

City of Sammamish Plan Annex

Introduction

The City of Sammamish is located west of the Cascade Mountains in the Puget Sound region, about 20 miles east of Seattle. The city takes its name from Lake Sammamish, a picturesque body of water that forms the city's western border. To the south, Sammamish is bordered by Issaquah, to the north by Redmond, and to the east, by rural King County. Sammamish covers 24 square miles, measures almost seven miles north to south, and six miles east to west. In 2018, Sammamish had an estimated population of roughly 65,700 residents. The City's population and housing stock is oriented to families with children; with roughly one-third of the population under the age of 18. Comparatively, the numbers of young adults under the age of 30, and older adults over the age of 65, are relatively small. Sammamish is largely a low-density residential city, with about 60 percent of its land area developed in single-family residences. Commercial and multi-family uses occupy about three percent of the land area. About 11 percent of the city is vacant land.

History

Prior to 1999, Sammamish was classified as unincorporated King County; however, by the early 1980s, as the pace of development on the Sammamish plateau was accelerating, interest in incorporation or annexation to a neighboring city was also increasing. In the early 1990s, two separate elections, one for incorporation and one for annexation, were defeated. By the late 1990s, the path of incorporation emerged as the most viable option for the

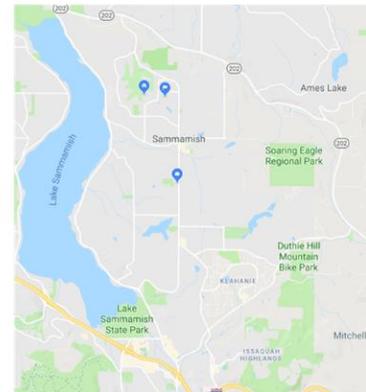
City of Sammamish Profile

Incorporated: 1999

Population: 65,733

Location: 47.6163° N,
122.0356° W

Area: 24 sq. miles





area to achieve cityhood. On November 3, 1998, nearly 8,000 citizens voted to create the City of Sammamish. At midnight on August 31, 1999, incorporation took effect and Sammamish became its own City.

Development Trends

Since incorporation in August 1999, Sammamish has continued to be largely a low-density residential city, with about 60 percent of its land area developed in single-family residences. Commercial and multi-family uses occupy about three percent of the land area. About 11 percent of the city is vacant land. A newly developed Town Center is the only significant area in Sammamish for future commercial and employment growth.

Due in part to the recession, Sammamish development activity from 2006 to 2012 was limited. No major commercial construction took place. Residential construction consisted of single family and townhouse development. The pace of construction slowed during 2008 and 2009 but picked up substantially in 2010 and 2011. This increased pace of construction continued through 2017. On April 28, 2015, the residents of Klahanie and several adjacent neighborhoods voted to annex to Sammamish. The annexation became official on Jan. 1, 2016, raising the city’s total population to approximately 61,000.

Jurisdiction Point of Contact:

Name: Andrew Stevens
 Title: Emergency Manager
 Entity: City of Sammamish
 Phone: 425-295-0549
 Email: astevens@sammamish.us

Plan Prepared By:

Name: Andrew Stevens
 Title: Emergency Manager
 Entity: City of Sammamish
 Phone: 425-295-0549
 Email: astevens@sammamish.us

In December of 2017, City Council approved an emergency ordinance that halted all new residential development including Town Center to research and address limitations of current infrastructure, mainly transportation corridors, and how they would be affected by continued growth. The moratorium was in effect until December 2018. It is unknown at this time what development trends will be within the coming years as any new construction, including the Town Center, will be constructed under new concurrency standards and development regulations.

City of Sammamish Risk Summary

Hazard Risk and Vulnerability Summary

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<p>Earthquake</p>	<p>Sammamish ranked earthquake as the greatest threat to the City of Sammamish as it is threatened by several fault lines capable of producing high magnitude earthquakes subjecting the community to violent shaking and ground movement. Seismic event could also produce secondary hazards, such as landslides, liquefaction, and a seiche of Lake Sammamish, which would further threaten the lives, property, and critical infrastructure of the community.</p> <p>Seismic scenarios particularly looked at as threats to the City of Sammamish included the Cascadia Subduction Zone earthquake (mag. 9.0), a Seattle Fault earthquake (mag 7.2), and a Southern Whidbey Island earthquake (mag. 7.4).</p>	<p>The primary factor which reduce the City of Sammamish’s vulnerability to seismic threats is the average age of the building stock. As a relatively new community in the region, most homes, businesses, and public buildings were built to more recent structural code standards, meaning a reduced risk of collapse of failure during earthquakes. The building official for Sammamish did not believe that the city contained any unreinforced masonry structures either, which pose a high risk of collapse during seismic events.</p> <p>While the building codes of most Sammamish structures strengthen the City’s resiliency from earthquakes, there are several factors which heighten vulnerabilities. The main transportation arterials on and off the Sammamish plateau end in areas susceptible to liquefaction, potentially isolating the jurisdiction logistically post disaster. Sammamish is also prone to landslides, which may be exacerbated by ground movement associated with seismic events. An earthquake along the Seattle Fault, which bisects the Southern portion of the jurisdiction, may also produce a seiche of Lake Sammamish, threatening homes and infrastructure bordering the body of water.</p>	<p>Of the three seismic scenarios researched, a Northern rupture of the Seattle Fault would result in the most localized damage throughout the City of Sammamish, with every structure exposed to violent ground movement, resulting in structural damage, the displacement of internal objects (furniture, etc.), and potentially other cascading failures (loss of infrastructure, fires, etc.). The severity of the shaking directly threatens human life and welfare and could very well result in widespread casualties and damage to the built environment.</p> <p>Damage to critical infrastructure would encompass nearly every sector with each affecting each other through interdependencies. There is expected to be widespread damage to the transportation, communication, water, and wastewater infrastructure locally, which in turn would affect other critical</p>

		<p>The Northwest Pipeline, a high-pressure natural gas transmission pipeline, bisects the city North/South. A seismic incident could result in a rupture of the pipeline. If a rupture was to ignite, the result would be very large flames burning at extremely high temperatures, threatening lives and property.</p>	<p>sectors such as government and emergency services. Certain seismic scenarios would have greater region consequences, further threatening the City of Sammamish’s long-term recovery. A large regional earthquake, such as the Cascadia Subduction Zone earthquake, would affect the region for numerous years and the long-term economic impact to the region could last for generations.</p>
<p>Flood</p>	<p>The City of Sammamish has limited areas mapped as flood hazard zones, with only a small portion of the jurisdiction bordering Lake Sammamish mapped as within the FEMA 100-year floodplain. Flooding as result of water level rise of Lake Sammamish is rare, with no prior incident know to City staff to the base risk assessment from.</p>	<p>The structures mapped within the FEMA 100-year floodplain are the lake front properties in Sammamish, none of which are repetitive loss properties.</p> <p>Most of the jurisdiction sits at higher elevations which greatly reduces the vulnerability to flood hazards.</p> <p>Based on 2012 building roofline imagery, 254 buildings and 12 storm water structures fall within the FEMA 100-year flood plain.</p>	<p>Flooding resulting in a water level rise of Lake Sammamish may threaten homes and structures bordering the lake. These homes are required to participate in the National Flood Insurance Program and would have flood insurance.</p> <p>A flood of Lake Sammamish may potentially affect one of the jurisdiction’s main transportation corridors, East Lake Sammamish Parkway, to the South, and Highway 202 to the North. A disruption to either of these main points of ingress/egress would have cascading</p>

			consequences for the jurisdiction and its population.
Landslide	<p>Sammamish is home to a variety of landslide hazards which include rockfalls, deep slope failure, and shallow debris flows. Gravity acting on a slope is the primary cause of landslides, but there are other important and dynamic factors that serve as triggers.</p> <p>Saturation of slopes by precipitation (rain or snowmelt) weakens soil and rock by reducing cohesion and increasing the pressure in pore spaces, pushing grains away from each other. Erosion and undercutting of slopes by streams or burst pipes increase slope angles and decrease slope stability.</p> <p>Ground shaking from earthquakes can also create stresses that weaken slopes and physically cause slope movement.</p> <p>Located on a plateau of roughly 500 ft in elevation, nearly the entire western and northern perimeters of Sammamish is under threat of landslide.</p>	<p>Numerous homes, infrastructure, and key transportation routes within Sammamish are vulnerable to landslide hazards. Two of the city’s primary arterial roads, East Lake Sammamish Parkway and Sahalee Way fall within, or are threatened, by landslides.</p> <p>In 1982, a landslide impacted Sahalee Way. More than 800 ft of the city’s primary artery was affected, in some sections breaks in the road created cliffs greater than 10 ft high. Repairs to the roadway took over a year and a half to complete and cost the city more than half a million dollars.</p>  <p>Other assets at risk include 786 buildings and 425 storm water structures which fall within the identified landslide hazard areas of the City (based upon 2012 roofline imagery).</p>	<p>Besides the immediate risk from landslides, which could threaten lives, property, and the environment, the long-term impacts of a landslide which affected one or more of the city’s primary transportation corridors would create several long-term issues for the community.</p> <p>Sahalee Way itself averages over 21,000 vehicle trips a day and is the primary point of ingress/egress of the community to the north. A landslide, such as the 1982 slide, would create significant logistical consequences and cascading failures across other critical infrastructure sectors including energy and telecommunications (whose infrastructure assets also are placed within the roadways right-a-way).</p> <p>A long-term loss of either East Lake Sammamish Parkway or Sahalee way could result severely affect the economy of the city.</p>
Severe Weather	Severe weather frequently impacts the City of	Sammamish is vulnerable to severe weather, especially winter	Severe weather can impact the city by

	<p>Sammamish, however stronger storms and high wind events most commonly affect the jurisdiction in late autumn, winter, and early spring.</p> <p>Historically, severe weather events have resulted in high winds, freezing rain, ice and snow, all of which affect transportation, emergency services, communications, and the energy sector.</p> <p>Heat waves can also impact the residents of Sammamish. Vulnerable populations may be susceptible to heat waves, which are becoming more and more common during the summer months. Due to rising and prolonged heat waves, the City of Sammamish has utilized public facilities as cooling centers for at-risk populations.</p>	<p>storm events, due to the limitations of the City’s transportation infrastructure and high density of trees. During these winter storm incidents, Sammamish often experiences a high level of toppled or fallen trees/limbs which often result in downed power lines, damage to homes, and blocked roads. They also pose a direct life safety risk to city residents. Due to the jurisdiction’s altitude and geography, snow accumulations are often higher than neighboring communities and ice makes may of the city’s steep, hilly roads impassable.</p> <p>Long-term power and transportation disruptions pose direct threat to life safety and human welfare, especially those vulnerable populations such as those with access or functional needs, the elderly, and children. Hazardous driving conditions and disruption of critical infrastructure also places severe limitations on the logistical capabilities of the public and private entities on the plateau, adding the additional threat of economic loss.</p>	<p>essentially shutting down roadways and points of entry/exit from the plateau. High winds, heavy snow, and ice accumulations have resulted in hundreds of dollars in disaster costs relating to debris removal and snow/ice removal. These storms nearly always affect the city’s electrical and telecommunications lines and have resulting in power disruptions of multiple days.</p> <p>Hazardous driving conditions pose significant threats to driving and can result in fatal vehicular accidents, damage to property, and exacerbate snow/debris removal due to abandoned vehicles in the roadways.</p>
<p>Tsunami/ Seiche</p>	<p>As outlined in a magnitude 6.7 earthquake of the Seattle Fault developed by the Earthquake Engineering Research Institute and the Washington Military Department Emergency Management Division, jurisdictions, which the Faultline passes through, could expect the rupture to raise the ground surface</p>	<p>Lake Sammamish is bordered by residential structures with limited access to vertically evacuate up the plateau if required. There has been no true study of the consequences of a seiche in Lake Sammamish, nor has modelling been completed to highlight vulnerabilities to infrastructure and property on the lakefront. If a seiche were to occur there would be limited to no time to alert and warn threatened</p>	<p>Impacts to residential homes and infrastructure along the lakefront could be severe in the event of a seiche. Lives would be threatened, homes damaged or destroyed, roadways and infrastructure compromised, and damage to environmentally</p>

	<p>of the southern side of the fault by roughly 6.5 feet.</p> <p>Since the Seattle fault bisects the southern half of Lake Sammamish, a sudden elevation rise of nearly 7 ft would displace an enormous volume of water resulting in a seiche of the water body.</p> <p>The report states that the scenario earthquake most certainly would generate damaging seiches in bodies of water throughout the study region. Like tsunamis, seiches threaten people and structures. Historical ruptures of the Seattle Faultline have resulted in tsunamis/seiches of up to ten feet or more.</p>	<p>populations, and lives and structures would be at risk. A seiche may also impact East Lake Sammamish Parkway, which is a primary transportation arterial of the jurisdiction.</p>	<p>sensitive areas should be expected. It would also be expected to incur hazardous materials releases into the lake as a result of debris washing into the lake post seiche.</p>
<p>Volcano</p>	<p>While Sammamish is not threatened directly by volcanic lava or debris flow, the city could be affected by ash fall if Mount St. Helens, Mount Rainier, Mount Baker or Glacier Peak.</p>	<p>Volcanic ash threatens health, critical infrastructure, personal property, and the environment.</p> <p>Populations such as those with respiratory illnesses, the young, and elderly may be especially vulnerable to exposure from volcanic ash.</p>	<p>Significant ashfall in Sammamish would directly impact the transportation sector and place major constraints on public and private vehicular travel.</p> <p>Volcanic ash grinds down and jams machinery. It contaminates and clogs ventilation, water supplies and drains.</p> <p>Ash also causes electrical short circuits in transmission lines (especially when wet), in computers, and in microelectronic</p>

			<p>devices. Power often goes out during and after ashfall. Long-term exposure to wet ash can corrode metal.</p> <p>The weight of ash can cause roofs to collapse. A one-inch layer of ash weighs 5-10 pounds per square foot when dry, but 10-15 pounds per square foot when wet, potentially threatening the integrity of rooftops.</p> <p>Wet ash is slippery. Ash is picked up and blown around by wind, and human activity can be disrupted for months after an eruption.</p>
<p>Wildfire</p>	<p>The City of Sammamish is home to steep forested slopes and numerous urban forest interfaces. The City encompasses 13,228 acres, 48% which is covered by tree canopy/woody shrubs and 23% which is grass and other vegetation.</p> <p>While wildfire risk west of the Cascade mountains has historically been low, rising global temperatures, stressed trees, and increasing frequencies of drought conditions have increased the likelihood of wildfire in the region.</p> <p>Prior incident of wildfire on the Sammamish</p>	<p>While the tree density and prevalence of urban forest interfaces in the City increases the threat of wildfire in the jurisdiction, one of the greatest vulnerabilities posed is the limited transportation corridors off the plateau. These limitations would place severe constraints on the population protection measures, such as evacuation.</p> <p>A recent study compared the wildfire risk of 5000 communities across the western United States to Paradise, CA, where 85 people died and nearly 19,000 buildings were destroyed in the 2019 Camp Fire. Evacuation constraint was one factor examined using a ratio of households to major exit roads. Paradise averaged roughly 1,800</p>	<p>If conditions were right, a wildfire could easily spread to where local firefighting resources would be overwhelmed. The result could result in the loss of life and large-scale loss of property within the community.</p> <p>If a wildfire were to result as a secondary disaster from other hazards, such as an earthquake or natural gas pipeline rupture, then fire suppression tactics could be compromised due to damage to water and</p>

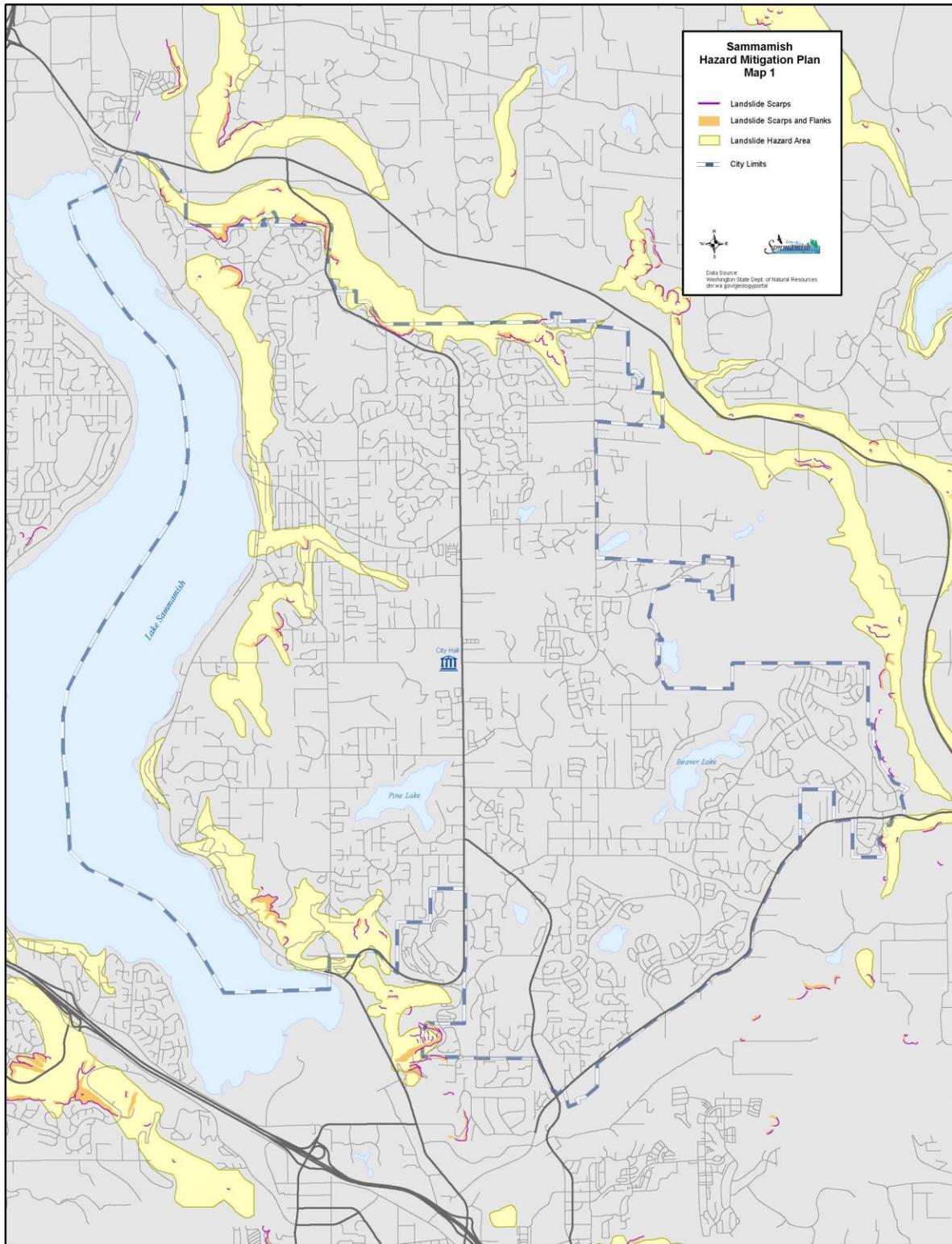
	<p>Plateau include the 1939 Beaver Lake Fire, which began in Sammamish burned over 35 square miles of land in two days, more than double the size of present-day Sammamish.</p>	<p>households per each evacuation route, which was one of the highest egress ratios of the communities examined.</p> <p>Using the same calculations, the City of Sammamish’s egress ratio would be 3,165 households per evacuation route, 1.7 times higher than Paradise (based on 7 Principal and Minor Arterial roads off the plateau.</p> <p>Additional vulnerabilities include numerous neighborhoods with only one point of entry/exit, heavily forested residential developments, limited setbacks between homes and natural fuels resulting in limited defensible space, and building practices which include wood shake shingles.</p>	<p>transportation infrastructure.</p> <p>Constraints on evacuation routes would further exacerbate the consequences of a rapidly evolving wildfire incident and could result in greater loss of life if evacuation routes become strained or overcrowded.</p>
<p>Cyber Attack</p>	<p>Cyber-attacks are continually ongoing. Whether it is attempts to log into networks, email solicitations or other vectors they continue daily. Early in 2019 the City of Sammamish was a victim of a ransomware event. The event locked and encrypted workstations, servers, and storage devices. The event basically shut down all computing capabilities for upwards of six weeks while restoration efforts were ongoing to restore the city’s computer systems.</p>	<p>Prior to the 2019 ransomware attack, the city’s IT infrastructure and state of security capabilities was known to be weak by current technology standards. Outdated Firewalls with conflicting and incomplete firewall rules and no advanced threat protection capabilities. Insufficient email filtering and both server and endpoint patching was not current. Staff cyber security/email phishing training was inconsistent.</p> <p>Following the attack, several protective security measures have but put into place, however more work is needed as it relates to eliminating single points of failure and providing consistent end-user cybersecurity training for all city personnel.</p>	<p>The 2019 ransomware event encrypted and disabled all online servers in the organization. The initial response was to shut down all servers, PC’s and Internet access. Gateway server to cloud storage was also encrypted and could only be accessed via the vendor’s portal. Cloud storage was discovered to be partially encrypted as well. All city services that relied on computer related resources were unavailable for upwards of six weeks. Only cloud services, email & city website,</p>

			<p>were available for staff and public.</p> <p>While new cyber security measures have since been put into place, this event highlighted the dependency on numerous essential functions within the city, as well as an estimation of time needed to fully restore these systems when they are compromised.</p>
<p>Dam Failure</p>	<p>The City of Sammamish contains 7 earthen dams surrounding storm water retention ponds and natural bodies of water (lakes and ponds).</p> <p>A failure of an earthen dam would normally be the result of overtopping or embankment failure due to an acute incident such as an earthquake or intentional act of sabotage, or a maintenance or design flaw.</p>	<p>The following are examples of conditions that may occur at a dam that usually constitute an emergency.</p> <ul style="list-style-type: none"> • Dam aging or design and construction oversights may cause a dam to fail. • Extreme weather events that may exceed design conditions can cause significant flow through the emergency spillway or can overtop the embankment. • Accidental or intentional damage to the dam may also result in an emergency • Natural disaster such as earthquakes may also result in earthen dam failure. 	<p>Structures, including numerous residential homes, and critical infrastructure would be impacted by a catastrophic dam failure. An expected or potential dam failure would also impact downstream residents as protective measures, such as evacuation, are implemented.</p> <p>The failure of certain dams within the jurisdiction would impact main transportation corridors within the City and the populations they serve.</p>
<p>Pandemic</p>	<p>Pandemic is defined as a disease occurring over a wide geographic area and affecting a high proportion of the population. A pandemic can cause sudden, pervasive illness in all age groups on a local or</p>	<p>The City of Sammamish is seemingly less vulnerable to many of the secondary impacts of a pandemic. A large majority of the City’s residents work in industries which may be more able to allow for teleworking or</p>	<p>The impacts of a pandemic outbreak are hard to estimate, as the severity of the virus, compliance with Public Health mitigations, and resiliency of public health systems cannot</p>

	<p>global scale. A pandemic is a novel virus to which humans have no natural immunity that spreads from person-to-person. A pandemic will cause both widespread and sustained effects and is likely to stress the resources of both the State and federal government. An epidemic occurs when new cases of a certain disease, in a given population, substantially exceed what is expected. An epidemic may be restricted to one locale, or it may be global, at which point it is called a pandemic</p>	<p>other forms of socially distancing work.</p> <p>The City’s budget is not contingent upon sales tax either, therefore a pandemic which resulted in the widespread closures of publicly facing businesses would not severely impact the operational budget of the City nor it’s continuity of operations.</p>	<p>be known until the new threat emerges. Medical systems may quickly be overwhelmed, long-term closures of businesses and schools may result in widespread economic recession, and the recovery may last for years beyond the initial hazard.</p>
--	--	--	--

Hazard and Asset Overview Map(s)

Figure 1: Hazard Map – Landslide Hazards





Plan Update Process

Jurisdiction Planning Team

NAME	TITLE	ORGANIZATION	CONTRIBUTION
Andrew Stevens	Emergency Manager	City of Sammamish	Project Lead
Tracy Cui	Senior Planner	City of Sammamish	Community Development SME
Evan Fischer	Management Analyst	City of Sammamish	Community Development SME
Beth Carpenter	GIS Coordinator	City of Sammamish	GIS Support
Andrew Zagars	City Engineers	City of Sammamish	Public Works and Engineering SME
Drew Noble	Senior Information Systems Manager	City of Sammamish	Information Technology SME
Grayson Court	Management Analyst	City of Sammamish	Parks and Recreation SME
Danika Globokar	Senior Stormwater Engineer	City of Sammamish	Public Works Stormwater SME
Darci Donovan	Special Projects Coordinator	City of Sammamish	Community Development SME
Chris Hankins	Senior Planner	City of Sammamish	Code Enforcement and Community Development SME
Sharon Gavin	Communications Manager	City of Sammamish	Communications and Public Outreach
Doug McIntyre	Transportation Planner	City of Sammamish	Transportation SME
Dan Berlin	Building Official	City of Sammamish	Building Code SME

Plan Update Timeline

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
King County Regional HMP Kick-Off Meeting	11/28/2018	King County introduced regional hazard mitigation planning process and timeline	Participating jurisdictions and King County Hazard Mitigation Planning Team.
Regional Hazard Mitigation Planning Workshop: Risk Assessments	12/13/2018	The workshop was to identify what hazards impact each community and then begin to identify needs and strategies to mitigate those risks.	Participating jurisdictions and King County Hazard Mitigation Planning Team.
Local Hazard Mitigation Steering Committee Meeting	2/25/2019	Discussed jurisdictional annex requirements and hazard mitigation steering committee expectations.	Jurisdictional Planning Team, King County Hazard Mitigation Strategist, SME from Water and Sewer special districts.

King County HMP Steering Committee Meeting	2/19/2019	Review the planning timeline and the draft plan annex template	King County HMP Steering Committee
King County HMP Steering Committee Meeting	3/12/2019	Review public outreach strategies for regional plan	King County HMP Steering Committee
Hazard Mitigation Plan Annex Workshop	6/10/2019	Discuss public process, risk assessment process, and reviewed mitigation plan annex templates	Participating jurisdictions and King County Hazard Mitigation Planning Team.
King County Hazard Mitigation Strategy Workshop	7/25/2019	Workshop on developing hazard mitigation planning strategies.	Participating jurisdictions and King County Hazard Mitigation Planning Team.
Local Hazard Mitigation Steering Committee Meeting	9/18/2019	Review and agree upon the hazards threatening the City then which assets are exposed to those hazards. Discuss the vulnerability of each exposed asset. Discuss impacts that the loss of an asset would have on our community, system, or other communities.	Jurisdictional Planning Team
Local Hazard Mitigation Steering Committee Meeting	10/2/2019	Develop local mitigation strategies and objectives	Jurisdictional Planning Team

Public Outreach

Public Outreach Events

EVENT	DATE	SUMMARY	ATTENDEES
Public Outreach – National Night Out	August 6, 2019	Staffed hazard mitigation plan booth at National Night Out at Central Washington University, Sammamish. Displayed Sammamish hazards map and interacted attendees about the City’s Hazard profile. 55 attendees participated in an online hazard survey.	An estimated 3,000 residents attended the event. Several hundred had direct interaction with the Hazard Mitigation booth staffed by Emergency Manager, Andrew Stevens.
Sammamish Preparedness Fair	September 7, 2019	Staffed emergency management booth at Preparedness Fair at	An estimated 700-800 residents attended the Fair. Several hundred had

		<p>Central Washington University, Sammamish. Displayed Sammamish hazards map and interacted attendees about the City's Hazard profile.</p>	<p>direct interaction with the Emergency Management booth staffed by Emergency Manager, Andrew Stevens.</p>
--	--	--	---

Jurisdiction Hazard Mitigation Program

Hazard mitigation strategies were developed through a two-step process. Each jurisdiction 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 base plan.

Hazard mitigation strategies in the City of Sammamish are managed through a collaborative process involving an interdepartmental steering committee. Strategic objectives were designed to primarily mitigate risks posed by all-hazards, to best capitalize on the benefit to the whole community and its residents. Input from a variety of departmental subject matter experts were provided into the process and only those strategic goals and objectives which were actionable and realistic were considered for inclusion within the plan. As the city's first local hazard mitigation plan, the goals and objectives focused more on soft mitigation and developing/incorporating hazard mitigation concepts into other city plans and policies versus hard mitigation tactics.

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, Sammamish 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 planning partner any federal notices of funding opportunity for the Hazard Mitigation Assistance Grant Program. Proposals from partners will be assessed according 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 implement the plan.

The next plan update is expected to be due in April 2025. All jurisdictions 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

Sammamish maintains substantial public outreach capabilities, focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into those public outreach efforts. This will provide City of Sammamish residents, already engaged in personal preparedness efforts, with context and the opportunity to provide feedback on the City's progress and priorities in large-scale

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

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.

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 are being 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

By developing and adopting a Local Hazard Mitigation Plan, the City of Sammamish aims to ensure that the plan informs other city-wide planning processes and vice versa. In the past, the City of Sammamish did not have a hazard mitigation plan in which to provide the risk-based analysis to other city planning initiatives. By doing so now, the City of Sammamish will:

- Ensure consistency with jurisdiction priorities across all planning processes
- Leverage opportunities to further multi-benefit initiatives that are supported by multiple planning processes
- Achieve common measures of success for outcomes

There are many plans and planning processes within Sammamish that impact hazard risk. These include The strategic plans, long-range plans, resource plans, and capital plans listed below.

PLAN TITLE	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Comprehensive Plan	Community Development	Kellye Hilde	The long-range guiding policy document for all land use and development regulations in Sammamish
Comprehensive Emergency Management Plan	Emergency Management	Andrew Stevens	The Jurisdictional Hazard Mitigation Annex provides the risk profiles that support the development of the CEMP
Capital Improvement Plan	Public Works	Andrew Zagars	Identifies and prioritizes large scale projects.
Urban Forest Management Plan	Community Development	Kellye Hilde	Outlines the city’s strategic objectives for urban forest management and the related hazards associated with urban-wildland interface.
Stormwater Management Plan	Public Works	Danika Globokar	The Stormwater Management Program plan guides the City of Sammamish in planning, funding and

			implementing a comprehensive program for managing stormwater runoff, flooding issues, and the City's natural resources.
Transportation Master Plan	Public Works	Doug McIntyre	The TMP is a long-range planning document that will lead to the development of a connected, multi-modal transportation system in Sammamish. The TMP will provide strategic and prioritized investments in the transportation system to improve how residents get around town. Regarding hazard mitigation planning, the TMP has specific focus on making a more connected transportation system, which, among many other benefits, will aid in emergency response and evacuation by providing more options for moving throughout Sammamish.
Strategic GIS Plan	Information Technology	Beth Carpenter	Geographic library (database) and applications to view and report on data.

Programs, Policies, and Processes

PROGRAM/POLICY	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Building Codes	Community Development	Dan Berlin	These codes help ensure that new construction and substantial improvements meet international standards, accounting for the City's hazard risk.
Emergency Management Program	Emergency Management	Andrew Stevens	Hazard assessments included with the Hazard Mitigation Annex are

			incorporated into all other aspects of emergency management.
Critical Areas Ordinance	Community Development	David Pyle	These ordinances provide the rules and regulations for development in sensitive areas which include land susceptible to landslides, erosion, and other natural hazards.
Shoreline Master Program	Community Development	David Pyle	Shorelines provide habitat for fish and wildlife, places for public enjoyment and space for wide-ranging waterfront land uses. The Shoreline Master Program helps Sammamish preserve these spaces and uses, thereby reducing risk to hazards including flooding.
Land Use Codes	Community Development	David Pyle	Regulates all building activities in the City of Sammamish
National Flood Insurance Program	Community Development	David Pyle	The NFIP insures properties in and around the floodplain.
StormReady	Emergency Management	Andrew Stevens	Strengthens the city's ability to respond to weather events.
Biennial Budget	Finance/City Manager's Office	Aaron Antin/ Rick Rudometkin	Provides the funding for all city activities and programs.

Entities Responsible for Hazard Mitigation

AGENCY/ORGANIZATION	POINT OF CONTACT	RESPONSIBILITY(S)
Emergency Management	Andrew Stevens	Lead on developing hazard mitigation plan and its inclusion into all other aspects of emergency management.
Community Development	David Pyle	Responsible for incorporating hazard mitigation strategies into goals and objectives of the Community Development Department
Public Works	Cheryl Paston	Responsible for incorporating hazard mitigation strategies into goals and objectives of the Public Works Department
City Manager's Office	Rick Rudometkin	Overall plan execution and oversight



IT Department	Jim Hominiuk	Responsible for incorporating hazard mitigation strategies into goals and objectives of the Information Technology Department
Parks and Recreation Department	Angie Feser	Responsible for incorporating hazard mitigation strategies into goals and objectives of the Parks and Recreation Department
City Council	City Councilmembers	Plan adoption

National Flood Insurance Program

National Flood Insurance Program Compliance

What department is responsible for floodplain management in your community?	Community Development Department
Who is your community's floodplain administrator? (title/position)	Community Development - Senior Planner
What is the date of adoption of your flood damage prevention ordinance?	SMC 15.10 Ord. O2000-54; year 2000
When was the most recent Community Assistance Visit or Community Assistance Contact?	April 15, 2019
Does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are?	No outstanding NFIP compliance violations have been identified as of today. Currently Department of Ecology is conducting an examination of floodplain permits and variance files which were provided in late July 2019.
Do your flood hazard maps adequately address the flood risk within your community? If so, please state why.	No. We are waiting for the updated maps. The map panels in use at the City are dated 1995 and 1998.
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?	This question will be discussed at the next CAV with Ecology.
Does your community participate in the Community Rating System (CRS)? If so, what is your CRS Classification and are you seeing to improve your rating? If not, is your community interested in joining CRS?	No. The City began the process several years ago and determined that it was not feasible for our personnel to accomplish the requirements. Many NFIP policies are under the King County code rather than Sammamish, having been established prior to the city's incorporation.

<p>How many Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties are in your jurisdiction?</p>	<p>SRL: 0 RL: 0</p>
<p>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?</p>	<p>No. The City is not pursuing buyouts of flood prone properties.</p>

Hazard Mitigation Strategies

2020 Hazard Mitigation Strategies

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
<p>S1 – Whole Community Disaster Resiliency</p>	<p>City of Sammamish Emergency Management</p>	<p>Ongoing</p>	<p>24</p>
<p>S2 - Cybersecurity</p>	<p>City of Sammamish Information Technology Department</p>	<p>2020-2026</p>	<p>18</p>
<p>S3 - Transportation</p>	<p>City of Sammamish Public Works Department</p>	<p>2020-2026</p>	<p>19</p>

S1 – Whole Community Disaster Resiliency – All Hazards

Lead Points of Contact	Partner Points of Contact (Title)	Hazards Mitigated / Goals Addressed	Funding Sources and Estimated Costs
Sammamish Emergency Manager	Sammamish ACERT Sammamish Communications Manager Sammamish Human Services Coordinator	All Hazards Goals – 6, 8, 10, 14	General Funds, Grants
<p>Strategy Vision/Objective</p> <p>Strengthen all-hazards community disaster resiliency programs which reinforce Sammamish’s ability to prepare for, respond to, and recover from disasters.</p>			
<p>Mitigation Strategies</p> <ul style="list-style-type: none"> • Build a diverse network of private sector, governmental, and non-governmental organizations focused on all-hazards emergency planning and preparedness. • Provide an outlet for community engagement of the whole community focused on collaborative disaster resiliency problem solving. • Develop outreach materials which target vulnerable populations found in Sammamish, including those with limited English proficiency. • Support and develop training and outreach programs focused on individual and community disaster preparedness. 			
<p>2-Year Objectives</p> <ul style="list-style-type: none"> • Support the delivery of Basic CERT training. • Conduct capability survey of community stakeholders • Develop pre-scripted emergency alerts in non-English languages prevalent in Sammamish. • Grow the Sammamish ACERT and Neighborhood Hub programs. • Engage in individual and neighborhood preparedness efforts. 	<p>5-Year Objectives</p> <ul style="list-style-type: none"> • Integrated LEP translation services • Robust Neighborhood Hub program tied to Citywide concept of operations. 	<p>Long-Term Objectives</p> <ul style="list-style-type: none"> • A community which embraces the best practices in all-hazard disaster resiliency. 	

Implementation Plan/Actions

- Engage all geographic areas of the City in self-preparedness efforts
- Provide self-preparedness information in a minimum of in primary and secondary languages
- Provide preparedness information for vulnerable populations.
- Ensure the City's race and social justice values are incorporated in the emergency preparedness and outreach efforts.
- Implement multi-media outreach tools to reach large audiences.
- Promote 2-week personal preparedness.
- Provide greater contribution to annual preparedness fair
- Ensure information meets industry standards for Americans with Disabilities Act.
- Develop a strategy for how the City will work with non-profit agencies and faith-based organizations on how they can help contribute to and promote resiliency.
- Create a business outreach plan to build awareness of hazards and cost-benefit of preparedness.
- Encourage Chambers of Commerce and other business advocates to sponsor business efforts to prepare and mitigate.
- Research and make available off-the-shelf drills for businesses such as those provided by FEMA.
- Identify ways to best support skills trainings to the public and promote recruitment for training opportunities.
- Identify functions which would benefit from volunteer assistance. Identify agencies such as corporate or non-governmental entities that may have expertise in that area such as Sammamish ACERT's and Washington Volunteer Organizations Active in Disaster.
- Outline plan for Community Disaster Support Hub program.
- Strengthen local coordination around the use of affiliated and spontaneous volunteers in disasters.
- Outreach to existing service clubs (e.g. Kiwanis, Rotarians, etc.) regarding their response capabilities.

Performance Measures

- Number of outreach programs taught or delivered each year increase
- Number of emergency preparedness materials distributed throughout community
- Estimated number of participants in annual preparedness fair
- Ready Business recognition awards.
- Number of Basic CERT graduates per year
- Number of external agencies incorporated into emergency response and recovery plans
- Number of ACERT Volunteers and volunteer hours logged each year.

S2 – Cyber Security – Cyber Attack

Lead Points of Contact City of Sammamish Director of Information Technology	Partner Points of Contact (Title) City of Sammamish Human Resources	Hazards Mitigated / Goals Addressed All Hazards Goals – 6, 8	Funding Sources and Estimated Costs General Funds, Grants
Strategy Vision/Objective Ensure the continuity and resiliency of the City of Sammamish’s Information Technology infrastructure and systems.			
Mitigation Strategies <ul style="list-style-type: none"> • Implement end-user training program which provides cybersecurity training for all personnel and adapts to meet a rapidly evolving hazard environment. • Invest in a robust security platform which detects, deters, and prevent malicious cyber threats. • Create a robust back-up/continuity of operations strategy which ensures the rapid restoration of essential IT and IT related functions. 			
2-Year Objectives <ul style="list-style-type: none"> • Build and establish end-user cyber security training program. • Establish IT technology replacement plan and budget. • Conduct risk assessment of IT infrastructure and identify single points of failure. 	5-Year Objectives <ul style="list-style-type: none"> • Address single points of failure identified in security vulnerability assessment. • Analyze success of cyber security program – revise and adapt as necessary. 	Long-Term Objectives <ul style="list-style-type: none"> • Prevent and deter all future cyber-attacks against the City of Sammamish. 	
Implementation Plan/Actions <ul style="list-style-type: none"> • Conduct cyber security awareness training for all new employees as part of their onboarding process and quarterly for all other employees. • Write into biennial budget updates to the cyber-security program to maintain a high level of protection against current threats. • Identify a priority of services restoration plan for IT and IT dependent systems. 			
Performance Measures <ul style="list-style-type: none"> • Number of employees provided end-user cybersecurity training. • Continuity of Operations exercises which test and evaluate the resiliency of the City’s IT infrastructure. 			

S3 – Transportation – All Hazards

Lead Points of Contact	Partner Points of Contact (Title)	Hazards Mitigated / Goals Addressed	Funding Sources and Estimated Costs
City of Sammamish Public works Department	City of Sammamish Emergency Management City of Sammamish Community Development	All Hazards Goals – 2, 4, 6, 8, 14	General Funds, Grants, Impact Fees
Strategy Vision/Objective Ensure that lifeline roadways in Sammamish remain open or have rapid restoration of service post disaster.			
Mitigation Strategies <ul style="list-style-type: none"> • Maintain the functional and operational capability of critical transportation corridors, to ensure the continuity of critical response and recovery function dependent on the transportation infrastructure, in ways which match the expectations of future population growth and needs. • Assess the current transportation infrastructure ability to support critical, emergency response functions, such as supporting incident logistics and population protection. 			
2-Year Objectives <ul style="list-style-type: none"> • Develop evacuation plans • Construct a vendor list of nearby services capable of assisting in the service or rapid restoration of primary and secondary arterials. 	5-Year Objectives <ul style="list-style-type: none"> • Provide City Council with recommendations in policy change needed to meet strategic vision. 	Long-Term Objectives <ul style="list-style-type: none"> • Resilient transportation infrastructure which ensure the ability to conduct critical emergency support functions. 	
Implementation Plan/Actions <ul style="list-style-type: none"> • Inclusion of hazards threatening transportation infrastructure in the City’s Transportation Master Plan. • Develop citywide evacuation routes and concept of options for population protection functions. • Implement resource management activities which support the continuity of city transportation corridors or their rapid restoration, to include the development of MOU, contracts, and an establish vendor list which would support emergency procurements of critical resources. 			
Performance Measures <ul style="list-style-type: none"> • Population protection analytics weighed against current and future transportation infrastructure. 			