for flood hazard mitigation.</b>				
Yes	Short term, ongoing	High	Public Works and Planning department staff continue to participate in the Basin Technical Committee.	Updated (2020 S-14)
<b>S-34 Continue to participate/support the King County Public Outreach Strategy developed to coordinate countywide outreach programs credited under the CRS program.</b>				
Yes	Short term, ongoing	High	Planning department staff continue to participate/support King County’s Public Outreach Strategy.	Updated (2020 S-16)

<b>S-35 Implement design and construction for bank stabilization of Sandy Cove Park.</b>				
Yes	Short term, ongoing	High	City staff hired a consultant to assess the site and identify possible preliminary bank stabilization alternatives. The study is complete. City staff continues to design.	Updated (2020 S-12)
<b>S-36 Seek funding for the placement of a new stream flow gauge at the City of Snoqualmie above the falls that will accurately depict in channel flows at the City during high water events.</b>				
No	Long term, depends on funding	Med	Staff has not dedicated time to research grant funding for this initiative.	Removed
<b>S-37 Replace two small bridges that have rotting wood pilings and abutments along Meadowbrook Way SE. These facilities were damaged by the Nisqually earthquake that required repair by King County bridge crews. Recent bridge inspection records indicate repair would be as costly as complete reconstruction.</b>				
Yes	Long term, depends on funding	High	Placed on CIP for design and construction.	Updated (2020 S-17)
<b>S-38 Replace Kimball Creek bridge on SR202 that is functionally obsolete with virtually no shoulders on either side and has an inadequate hydraulic opening. The concrete rigid frame structure does not meet current seismic design and detailing standards.</b>				
Yes	Long term, depends on funding.	Low	Continue to seek funding through grant programs and/or CIP listed.	Updated (2020 S-18)
<b>S-39 Address stormwater flood problems due to lack of drainage conveyance system on SE Northern Street and Harding Place SE.</b>				
• <b>Install large diameter storm drain pipe along SE Northern Street near Pickering Court.</b>				
No	Short term	High	Continue to seek funding.	Updated (2020 S-8)
<b>S-40 Address stormwater flood problems due to lack of drainage conveyance system on SE Cedar Street.</b>				
• <b>Install 15 to 18-inch diameter storm drain pipeline along SE Cedar Street from 380<sup>th</sup> Ave SE to Pine Ave SE.</b>				
No	Short term	Low	Continue to seek funding	Complete
<b>S-41 To alleviate stormwater flood problems within the vicinity of SE Newton Street.</b>				
• <b>Install new 12-inch diameter storm drain pipeline along SE Newton Street from Falls Ave to Park Ave SE. Connect to existing outfall to Snoqualmie River.</b>				
• <b>Install new 12-inch diameter storm drain pipeline along SE Newton Street from Maple Ave SE to Falls Ave SE. Connect to existing storm drain at Falls Ave SE.</b>				
• <b>Install new 12-inch diameter storm drain pipeline along Maple Ave SE north of SE Newton St. Connect to existing storm drain at SE Newton St.</b>				
• <b>Install new 18-inch diameter storm drain pipeline along Falls Ave SE from SE Beta St. to SE Newton St. Connection to existing storm drain at SE Newton St.</b>				
• <b>Install new 12-inch diameter storm drain pipeline along SE Beta St. from east of Railroad Place SE to Falls Ave SE. Connect to new pipeline at Falls Ave SE.</b>				
• <b>Install new 12-inch diameter storm drain pipeline along Railroad Place SE. Connect to new pipeline at SE Beta St.</b>				

<ul style="list-style-type: none"> <li>• <b>Install new 12-inch diameter storm drain pipeline along SE Alpha St. Connect to new pipeline on Falls Ave SE.</b></li> <li>• <b>Install new 12-inch diameter along Railroad Ave SE. Connect to existing pipeline at Falls Ave SE.</b></li> </ul>				
Yes	Short term	High	This project has been completed.	Complete
<b>S-42 Address stormwater flood problems due to lack of drainage conveyance system on Railroad Ave between SE King Street and SE Fir Street.</b>				
<ul style="list-style-type: none"> <li>• <b>Install 12-inch diameter storm drain pipeline along Railroad Ave SE at SE King St to SE River St. Connect to existing pipeline at SE River St.</b></li> </ul>				
Yes	Short term	High	This project has been completed.	Complete
<b>S-43 Address stormwater flood problems due to lack of drainage conveyance system on Maple Avenue and Olmstead Avenue</b>				
<ul style="list-style-type: none"> <li>• <b>Install 18-inch diameter storm drain pipeline along SE King St from Silva to Railroad Tracks.</b></li> <li>• <b>Install 18-inch diameter storm drain pipeline along Olmstead Ave SE from SE King St. to SE River St. Connect to existing pipeline at SE River St.</b></li> </ul>				
Yes	Short term	High	Included in City CIP budget.	Updated (2020 S-8)
<b>S-44 Stabilize approximately 400 feet of undermined riverbank at the intersection of Park Ave SE and SE River St.</b>				
Yes	Short term	High	Under design with King County.	Updated (2020 S-12)
<b>S-45 Address stormwater flood problems due to lack of drainage conveyance system on Northern Street between 380<sup>th</sup> and Pickering Court.</b>				
<ul style="list-style-type: none"> <li>• <b>Install bio-retention cells, a pervious concrete sidewalk on one side of the street, street trees to aid in canopy interception of rainfall, and a box culvert or pipe feature at the east end of the project to reconnect wetland hydrology.</b></li> </ul>				
Yes	Short term	High	Funding for design has been secured. Continue to seek funding for construction.	Updated (2020 S-8)

## 2020 Hazard Mitigation Strategies City of Snoqualmie

The City of Snoqualmie identified the following strategies through meetings among city departments, community input, and technical assistance and review. A lead agency/point of contact was identified, a timeline given, and priority was ranked from moderate, to medium, and high.

### 2020 Hazard Mitigation Strategies

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
<b>S-1 Back-up Power at all facilities</b>	Public Works	As soon as possible, urgent	High
<b>S-2 Ensure Community Resilience</b>	Department of Emergency Management	EMPG Grant funds will be used for this in 2021	High
<b>S-3 Enhance cyber security</b>	Information Technology	Seeking funding options	High
<b>S-4 Wildland Urban Interface / Forest Management</b>	Public Works	Pre-application for grant funds submitted	High

<b>S-5 Improved shelter facilities</b>	Office of the Mayor	Council is deliberating on this topic	Moderate
<b>S-6 Water system Resilience</b>	Public Works	As soon as possible	High
<b>S-7 Develop a post-disaster plan for all hazards of concern that address: debris management, historical data gathering, substantial damage assessment, and grants management.</b>	Community Development Department and Fire Department	Short-term, depends on funding	High
<b>S-8 Enhance the long-term goal of flood mitigation efforts in the downtown corridor of City of Snoqualmie.</b>	Community Development Department	Long-term, ongoing	Medium
<b>S-9 Consider the adoption of the “split-flow” floodway as an alternative to the regulatory floodway in effect for the City.</b>	Planning, Public Works and City Council	Short-term, depending on funding	Medium
<b>S-10 Continue and/or enhance where feasible, the city’s ongoing drainage system maintenance program to reduce or minimize the impacts from stormwater flooding within the City</b>	Public Works	Long-term	Medium/high
<b>S-11 Evaluate wildfire hazards within the City and its boundaries and develop strategies to mitigate.</b>	Fire, Planning, Public Works	Long-term	Medium/high
<b>S-12 River Bank Stabilization, home elevations, and home acquisitions</b>	Planning, Public Works	Long-term	Medium/High
<b>S-13 Develop a public outreach program teaming with home improvement vendors educating the public on ways to protect their property from the potential impacts of all hazards of concern.</b>	Fire Department, vendors, Planning Department	Short-term	High
<b>S-14 Participate in the Basin Technical Committee process of the King County Flood Control District to leverage resources for flood hazard mitigation.</b>	Planning Department, Public Works	Ongoing	High
<b>S-15 Develop a public outreach strategy that maximizes the City’s capabilities through its</b>	Communications	Short-term, ongoing	High

ongoing programs that provide multiple messages that support all phases of emergency management			
<b>S-16 Continue to participate/support the King County Public Outreach Strategy developed to coordinate countywide outreach programs credited under the CRS program.</b>	Planning Department, King County Flood Control District, Communications Department	Ongoing	High
<b>S-17 Replace two small bridges that have rotting wood pilings and abutments along Meadowbrook Way SE. These facilities were damaged by the Nisqually earthquake that required repair by King County bridge crews. Recent bridge inspection records indicate repair would be as costly as complete reconstruction.</b>	Community Development Department, Fire Department	Short-term	High
<b>S-18 Promote the structural seismic retrofit of structures built before 1974 by a targeted outreach to the property owners of these structures.</b>	Community Development, Fire Department	Ongoing	Medium

Each of these 2020 Hazard Mitigation Strategies (S-1 through S-18) are further individually detailed below:

## Hazard Mitigation Strategy S-1

<b>Lead Points of Contact:</b> Public Works	<b>Partner Points of Contact</b> FEMA King County Emergency Management	<b>Hazards Mitigated:</b> Severe weather  <b>Goals Addressed:</b> Community and Public Safety	<b>Funding Sources:</b> FEMA and King County Emergency Management  <b>Estimated Costs:</b> \$250-500/location
<b>Strategy Vision/Objective</b> Develop and maintain back up power sources at all government facilities			
<b>Mitigation Strategy</b>  Emergency back-up power is available at all city facilities. Several pump stations and lift stations rely on portable back-up power generation. The desire is to install permanent power generation at all critical city facilities and develop a redundancy plan for each location to ensure continuous power supply. The generators are maintained as part of the of the Equipment Repair and Replacement (ER&R) program. Equipment is on an average 15-year replacement cycle. The back-up power equipment age varies in the city system equipment.			
<b>2-Year Objectives</b> <ul style="list-style-type: none"> <li>Develop primary and redundancy back-up power strategies.</li> <li>Seek grant funding assistance for redundancy and equipment replacement purchases.</li> </ul>	<b>5-Year Objectives</b> <ul style="list-style-type: none"> <li>Implement redundancy plan and purchase redundancy equipment</li> <li>Replace equipment identified in ER&amp;R program to ensure power availability to critical city facilities</li> </ul> Purchase and install permanent power generation at all critical city facilities	<b>Long-Term Objectives</b> Follow replacement schedules and redundancy plan to ensure power is maintained to critical city facilities.	
<b>Implementation Plan/Actions</b> <ul style="list-style-type: none"> <li>Convene stakeholder group to develop redundancy strategies</li> <li>Identify grant funding opportunities for new permanent, redundancy, and replacement equipment</li> </ul>			
<b>Performance Measures</b> Number of critical city facilities with back-up power generation and a redundancy plan			

## Hazard Mitigation Strategy S-2

<p><b>Lead Points of Contact:</b></p> <p>Emergency Management</p>	<p><b>Partner Points of Contact (Title)</b>  <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>King County Office of EM          WA State Dept. of EMD          FEMA Region 10</p>	<p><b>Hazards Mitigated:</b>          All hazards</p> <p><b>Goals Addressed:</b>          Community and Public Safety</p>	<p><b>Funding Sources:</b>          EMPG grant</p> <p><b>Estimated Costs:</b>          \$6,000</p>
<p><b>Strategy Vision/Objective</b>          Ensure Community resilience</p>			
<p><b>Mitigation Strategy</b>          The City will use its EMPG funds to create resiliency throughout the community. Strategies will include public information campaign related to self-preparedness, education on how to opt into the King County Alert system, shelter improvements, updating of the City’s Comprehensive Emergency Management Plan, and improved communication with the public.</p>			
<p><b>2-Year Objectives</b>          Ongoing education on opting into the Alert King County system          Ongoing education on self-preparedness for a disaster</p>	<p><b>5-Year Objectives</b>          Update of the City CEMP</p>	<p><b>Long-Term Objectives</b>          Improved communication with the community,          Improvement in communication equipment.</p>	
<p><b>Implementation Plan/Actions</b>  <i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i></p> <p>Annually communicate at least two times with the public on how to opt into the KC Alert System.          Annually, communicate the importance of self-emergency preparedness.          In 2021, update the City CEMP and submit to the State for approval.          In 2022, evaluate additional communication needs for the City and prioritize items based on need that will impact the greatest number of people.          In 2023, purchase equipment based on priority.</p>			
<p><b>Performance Measures</b>          Number of contacts made with the public.          Percentage of CEMP Updates          Percentage of communication equipment that has been updated.</p>			

## Hazard Mitigation Strategy S-3

<b>Lead Points of Contact:</b>  Information Technology	<b>Partner Points of Contact (Title)</b> <i>None</i>	<b>Hazards Mitigated:</b> <ul style="list-style-type: none"> <li>Ransomware</li> <li>Encryption of city data</li> </ul> <b>Goals Addressed:</b> Reliable and consistent services available for city employees and residents	<b>Funding Sources:</b> General Fund  <b>Estimated Costs:</b> 3 components – hardware, analyst and security audit. Est \$30k each component – Est \$100k total
<b>Strategy Vision/Objective</b> Enhance cyber security for the City of Snoqualmie.			
<b>Mitigation Strategy</b> <ul style="list-style-type: none"> <li>Install cyber security hardware in city IT infrastructure</li> <li>Install email filtering services</li> <li>Contact with Cyber response organizations to aid in potential future remediation of an attack</li> </ul>			
<b>2-Year Objectives</b> Build up cyber defenses and response protocols	<b>5-Year Objectives</b> Maintain cyber defenses against current and future threats	<b>Long-Term Objectives</b> Maintain cyber security awareness	
<b>Implementation Plan/Actions</b> Create and issue CyberDefenese/Managed services RFP as soon as possible. Install equipment and services as soon as possible			
<b>Performance Measures</b> Number of cyber attacks thwarted			

## Hazard Mitigation Strategy S-4

<p><b>Lead Points of Contact:</b></p> <p>Public Works</p> <p>Parks</p> <p>Fire Department</p>	<p><b>Partner Points of Contact (Title)</b> <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>Residential Owners Association of Snoqualmie Ridge (Owners of forestland contiguous with City-owned forestland).</p> <p>The Club at Snoqualmie Ridge (Golf course)</p> <p>Private contractors such as Timberline Silvics who provide forest-thinning services.</p> <p>Adjacent unincorporated communities such as Lake Alice.</p>	<p><b>Hazards Mitigated:</b></p> <p>Flood, Severe weather</p> <p>Goals Addressed: Healthy Built and Natural Environments</p> <p>Community and Public Safety</p> <p>Access to Parks and Natural Resources</p> <p>Strong, Vibrant Neighborhoods</p>	<p><b>Funding Sources:</b></p> <p><b>Estimated Costs:</b> Strategy costs for future phases is unknown.</p>
<p><b>Strategy Vision/Objective</b> Wildland Urban Interface / Forest Management</p> <p>-Objective: Reduce the risk of canopy/crown fire events in City owned forestland.</p>			
<p><b>Mitigation Strategy</b></p> <ul style="list-style-type: none"> <li>- Reduce ladder fuels and overall fuel loads in vulnerable second growth City-owned forest land adjacent to residences.</li> </ul>			
<p><b>2-Year Objectives</b></p> <ul style="list-style-type: none"> <li>-Identify fire-vulnerable parcels and prioritize for treatment</li> <li>-Develop prescriptions for treatment</li> <li>-Begin treatments</li> </ul>	<p><b>5-Year Objectives</b></p> <ul style="list-style-type: none"> <li>-Continue treatments</li> <li>-Move to secondary priorities</li> <li>-Monitor forest health and fire/fuel conditions</li> </ul>	<p><b>Long-Term Objectives</b></p> <ul style="list-style-type: none"> <li>-Monitor and prescribe additional treatments as necessary to reduce overall fire risk</li> </ul>	
<p><b>Implementation Plan/Actions</b> <i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i></p> <p>2020:</p> <ul style="list-style-type: none"> <li>- Engage partners/stakeholders in the project (ROA, Golf course)</li> <li>-Develop unified strategy for fire fuel reduction <ul style="list-style-type: none"> <li>- Contract with foresters versed in fire fuel reduction treatments for technical assistance</li> </ul> </li> <li>- Map priority areas for treatment</li> <li>- Develop treatment prescriptions</li> <li>- Identify local contractors with expertise in fuel reduction treatments</li> </ul>			

2021-2024

- Begin treatments, monitor and evaluate efficacy
- Support partner efforts

2024-onwards

- Monitor treated acres
- Evaluate future areas for treatment

**Performance Measures**

# of acres thinned

# of acres ladder fuels reduced

## Hazard Mitigation Strategy S-5

<p><b>Lead Points of Contact:</b></p> <p>Emergency Management</p>	<p><b>Partner Points of Contact (Title)</b>  <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>King County Residents          King County OEM</p>	<p><b>Hazards Mitigated:</b></p> <p>Flood, Severe weather</p> <p>Goals Addressed:          Healthy Built and Natural Environments</p> <p>Community and Public Safety</p> <p>Access to Parks and Natural Resources</p> <p>Strong, Vibrant Neighborhoods</p> <p>Access to Parks and Natural Resources</p> <p>Goals Addressed:          Affordable, Safe, Quality Housing</p>	<p><b>Funding Sources:</b></p> <p><b>Estimated Costs:</b>          \$30,000</p>
<p><b>Strategy Vision/Objective</b></p> <p>Improved shelter facilities (add air purification for poor air quality events).          Improved air quality during poor-air-quality-days for regional residents who may have respiratory compromise.</p>			
<p><b>Mitigation Strategy</b></p> <p>Add air purification to the environmental control systems in the City’s Community Center. This will be added when the Community Center expansion project is approved.</p>			
<p><b>2-Year Objectives</b></p> <p>Look to other Community Best Practices for guidance.          Design air purification system for Community Center when it is in the design phase.</p>	<p><b>5-Year Objectives</b></p> <p>Implement purification system when the Center is under design and build.</p>	<p><b>Long-Term Objectives</b></p> <p>Market clean air during poor air quality periods.</p>	
<p><b>Implementation Plan/Actions</b></p> <p><i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i></p> <p>Look to other communities for best practices.          Advocate that this system be added during design phase of the project.          Build infrastructure as part of Community Center Expansion.          Notify the community during poor air quality days that this resource is available.</p>			



**Performance Measures**

Number of poor-air-quality days.

Number of residents who use the shelter for clean air.

## Hazard Mitigation Strategy S-6

<p><b>Lead Points of Contact:</b></p> <p>City of Snoqualmie Dept of Parks and Public Works</p>	<p><b>Partner Points of Contact (Title)</b> <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>FEMA Region 10; Environmental Protection Agency (EPA); Water Utilities serving more than 3,300 people</p>	<p><b>Hazards Mitigated:</b></p> <p>Earthquake; Flooding; Terrorism; Unspecified Related Emergencies</p> <p>Goals Addressed: Community and Public Safety</p> <p>Water System reliability and emergency response planning</p>	<p><b>Funding Sources:</b> FEMA, CIP</p> <p><b>Estimated Costs:</b> Approx \$50K</p>
<p><b>Strategy Vision/Objective</b></p> <p>Signed into law in October 2018, Title II of the <i>America's Water Infrastructure Act</i> (AWIA) updates and expands upon the 2002 Bioterrorism Act by requiring community water systems serving more than 3,300 people to prepare a Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP). The City of Snoqualmie will submit to the EPA certification letters for the RRA and ERP within the published deadlines (June 30, 2021 and December 31, 2021, respectively).</p>			
<p><b>Mitigation Strategy</b></p> <p>The City of Snoqualmie will engage a qualified consultant to conduct and develop the RRA and ERP documents. Activities will include a thorough review of the City's water system and evaluation of vulnerable components.</p> <p>The Risk and Resilience Assessment includes:</p> <ul style="list-style-type: none"> <li>• Asset characterization (physical, human, cyber)</li> <li>• Threat characterization (malevolent acts, natural hazards, dependency hazards)</li> <li>• Consequence, vulnerability, and threat analyses</li> </ul> <p>The Emergency Response Plan includes:</p> <ul style="list-style-type: none"> <li>• System overview</li> <li>• Established roles and responsibilities</li> <li>• Internal and external communications</li> <li>• Mutual aid and partnerships (NIMS ICS, WARN)</li> <li>• Training</li> <li>• Documentation practices</li> <li>• Mitigation to address hazards</li> </ul>			
<p><b>2-Year Objectives</b></p> <p>Complete RRA and ERP certification procedures in compliance with EPA requirements</p>	<p><b>5-Year Objectives</b></p> <p>Both RRA and ERP certifications must be re-certified every 5 years.</p>	<p><b>Long-Term Objectives</b></p> <p>Maintain and update certification status as required</p>	

**Implementation Plan/Actions**

1. Coordinate with other local water utilities to evaluate strategies and determine value of joint procurement of consulting services.
2. Within the first quarter of 2020, Public Works staff shall obtain scope of work and fee proposal from qualified consultant and bring to City Council for authorization.
3. Complete analyses as needed and submit certification documents within published deadlines.

**Performance Measures**

Compliance with EPA requirements

## Hazard Mitigation Strategy S-7

<p><b>Lead Points of Contact (Title)</b></p> <p>Community Development and Fire Departments.</p>	<p><b>Partner Points of Contact (Title)</b></p> <p>FEMA Region 10</p>	<p><b>Hazards Mitigated:</b></p> <p>All Hazards</p> <p><b>Goals Addressed:</b></p> <p>Community and Public Safety</p>	<p><b>Funding Sources:</b></p> <p>City General Fund, FEMA Hazard Mitigation Planning Grant, HMGP Funds</p> <p><b>Estimated Costs:</b></p> <p>Costs vary</p>
<p><b>Strategy Vision/Objective</b></p> <p><i>Long-term objective and vision for the strategy</i></p> <p>Develop a post-disaster action plan for all hazard of concern that address: debris management, historical data gathering, substantial damage assessment, and grants management. This plan would be an appendix to the City's Emergency management plan.</p>			
<p><b>Mitigation Strategy</b></p> <p><i>Describe the program/proposed program</i></p> <p>Grant funding will be applied through one of the FEMA Hazard Mitigation Assistance (HMA) grant programs and Department of Homeland Security. To date, the City's applications have been for home elevation projects, not planning projects.</p>			
<p><b>2-Year Objectives</b></p> <p>Develop a debris management plan</p> <p>Develop data elements for historical data.</p> <p>Evaluate damage assessment procedure and make changes as needed.</p>	<p><b>5-Year Objectives</b></p> <p>Capture data for historical information</p>	<p><b>Long-Term Objectives</b></p> <p>Continual reevaluation or post disaster programs.</p>	
<p><b>Implementation Plan/Actions</b></p> <p><i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i></p> <p>Determine funding options for debris management plan.</p> <p>Apply for debris management plan funding.</p> <p>Establish data elements.</p> <p>Retrospective analysis of previous incidents to measure data elements.</p> <p>Ongoing capturing of data and publish to the community (Annual Report).</p> <p>Develop debris management plan.</p> <p>Council adopts debris management plan.</p> <p>Ongoing evaluation of data elements.</p>			
<p><b>Performance Measures</b></p> <p>Number of annual disasters by type.</p> <p>EOC Activations.</p> <p>Percent completion of Debris Management Plan.</p>			

## Hazard Mitigation Strategy S-8

<p><b>Lead Points of Contact:</b></p> <p>Community Development, Public Works, Fire Depts.</p>	<p>Partner Points of Contact (Title) <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>FEMA Region 10 Insurance Service Office</p>	<p><b>Hazards Mitigated:</b> Flood, Severe weather</p> <p><b>Goals Addressed:</b> Healthy Built and Natural Environments  Community and Public Safety  Access to Parks and Natural Resources  Strong, Vibrant Neighborhoods  Access to Parks and Natural Resources  Goals Addressed: Affordable, Safe, Quality Housing</p>	<p><b>Funding Sources:</b> FEMA, HMGP, King County Flood Control District, Conservation Futures General Fund</p> <p><b>Estimated Costs:</b> Costs for future elevations and acquisitions is unknown.</p>
<p><b>Strategy Vision/Objective:</b> Enhance the long-term goal of flood mitigation efforts in the downtown corridor of City of Snoqualmie. The City is currently a Class 5 CRS category. We have enough points to become a Class 4 however are missing a few key pieces. The objective is to complete the missing pieces to submit to Insurance Services Office and attain a Class 4 rating.</p>			
<p><b>Mitigation Strategy</b></p> <ul style="list-style-type: none"> <li>• Amend the City’s flood damage prevention ordinance to add language that will track substantial improvements and damages cumulatively, to leverage Increased Cost of Compliance (ICC) opportunities for flood insurance policy holders.</li> <li>• Adopt a higher regulatory freeboard standard above the current 1-foot standard.</li> <li>• Maintain Snoqualmie’s compliance and good standing under the National Flood Insurance program (NFIP).</li> <li>• Maintain or enhance the City’s classification under the Community Rating System (CRS).</li> <li>• Re-map the City of Snoqualmie floodplain utilizing best available data and generating a mapped based product that will actively support hazard mitigation and land use decision making within the City.</li> <li>• Pursue feasible, cost effective home elevation projects, targeting identified repetitive loss or frequently flooded properties within the Snoqualmie floodplain.</li> <li>• Acquire FEMA elevation certificates for all structures within the mapped floodplain for which the city does not currently have one.</li> </ul>			

- Tie covenants to building permits that state all homes that have been elevated, be it with grant funding or on their own, are required not use the space below the 1-foot base flood elevation for residential space.

<p><b>2-Year Objectives</b> Amend the City Municipal Code to increase the higher regulatory freeboard requirement.</p> <p>Work with partnering agencies to continue work for elevations. In 2020 the City plans to elevate at least 7 floodprone homes.</p>	<p><b>5-Year Objectives</b></p> <p>Submit to City Council the changes to the Flood Hazard Regulations regarding other higher standards.</p>	<p><b>Long-Term Objectives</b></p> <p>Ensuring all potential development in floodplains meet flood-safe standards.</p>
<p><b>Implementation Plan/Actions</b> Work with the Building and Permitting Division to enforce higher regulatory standards. Additionally, the Floodplain Management Plan update will consider similar higher regulatory standards.</p>		
<p><b>Performance Measures</b> Fewer and less extensive flood damage during a major flooding event.</p> <p>More points in the FEMA Community Rating System category for higher regulatory standards.</p>		

## Hazard Mitigation Strategy S-9

<p><b>Lead Points of Contact:</b></p> <p>Community Development Department, Public Works, City Council</p>	<p><b>Partner Points of Contact (Title)</b></p> <p>King County</p>	<p><b>Hazards Mitigated:</b></p> <p>Flood</p> <p><b>Goals Addressed:</b></p> <p>Community and Public Safety</p>	<p><b>Funding Sources:</b></p> <p>FEMA HMGP funding, RiskMAP program, General Fund, Flood Control District</p> <p><b>Estimated Costs:</b></p> <p>Unknown</p>
<p><b>Strategy Vision/Objective</b></p> <p><i>Long-term objective and vision for the strategy</i></p> <p>Consider the adoption of the “split-flow” floodway as an alternative to the regulatory floodway in effect for the City.</p>			
<p><b>Mitigation Strategy</b></p> <p>Current regulatory floodway strategies can allow properties and features to effectively split a floodway into multiple effective floodways. The impacts from this can range from increased flood impacts due to decreased floodway capacity, and changes to floodway predictions. Both situations can lead to increased damages to property, an inadequate emergency response caused by inaccurate predictions, or unpredictable and changing hazard situations, and a widening of the floodway.</p>			
<p><b>2-Year Objectives</b></p> <p>Identify high impacting and lesser impacting ‘Split Flow’ environments within floodway.</p>	<p><b>5-Year Objectives</b></p> <p>Either remove the split flow cause or adapt to split flow floodway realities.</p> <p>Identify potential future risks related to ‘Split Flow’ floodways and development in or near floodway.</p>	<p><b>Long-Term Objectives</b></p> <p>Reduce risks caused by split-flow floodways and reduce future creation of split flow floodways.</p>	
<p><b>Implementation Plan/Actions</b></p> <p><i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i></p> <ol style="list-style-type: none"> <li>1. Identify ‘Split Floodway’ situations.</li> <li>2. Identify solutions or fixes to the risks created by each split floodway situation.</li> <li>3. Reduce development that creates or reinforces high risk split floodway situations.</li> </ol>			
<p><b>Performance Measures</b></p> <p>Number of split floodway situations identified.</p> <p>Reduction of high-risk split floodways</p> <p>Reduction of impacts by floodway due to increased floodplain capacity.</p>			

## Hazard Mitigation Strategy S-10

<p><b>Lead Points of Contact:</b></p> <p>Public Works Dept.</p>	<p><b>Partner Points of Contact</b></p> <p>FEMA Region 10</p>	<p><b>Hazards Mitigated:</b></p> <p>All hazards</p> <p><b>Goals Addressed:</b></p> <p>Community and Public Safety</p> <p>Access to Safe and Efficient Transportation</p> <p>Strong, Vibrant Neighborhoods</p> <p>Efficient Transportation</p> <p>Affordable, Safe, Quality Housing</p>	<p><b>Funding Sources:</b></p> <p>FEMA, Hazard Mitigation Grant Programs, Stormwater Utility, CIP</p> <p><b>Estimated Costs:</b></p> <p>\$300-\$750K /location</p>
<p><b>Strategy Vision/Objective:</b></p> <p>Continue and/or enhance where feasible, the city’s ongoing drainage system maintenance program to reduce or minimize the impacts from stormwater flooding within the City</p>			
<p><b>Mitigation Strategy</b></p> <p>Alleviate stormwater flooding problems at:</p> <ul style="list-style-type: none"> <li>• Railroad Avenue SE between SE Fir Street and SE King Avenue SE and the Snoqualmie River.</li> <li>• Vicinity of Doone Avenue SE and SE Newton Street.</li> <li>• Northern Street and Railroad Place SE.</li> <li>• Maple Ave and Olmstead.</li> <li>• SE King St from Silva to Railroad Tracks.</li> <li>• SE Cedar Street.</li> <li>• SE Northern Street near Pickering Court.</li> </ul>			
<p><b>2-Year Objectives</b></p> <ul style="list-style-type: none"> <li>• Resolve 20% of identified drainage issues</li> <li>• Seek grant sources to assist with project funding</li> <li>• Remedy identified issues as funding is available</li> </ul>	<p><b>5-Year Objectives</b></p> <ul style="list-style-type: none"> <li>• Resolve 50% of issues identified in mitigation strategy within 5 years</li> </ul>	<p><b>Long-Term Objectives</b></p> <ul style="list-style-type: none"> <li>• On-going monitoring of city-wide drainage issues and identification of problem areas needing repair.</li> <li>• Continually seek grant opportunities to assist with funding drainage improvements</li> </ul>	
<p><b>Implementation Plan/Actions</b></p> <ul style="list-style-type: none"> <li>• Complete drainage improvements as part of City’s Utility Infrastructure Program where feasible</li> <li>• Annually assess and document city-wide drainage issues.</li> <li>• Include drainage issue assessments in 6-year comprehensive Stormwater System Plan updates.</li> </ul>			



**Performance Measures**

Less than 10 drainage issue locations in the city

## Hazard Mitigation Strategy S-11

<p><b>Lead Points of Contact:</b></p> <p>Fire, Community Development, Public Works Depts.</p>	<p><b>Partner Points of Contact</b></p>	<p><b>Hazards Mitigated:</b> Wildfire</p> <p><b>Goals Addressed:</b> Healthy Built and Natural Environments</p> <p>Community and Public Safety</p> <p>Access to Parks and Natural Resources</p> <p>Strong, Vibrant Neighborhoods</p> <p>Affordable, Safe, Quality Housing</p>	<p><b>Funding Sources:</b> General Fund</p> <p><b>Estimated Costs:</b></p>
<p><b>Strategy Vision/Objective:</b> Evaluate wildfire hazards within the City, its boundaries, and within the wildland urban interface (WUI) area and develop strategies to mitigate these hazards</p>			
<p>Mitigation Strategy</p> <ul style="list-style-type: none"> <li>• Increase in the building setback/spacing requirement for new construction in areas deemed susceptible to wildfire exposure. Use the WUI-Code to guide this process.</li> <li>• Encourage a community approach to the Firewise program by adopting Firewise programs and policies in the management of the WUI areas within Snoqualmie.</li> <li>• Consider planting standards in Wildland buffer areas to use only loose branching habitats, non-resinous woody material, high moisture content leaves and limited seasonal dead debris and other varieties that possess fire resistive traits.</li> </ul>			
<p>2-Year Objectives Support Firewise Communities throughout the City Evaluate forest management practices</p>	<p>5-Year Objectives Implement forest management practices in high risk areas that reduce fuels and improve the health of the greenspaces around the community</p>	<p>Long-Term Objectives Maintain healthy greenspaces in high risk WUI areas</p>	

#### Implementation Plan/Actions

Short-term: Fire Department staff will be ambassadors of the Firewise program. They will recruit neighborhoods to join the Firewise programs and encourage them to create defensible spaces around their homes in the WUI area.

The Fire Department will also work with the Urban Forester / Public Works Department to update the Forestry plans to identify WUI areas throughout the community.

#### 5-Year Objectives

If grants funds are available, forest mitigation will occur. This action will be led by the Public Works Department.

#### Long-Term Objectives

The Public Works Department will monitor and maintain the WUI areas affirming ladder fuels are reduced and forest health remains good.

#### Performance Measures

Number of Firewise participants within a community

Number of Firewise-best-practice parcels

## Hazard Mitigation Strategy S-12

<p><b>Lead Points of Contact:</b></p> <p>Community Development, Public Works Depts.</p>	<p><b>Partner Points of Contact</b></p> <p>FEMA Region 10 King County Flood Control District Conservation Futures District</p>	<p><b>Hazards Mitigated:</b></p> <p>Wildfire</p> <p><b>Goals Addressed:</b></p> <p>Healthy Built and Natural Environments</p> <p>Community and Public Safety</p> <p>Access to Parks and Natural Resources</p> <p>Strong, Vibrant Neighborhoods</p> <p>Affordable, Safe, Quality Housing</p>	<p><b>Funding Sources:</b></p> <p>FEMA, King County Flood Control District, Conservation Futures, CIP General Fund</p> <p><b>Estimated Costs:</b></p> <p>\$2.5 - \$5.0 Million</p>
<p><b>Strategy Vision/Objective:</b></p> <p>Riverbank Stabilization, home elevations, and home acquisitions.</p>			
<p><b>Mitigation Strategy</b></p> <ul style="list-style-type: none"> <li>Continue to pursue feasible, cost-effective property acquisition opportunities along the Snoqualmie River front.</li> <li>Continue to pursue feasible home elevation opportunities of residential properties in the flood hazard area.</li> <li>Implement design and construction for bank stabilization of Sandy Cove Park.</li> <li>Stabilize approximately 400 feet of undermined riverbank at the “Record Office Site” (the intersection of Park Ave SE and SE River St.).</li> </ul>			
<p><b>2-Year Objectives</b></p> <p>By the end of 2021,</p> <ul style="list-style-type: none"> <li>Complete 1 or more additional acquisitions;</li> <li>Complete design and permitting of Sandy Cove;</li> <li>Complete Record Office bank stabilization construction</li> </ul>	<p><b>5-Year Objectives</b></p> <p>By the end of 2026,</p> <ul style="list-style-type: none"> <li>Complete 1 or more additional acquisitions;</li> <li>Complete Sandy Cove bank stabilization construction;</li> <li>Complete 5 or more additional home elevations</li> </ul>	<p><b>Long-Term Objectives</b></p> <p>-Acquire the remaining 10 -13 flood-prone parcels with residential structures within 100’ of Snoqualmie River.</p> <p>-Protect infrastructure from River erosion.</p>	
<p><b>Implementation Plan/Actions</b></p> <p><i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i></p> <p>2020-2021: Work with King County &amp; other appropriate stakeholders to secure designs and permits for both the Sandy Cove and Record Office bank stabilization sites.</p> <p>2021-2022: Complete construction of the Sandy Cove and Record Office bank stabilization sites.</p> <p>2020 – ongoing. Between 10-15 flood-prone residentially zoned parcels along the Snoqualmie South bank remain to be acquired. City Council policy &amp; acquisition funding sources both only allow house purchases</p>			

from willing sellers. As such the City remains in contact with riverfront homeowners to make them aware of the City purchase interest. When interest is voiced, the City secures an appraisal, makes an offer, completes purchase, process tenant relocations as applicable, and secures residential structure deconstruction, material salvage/recycling, and demolition.

**Performance Measures**

Flood-prone houses acquired; Number of home elevations; Number of structures and/or square footage of structures and impervious surfaces removed.

Linear feet of failing or endangered riverbank stabilized to site-selected factors of safety.

## Hazard Mitigation Strategy S-13

<p><b>Lead Points of Contact (Title)</b></p> <p>Community Development Department and Communications</p>	<p><b>Partner Points of Contact (Title)</b></p>	<p><b>Hazards Mitigated:</b> All Hazards</p> <p><b>Goals Addressed:</b> Affordable, Safe, Quality Housing</p> <p>Community and Public Safety</p> <p>Strong, Vibrant Neighborhoods</p> <p>Economic Development</p>	<p><b>Funding Sources:</b> General Fund</p> <p><b>Estimated Costs:</b> Unknown</p>
<p><b>Strategy Vision/Objective</b> <i>Long-term objective and vision for the strategy</i></p> <p>Develop a public outreach program coordinating with property management/improvement vendors on methods and opportunities to educate the public on ways to protect their property from the potential impacts of all hazards of concern.</p>			
<p><b>Mitigation Strategy</b> <i>Describe the program/proposed program</i></p> <p>A more informed public means property owners who make decisions based on risk and fewer unexpected losses during a hazardous event.</p> <p>Effective outreach efforts are a key piece of communication. Letters sent annually, outreach events, project-specific meetings, and providing technical assistance are all components of effective outreach. Repetition of messages and continued outreach activities are also important to ensuring that messages are delivered. Engaging as many types of communication mediums as possible will also ensure that outreach efforts are effective.</p>			
<p><b>2-Year Objectives</b></p> <p>New initiatives are implemented and strategized.</p>	<p><b>5-Year Objectives</b></p> <p>Documentation that more residents are engaged.</p>	<p><b>Long-Term Objectives</b></p> <p>An informed public that is prepared for the effects of all hazards of concern and how they can protect their property.</p>	

### **Implementation Plan/Actions**

*This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.*

The following activities should be conducted on an annual basis to make the public more aware of hazards in their area:

1. Realtor, insurance agent, and other stakeholder outreach – workshops, meetings, or other outreach to professionals who need hazard risk information.
2. Annual event – separate or coordinated event every year that focuses on property protection.
3. Maintaining a robust website, including an interactive map, with preparedness, mitigation, regulation, and other risk information. The website will be updated at least annually, and the interactive map will incorporate new data when available.

### **Performance Measures**

- Number of stakeholder groups reached
- CRS points for outreach and public information activities

## Hazard Mitigation Strategy S-14

<p><b>Lead Points of Contact (Title):</b></p> <p>Dylan Gamble Assistant Planner, Community Development Department</p>	<p><b>Partner Points of Contact (Title)</b> <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>N/A</p>	<p><b>Hazards Mitigated:</b> Flood, severe weather</p> <p><b>Goals Addressed:</b> Access to Safe and Efficient Transportation</p> <p>Affordable, Safe, Quality Housing</p> <p>Community and Public Safety</p> <p>Healthy Built and Natural Environments</p> <p>Strong, Vibrant Neighborhoods</p>	<p><b>Funding Sources:</b> General Fund, Flood Control District</p> <p><b>Estimated Costs:</b> Unknown</p>
<p><b>Strategy Vision/Objective</b> <i>Long-term objective and vision for the strategy</i></p> <p>Participate in the Basin Technical Committee process of the King County Flood Control District to leverage resources for flood hazard mitigation.</p>			
<p><b>Mitigation Strategy</b> <i>Describe the program/proposed program</i></p> <p>The Basin Technical Committee works to provide the Flood Control District technical local working knowledge and stakeholder feedback to the decisions and policies enacted by their represented cities and organizations.</p>			
<p><b>2-Year Objectives</b></p> <p>N/A</p>	<p><b>5-Year Objectives</b></p> <p>N/A</p>	<p><b>Long-Term Objectives</b></p> <p>Continued attendance to program and similar flood basin committees.</p>	
<p><b>Implementation Plan/Actions</b></p> <p>Maintain attendance of flood control district basin technical committees, participate in guidance of flood control districts process and decision making.</p>			
<p><b>Performance Measures</b></p> <p>N/A</p>			

## Hazard Mitigation Strategy S-15

<p><b>Lead Points of Contact (Title)</b></p> <p>Emergency Manager</p>	<p><b>Partner Points of Contact (Title)</b>  <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>King County          FEMA Region 10</p>	<p><b>Hazards Mitigated:</b>          All Hazards</p> <p><b>Goals Addressed:</b>          Access to Health and Human Services           Access to Safe and Efficient Transportation           Community and Public Safety</p>	<p><b>Funding Sources:</b> General Fund, FEMA Hazard Mitigation Programs</p> <p><b>Estimated Costs:</b>          Unknown</p>
<p><b>Strategy Vision/Objective</b>  <i>Long-term objective and vision for the strategy</i></p> <p>Develop a public outreach strategy that maximizes the City’s capabilities through its ongoing programs that provide multiple messages that support all phases of emergency management</p>			
<p><b>Mitigation Strategy</b></p> <p>The City tests the emergency notification systems annually with published results. The City employs the Emergency Alert system and AM radio broadcast system, with signal notification for the public. In 2013, the Emergency Management department entered into an agreement with Everbridge Community Alert company to replace the R911 system that had become unreliable and antiquated. This system can be used to issue any type of message to any group.</p>			
<p><b>2-Year Objectives</b></p> <ul style="list-style-type: none"> <li>Improved outreach efforts.</li> </ul>	<p><b>5-Year Objectives</b></p> <ul style="list-style-type: none"> <li>Annual exercises are conducted to prepare the City for eminent flooding.</li> </ul>	<p><b>Long-Term Objectives</b></p> <ul style="list-style-type: none"> <li>Smooth operation of the Flood Warning Program and integration with King County’s programs.</li> </ul>	

### **Implementation Plan/Actions**

*This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.*

1. Review on an annual basis the various components of the Flood Warning Program and make improvements where necessary.
2. Conduct an annual flood response exercise with other agencies to ensure the region is prepared for flood response and recovery actions necessary. Write up an after-action report.
3. Improve public outreach materials such as flood inundation maps and online interactive map applications that show the inundation areas of the four flood phases.
4. Continue monitoring the status of streamgages to ensure they are collecting data accurately. Streamgages provide the underlying data that are used as the basis for Flood Alert notifications and openings of the Flood Warning Center.

### **Performance Measures**

- Subscribers to the Flood Alert app.
- CRS points for Activity 610.

## Hazard Mitigation Strategy S-16

<p><b>Lead Points of Contact (Title)</b></p> <p>Community Development Department</p>	<p><b>Partner Points of Contact (Title)</b> <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i></p> <p>King County Flood Control District</p> <p>King County River &amp; Floodplain Management Section</p>	<p><b>Hazards Mitigated:</b></p> <p>Flood, severe weather</p> <p><b>Goals Addressed:</b></p> <p>Access to Safe and Efficient Transportation</p> <p>Affordable, Safe, Quality Housing</p> <p>Community and Public Safety</p> <p>Economic Development</p> <p>Equity in Government Practices</p> <p>Healthy Built and Natural Environments</p>	<p><b>Funding Sources:</b></p> <p>General Fund, King County Flood Control District</p> <p><b>Estimated Costs:</b></p> <p>Costs vary</p>
<p><b>Strategy Vision/Objective</b> <i>Long-term objective and vision for the strategy</i></p> <p>Continue to participate/support the King County Public Outreach Strategy developed to coordinate countywide outreach programs credited under the CRS program.</p>			
<p><b>Mitigation Strategy</b> <i>Describe the program/proposed program</i></p> <p>Effective outreach efforts are a key piece of comprehensive floodplain management. Letters sent annually, outreach events, project-specific meetings, and providing technical assistance are all components of effective outreach. Repetition of messages and continued outreach activities are also important to ensuring that messages are delivered. Engaging as many types of communication mediums as possible will also ensure that outreach efforts are effective.</p>			
<p><b>2-Year Objectives</b></p> <p>New initiatives are implemented.</p>	<p><b>5-Year Objectives</b></p> <p>Documentation that more floodprone residents are engaged.</p>	<p><b>Long-Term Objectives</b></p>	

### **Implementation Plan/Actions**

The following activities should be conducted on an annual basis as a way to make the public more aware of flood hazards and risks:

1. Flood brochure – sent to every property owner in the floodplain.
2. Repetitive loss letter – sent to properties with known repeated losses.
3. Realtor, insurance agent, and other stakeholder outreach – workshops, meetings, or other outreach to professionals who need flood risk information.
4. News media outreach – coordinated effort to share stories about flood risk with the news media.
5. Annual event – separate or coordinated event every year that focuses on flood risk.

The following activities are not annual occurrences, but should be maintained to help facilitate the availability of flood risk information:

1. Videos demonstrating flood risk, flood preparedness, and property protection measures that can be taken.
2. Technical assistance to property owners on reducing flood risk on their property, including home elevation support and small actions to reduce localized flood risk.
3. Maintaining a robust website, including an interactive map, with flood preparedness, mitigation, regulation, and other flood risk information. The website will be updated at least annually, and the interactive map will incorporate new data when available.
4. Floodplain management permitting bulletins will be created to help permit applicants understand the regulations and their purpose.

### **Performance Measures**

- Number of stakeholder groups reached
- CRS points for outreach and public information activities

## Hazard Mitigation Strategy S-17

<b>Lead Points of Contact (Title)</b>  Public Works Department	<b>Partner Points of Contact (Title)</b> <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i> N/A	<b>Hazards Mitigated:</b> Flood, earthquake  <b>Goals Addressed:</b> Economic Development  Access to Safe and Efficient Transportation  Strong, Vibrant Neighborhoods	<b>Funding Sources:</b> CIP PSRC  <b>Estimated Costs:</b> \$3M
<b>Strategy Vision/Objective</b> <i>Long-term objective and vision for the strategy</i> Replace two small bridges that have rotting wood pilings and abutments along Meadowbrook Way SE. These facilities were damaged by the Nisqually earthquake that required repair by King County bridge crews. Recent bridge inspection records indicate repair would be as costly as complete reconstruction.			
<b>Mitigation Strategy</b>  Replacing the bridges with culverts is the desired solution to the issue. Design work for the replacement of the bridges is complete. Funding for construction is needed to execute the solution.			
<b>2-Year Objectives</b> <ul style="list-style-type: none"> <li>Continue to seek funding for construction through grants.</li> <li>Identify other possible funding sources</li> </ul>	<b>5-Year Objectives</b> Bridge replacement work 100% complete	<b>Long-Term Objectives</b> Evaluate effectiveness of the culvert bridge replacement	
<b>Implementation Plan/Actions</b> <ol style="list-style-type: none"> <li>Pursue grant funding opportunities through PSRC</li> <li>Identify other possible grant sources to fund construction</li> <li>Apply for grant opportunities as available</li> </ol>			
<b>Performance Measures</b> Bridge replacement work completed within 2 years			

## Hazard Mitigation Strategy S-18

<b>Lead Points of Contact (Title)</b>  Community Development Department	<b>Partner Points of Contact (Title)</b> <i>Who else outside your jurisdiction benefits from the strategy or will help implement the strategy?</i>	<b>Hazards Mitigated:</b> Earthquake  <b>Goals Addressed:</b> Affordable, Safe, Quality Housing  Community and Public Safety	<b>Funding Sources:</b> General Fund  <b>Estimated Costs:</b> Costs vary
<b>Strategy Vision/Objective</b> <i>Long-term objective and vision for the strategy</i> <ul style="list-style-type: none"> <li>Promote the structural seismic retrofit of structures built before 1974 by a targeted outreach to the property owners of these structures.</li> <li>Conduct seismic vulnerability study of critical facilities identified by City emergency managers.</li> </ul>			
<b>Mitigation Strategy</b> <i>Describe the program/proposed program</i> Letters sent annually, outreach events, project-specific meetings, and providing technical assistance are all components of effective outreach. Repetition of messages and continued outreach activities are also important to ensuring that messages are delivered. Engaging as many types of communication mediums as possible will also ensure that outreach efforts are effective. Adjust building codes to require seismic retrofit for buildings built prior to 1974.			
<b>2-Year Objectives</b>  New initiatives are implemented.	<b>5-Year Objectives</b>  Documentation that more residents are engaged.	<b>Long-Term Objectives</b> All homes are aware of the need to retrofit their homes/businesses	
<b>Implementation Plan/ Actions</b> <i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i> The following activities should be conducted on an annual basis as a way to make the public more aware of seismic hazards and risks: <ol style="list-style-type: none"> <li>Seismic brochure – sent to every property owner with structures built prior to 1974.</li> <li>Realtor, insurance agent, and other stakeholder outreach – workshops, meetings, or other outreach to professionals who need seismic risk information.</li> <li>News media outreach – coordinated effort to share stories about seismic risk with the news media.</li> <li>Annual event – separate or coordinated event every year that focuses on seismic risk.</li> </ol> The following activities are not annual occurrences, but should be maintained to help facilitate the availability of seismic risk information: <ol style="list-style-type: none"> <li>Videos demonstrating property protection measures that can be taken.</li> <li>Technical assistance to property owners on reducing seismic risk on their property.</li> <li>Maintaining a robust website, including an interactive map, with seismic risk. The website will be updated at least annually, and the interactive map will incorporate new data when available.</li> </ol>			
<b>Performance Measures</b> Tracking building permits applied for.			