

Progress Report on Implementation of Hazard Mitigation Plan

Report Date:	February 20, 2024
Name of community:	City of Valdez
Name of plan:	Natural Hazard Mitigation Plan
Date of adoption of plan:	February 19, 2019
Plan expiration date:	March 11, 2024
5 Year CRS expiration date:	October 1, 2024

Where the Plan is Located:

A hard copy of the City's Hazard Mitigation Plan is kept in the Planning Department at City Hall and can also be found on the City's website at:

<https://www.valdezak.gov/DocumentCenter/View/10863>

How This Report Was Prepared:

The Senior Planner with responsibilities for the Hazard Mitigation Plan sent a request to several City employees including Police Chief, Fire Chief, Emergency Manager, Public Works Director, Capital Facilities Director, Communications Director, Planning Director, and Building Inspector. The information received from these employees was compiled into this report. The written report was placed on the agenda for the City Council meeting closest to the anniversary of the adoption of the plan. The report is available to the public at the Planning Department.

Goal 1 Protect Public Health and Safety

Objective 1.1 Improve systems that provide warning and emergency communications.

The City is engaged in efforts to upgrade antiquated police/fire radio towers, antennas, hardware, mobile and handheld radios, telecommunications, and to create redundancy in these system, independent from the state's radio system. The primary area of focus is the Salmonberry Ski Hill, to provide better coverage between Robe River and Keystone Canyon; upgrades to the antenna array and infrastructure on the Valdez Container Terminal; and upgrades to dispatch at the police department with an extension of those services over to the new fire station to provide redundancy in the event City Hall is incapacitated. The project is designed and the City is seeking funding through various grant resources. The implementation timeline is subject to funding availability.

Maintenance was conducted on the Outdoor Warning System during 2023 to update equipment and improve messaging. Deficiencies were discovered and plans are underway to receive

proposals and search grant possibilities for a new Outdoor Warning System with a different vendor; one that will increase the city's ability to maintain and make adjustments without being dependent upon contractors from the Lower-48.

The City is preparing to adopt "Valdez Alerts" as the title of its new SMS, phone dialing, email, and social media alerting platform that will alert the public with critical information leading up to and during a disaster. The new reference will encompass several methods of alerting the public, to include another vendor similar to NIXLE. This new vendor offers an interactive app with numerous ways to customize how information is received, what information is received, and more options to protect self and family through elective location services, among many other features.

The city added a satellite phone antenna on top of City Hall above the Valdez Public Dispatch Center. The antenna was connected to a satellite phone bases station inside the dispatch center to increase communication redundancy during an incident. The same equipment was purchased and is in hand ready to install at the Valdez Fire Department for use in the Emergency Operations Center.

The Emergency Manager and Seed Media created and released a 6-minute educational tsunami video where Everbridge/Nixle was promoted during the video. The video is currently showing in the theatre and was posted on social media in March, during the Alaska Tsunami Awareness Week. The video was also posted on the City's YouTube channel.

Objective 1.2 Reduce the impacts of hazards on vulnerable populations.

Valdez Alerts will provide users with an opportunity to declare if and what type of functional needs they may have that impact their own ability to respond to a disaster.

Metal signage (3'x2'), with tsunami information graphic overlay, has been purchased and will be placed at all RV parks, fish processors, coastal parks, harbor, docks, etc. this spring/summer. Information expands on the tsunami brochure and adds additional links and connections to local emergency resources. The signs are translated into six languages by scanning a QR code.

Objective 1.3 Strengthen local building code education and enforcement.

The Planning Department is working toward the adoption and implementation of the 2021 model building codes in the spring of 2024. We will be producing and providing educational materials that will identify significant changes in the updated building code adoption. These materials will be provided to both contractors and the general public who may act as an owner/builder. Plan reviews will place added focus on these code changes and other common areas of non-compliance.

The Planning Department is also updating a user-friendly printed media display and will work on expanding web-based and social media platforms. These actions will result in an enhanced online outlet for information, while also promoting a strong culture on the value of modern building codes.

The city's drone program is available for use in building code compliance.

A city employee is a chaired member on the Governor's Alaska Seismic Hazards Safety Commission. The commission is engaged in research and development of the adoption of new statewide building codes that would model other states with similar seismic and tsunamigenic hazards. The project is ongoing.

Objective 1.4 Minimize social dislocation and stress.

The city continues to support the local Public Health Nurse, medical clinics, and hospital through annual flu-vaccination clinics. A clinic was held in 2023.

Objective 1.5 Strengthen evacuation and sheltering plans/procedures.

The City Parks, Recreation, and Cultural Resources Department is now responsible, with assistance from the city's Incident Management Team, for the development and implantation of shelter planning and staffing for persons displaced during a disaster. Shelter floor plans have been created by the shelter team, with input from the American Red Cross. Additional shelter supplies are being organized and acquired. More training with the American Red Cross will occur in April and during the full-scale earthquake tsunami exercise in Valdez, where evacuations and sheltering play a vital role.

Objective 1.6 Improve training of emergency responders.

The city is planning a full-scale exercise involving the city Incident Management Team (IMT), the State of Alaska DHS&EM, the National Guard, and several local stakeholders for the AlaskEx2024 earthquake/tsunami exercise in May. A significant amount of training is underway by the city to prepare for this exercise.

The city continues to train its Incident Management Team in position specific training to increase the capabilities of the IMT and individual members. In November five city employees were trained as All Hazards Planning Section Chiefs, making six total. Also, on November 16 COV employees were trained in ICS 300. In January of this year, 16 COV employees trained in ICS 400, seven city employees were trained as All Hazards Operation Section Chiefs, and seven city employees were trained as All Hazards Logistics Section Chief. All training courses mentioned were made available to other stakeholders and there were many in attendance, in addition to the City employees, from Valdez and around Alaska.

The city is preparing new capabilities to conduct damage assessments during a disaster and will be training city employees prior to AlaskEx2024.

The city is hosting two TEEX courses related to Senior Leadership during emergency and crisis events. The training will be held in June. The training will be offered to local stakeholder leadership.

The City's small, unmanned aircraft system (sUAS) program, or drone program, continues to train team members on aircraft operations and recently partnered with AK Drone (a subsidiary of Seed

Media) to train the team in NIST levels 2 and 3 for compliance with the team's internal pilot proficiency requirements. This training aids in the application to the FAA for specific waivers the team needs to operate drones outside the requirements of Part 107 rules during disaster and emergency.

Objective 1.7 Save lives and reduce injuries.

The city achieved Storm Ready status through the National Weather Service.

The city continues to provide hazard education to PWSC, USCG, and the Valdez School District, among other organizations, in the form of in-person presentations.

Objective 1.8 Form partnerships to leverage and share resources.

The following list is some of the partners, projects, and events from this past year.

- The City continues to partner with the Alaska Division of Geological and Geophysical Surveys in monitoring the Valdez Glacier ice dam and utilizing this information in our emergency planning.
- The City continues to partner with the United States Geological Survey to collect stream flow data for Lowe River, Mineral Creek, and Valdez Glacier Stream.
- The City participated in the Tri-annual Airport drill with the DOT and several other participants.
- The City participated in an annual spill drill with APSC/SERVS.
- Multi-stakeholder partnership for AlaskEx2024.
- The City partners with USGS, DGGS, and UAF for avalanche and slope instability studies and research of areas directly impacting the City of Valdez.
- The City received a 70/30 matching grant with NOAA for a new hydrographic survey of Port Valdez. The survey is directly tied to efforts to create an identification and monitoring program related to slope instability in Valdez.
- The City is working with NWS to train and increase local weather observers in Valdez to improve the accuracy of weather forecasting. More to come this spring and summer.
- The City is partnering with DGGS in the creation and implementation of a citizen science app the public can use to identify newly developing anomalies in mountain terrain features, active deformation sites (landslides), and geographic features that appear to represent large-scale hazards. The user will be able to take a picture of the feature, offer a description, and then submit it for review by a scientist. The app is complete, and the city is contracting with a local media company to create a basic tutorial of the app and a media message educating the public on why we need to be paying attention to our surrounds when in the mountains, boating, flying, etc. in order to help identify slope instability sites.

Goal 2: Protect Property

Objective 2.1 Protect critical facilities and services; minimize impacts to operations; and expedite recovery in an emergency.

Sandbags and barricades were purchased and are in Valdez ready to be used if needed.

Objective 2.2 Consider known hazards when identifying sites for new development and construction.

All new city projects take into consideration known hazards.

The comprehensive plan includes a development suitability map. The map displays areas ranging from low development constraints to areas with significant environmental constraints, where development is not recommended due to slopes greater than 25%, avalanche and landslide hazards, and areas subject to significant flooding events.

Objective 2.3 When possible, create redundancies for crucial networks such as water, sewer, power, communications, and digital data.

Backup power has been implemented at all well houses, the sewage treatment plant, and the mobile connections at lift stations. Improvements to citywide emergency communications will provide some additional communication redundancies.

Objective 2.4 Maintain critical facilities and infrastructure in functional order.

The City utilizes a computer managed maintenance system called Maintenance Connection to identify and track facility maintenance needs. Maintenance Connection facilitates the daily, weekly, monthly, and annual preventative maintenance work orders to ensure they are completed in a timely manner. The maintenance staff record completed work orders in the program to track labor hours, material costs, and equipment history. The work order system is designed to facilitate inspections of facilities and equipment to move from reactive maintenance to preventative maintenance to ultimately, predictive maintenance.

Flood mitigation infrastructure is maintained programmatically with inspections at least twice a year and recorded in the Collector app in accordance with the City of Valdez Flood Control Maintenance Manual. As issues are identified in inspections the problems are referred to the Public Works Department for repairs in accordance with the maintenance manual or inclusion in the capital project budgeting cycle.

Objective 2.5 Integrate new hazard and risk information into building and subdivision codes, and land use planning mechanisms.

The Planning Department is working toward the adoption and implementation of the 2021 model building codes in the spring of 2024. The floodplain regulations were updated in 2019 and we will be updating them again at the same time as the building codes. These new codes take into account construction techniques that reduce the risk of natural hazards.

The comprehensive plan includes a development suitability map. With the adoption of the comprehensive plan the Planning Department has been working on revisions to the zoning code to implement the goals of the comprehensive plan. When the revisions to the zoning code are adopted, we will begin the process to update the subdivision regulations. It is anticipated that these changes will be adopted later this year and will include provisions to reduce the risks of natural hazards.

Objective 2.6 Educate public officials, developers, realtors, contractors, land and building owners, and the public about hazard risks and building requirements.

The planning department mails an annual letter, postcard, or flyer to mortgage lenders, insurance agents, real estate offices, and to landowners with property in the floodplain that explains the risks associated with the floodplain and the need to obtain floodplain development permits.

A tsunami education video is playing in the theater and was posted on social media in March, during the Alaska Tsunami Awareness Week. The video was also posted on the City's YouTube channel. This video and additional hazard information is available on the city website on the Emergency and Disaster Management pages.

The city regularly communicates with residents via Everbridge/Nixle, social media, and the city website regarding flooding events, tsunami alerts, increasing snow loads, and ongoing hazards presented by the Valdez Glacier and Ice Dam Lake.

The city maintains hazard information on the Emergency and Disaster Management page of the city website.

The city purchased two additional digital roadway signs to educate the public on active threats and hazards.

Objective 2.7 Promote appropriate mitigation actions for all public and privately-owned property within the City's jurisdiction including, but not limited to, residential units, commercial structures, educational institutions, healthcare facilities, cultural facilities, and infrastructure systems.

The Planning Department continues to offer technical advice, as a free service to property owners, for reducing the flood hazard to their personal or commercial property. We promote this service annually through a mailing to property owners within the Special Flood Hazard Area.

The work was completed in 2022 on phase 1 of the Ten-Mile project. Dikes 1, 2, & 4 all received a new buried toe, scour aprons at the end of each dike, replaced the face of the dike with class I filter rock and new class III riprap armor rock at a 3:1 slope. Material removed from the toe was placed atop the dikes to maintain floodplain elevations within the riverbed and add freeboard to the dike systems. The dikes were raised and armored a minimum of 3' on average.

We are still communicating with the Alaska Department of Natural Resources on approval for the Lowe River Flood Mitigation Plan to be able to complete phase 2 of the Ten-Mile project. Phase 2 involves removing approximately 100,000 cubic yards of gravel from the river to create a channel that will divert a portion of the main flows away from the subdivisions. Excess material will be used to raise the dikes. DNR permits have not been issued at this time.

During the summer and fall of 2023, five spur dikes were constructed along Glacier Haul Road. The five dikes are located upstream of the landfill and downstream of the construction and debris pit. Since 2000 the Glacier Stream has been migrating towards and eroding away the existing bank along

the west side of the riverbed. Since the 1970's historic gravel mining operations removed gravel material along the roadway and the river now flows through these old mining sites. The river is both undermining the armored bank along the roadway and eroding away the existing bank farther upstream. Since 2016 the annual Valdez Glacier ice dammed lake outburst event has caused accelerated rates of erosion along this area and threatened river migration into the landfill. Work on the 5 new spur dikes was completed in the fall of '23.

In February 2022 the City requested consideration from the Natural Resources Conservation Service (NRCS) to be included in the National Watershed Program to support protection of the Valdez landfill from erosion on the Valdez Glacier Stream. The erosion along the Glacier Stream is threatening the landfill and Glacier Haul Road. The City was granted the request and the NRCS completed the Preliminary Investigation Feasibility Report. The report confirmed the need for additional protection of this infrastructure. The next step in the project is for the NRCS to complete the planning and design phases in preparation for construction. Planning and Design is expected to take 3 to 4 years but is 100% federally funded. The City will be required to provide in-kind services on occasion. Capital Facilities will dedicate a project manager to this project to work with the NRCS to help progress toward construction.

Objective 2.8 Incorporate effective mitigation strategies into the City of Valdez Capital Improvement Project and Major Maintenance programs.

Annually, City stakeholders are solicited for new capital and major maintenance projects. Each stakeholder receives a copy of the current long-range plan identifying their specific projects. Project requests are evaluated by the Capital Facilities Director for need, urgency and cost among other factors and prioritized for presentation to the City Council. Priority is given to projects that correct deficiencies or mitigate potential for future problems. The City Council appropriates funds annually in the first quarter of each year to fund various design and construction priorities. High risk projects receive higher ranking in the scoring matrix.

Objective 2.9 Promote post-disaster mitigation as part of restoration and recovery.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Goal 3: Promote a Sustainable Economy

Objective 3.1 Form partnerships to leverage and share resources.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Objective 3.2 Continue critical business operations.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Objective 3.3 Restore non-critical business operations as soon as possible.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Objective 3.4 Partner with private sector, including small businesses, to promote structural and non-structural hazard mitigation as part of standard business practice.

The City offers its ICS-related training to local stakeholders and partners with stakeholders on joint exercises.

The City is partnering with the hospital in the creation of plans to evacuate the hospital during a tsunami warning/event or other incident that requires evacuation to the alternate care site.

Objective 3.5 Educate businesses about city-wide contingency planning, targeting small businesses, and those businesses located in high-risk areas.

Businesses that employ a large number of seasonal cannery workers that are located in the tsunami inundation zone are key participants in AlaskEx2024. The City is working with these businesses with specific evacuation procedures for their employees in the event of a tsunami warning.

Objective 3.6 Partner with private sector to promote employee/employer education about disaster preparedness while at work and at home.

The City's Emergency and Disaster Management page of the City website targets both citizen and private sector self-reliance. This coming year will see additional self-reliance initiatives coming from the Emergency Manager.

Commitments from vendors that support preparedness efforts have been secured to offer citizens disaster supplies at reduced rates.

Preparedness resources are available in the City Hall lobby and on the Emergency and Disaster Management page of the City's website. This website has recently been promoted as part of the community survey for the Hazard Mitigation Plan update.

Goal 4: Protect the Environment and Natural Resources

Objective 4.1 Develop hazard mitigation policies that protect the environment.

Planning Department staff are evaluating the possibility of preparing a Floodplain Species Assessment and a Floodplain Species Plan to take advantage of newly available credits within FEMA's Community Rating System. It is possible that residents could see a decrease in flood insurance premiums if the City pursues these additional credits.

Objective 4.2 Develop mitigation strategies that lessen the impact of natural hazards on natural resources.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Goal 5: Maintain Local Government and Non-Government

Objective 5.1 Develop mitigation strategies that lessen the impacts of natural hazards on local government services.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Objective 5.2 Develop mitigation strategies that lessen the impacts of natural hazards on the service delivery of local non-governmental agencies, especially the providers of social services.

This objective will be evaluated and further refined over the next few months as we work on updating the Hazard Mitigation Plan.

Goal 6: Increase Public Preparedness for Disasters

Objective 6.1 Enhance understanding of natural hazards and the risks they pose.

The City is continuing to work with the United States Army Corps of Engineers and Alaska Division of Geological and Geophysical Surveys to gain a better understanding of local hazards including Valdez Glacier dam outburst events, the potential Barry Arm landslide tsunami, and avalanche hazards.

In anticipation of AlaskaEX2024, the City held a training session in June with members of the Incident Management Team and supporting community organizations. Training was conducted by Alaska Division of Geological and Geophysical Surveys, UAF Geophysical Institute, and United States Geological Survey concerning earthquakes and local tectonic plate configuration, tsunamis and local underwater instabilities, and tsunamigenic landslides.

Ongoing participation with a group of local and worldwide scientists that are seeking funding from the National Science Foundation (NSF) to study slope instability in the PWS – original request wasn't funded. NSF encouraged the group to coordinate and integrate study objectives with the local area. The City is now a participating partner leading into the next proposal.

The City is cooperating with the Alaska Division of Geological and Geophysical Surveys to improve understanding of the complex interaction between the changing cryosphere, snow avalanches, natural resources, and people in their natural and built environments. The proposed effort centers on the snow avalanche-affected landscape in southern Alaska, where climate model projections indicate increases in air temperature, precipitation intensity, and rain-on-snow events over the coming decades; such changes could significantly impact the extent, behavior, and predictability of snow

avalanches. This is a multi-year project where the results will be incorporated into a State Geological Map that will be available to the public.

The City is partnering with the National Oceanic and Atmospheric Administration to conduct a hydrographic study of Port Valdez. The survey is directly tied to efforts to create an identification and monitoring program related to slope instability in Valdez. The results of this survey will be incorporated into the State Geological Map.

Once the unstable slopes are identified, a program will be put in place that actively monitors these slopes for changes that could indicate increased instability.

Objective 6.2 Improve hazard information, including databases and maps.

The comprehensive plan includes a development suitability map. The map displays areas ranging from low development constraints to areas with significant environmental constraints, where development is not recommended due to slopes greater than 25%, avalanche and landslide hazards, and areas subject to significant flooding events.

The Planning Department is preparing an interactive map for the City's website that will display the Special Flood Hazard Areas in the City. This will allow residents to easily look at some of the flood risks associated with any property in the City. It is anticipated that this will be posted on the city website this spring.

Objective 6.3 Improve public knowledge of hazards and protective measures allowing individuals to appropriately prepare for and respond to hazard events.

The City continues to distribute a tsunami brochure that incorporates the latest science with respect to maximum tsunami inundation potential in Valdez and gives basic guidance to the reader.

Metal signage (3'x2'), with tsunami information graphic overlay, has been purchased and will be placed at all RV parks, fish processors, coastal parks, harbor, docks, etc. this spring/summer. Information expands on the tsunami brochure and adds additional links and connections to local emergency resources. The signs are translated into six languages by scanning a QR code.

The Emergency Manager continues to educate new students at Prince William Sound College about the natural hazards in the community, Coast Guard members new to the community about the winter weather in Valdez, and other organizations that may have special needs as it relates to hazard events.

The city is working with the Prince William Sound Regional Citizens' Advisory Council to conduct a maritime guidance workshop concerning area geologic hazards.

A tsunami education video involving the National Tsunami Warning Center, Alaska Earthquake Center, a local '64 survivor, and the City Emergency Manager is playing in the theater and was posted on social media in March, during the Alaska Tsunami Awareness Week. The video was also posted on the City's YouTube channel. The purpose of the video is to educate, create awareness, and point viewers

toward hazard information that is available on the city website on the Emergency and Disaster Management pages.

The following items related to hazard awareness were posted on social media this past year.

February 6, 2023	Highway closure due to high winds and snow accumulations making for poor road conditions.
March 15, 2023	Be Aware - The Valdez Glacier lake remains a dynamic area, partly due to the extreme glacier separation event during the summer of 2020. Blankets of snow can cover crevasses and melting sections of ice, and Icebergs may calve, split, or roll without notice.
March 28, 2023	In recognition of the State of Alaska Tsunami Preparedness Week, March 26 - April 1, 2023, the City of Valdez encourages all residents and visitors to be mindful of and prepare for a tsunami hazard in our area.
June 9, 2023	Be alert for rising water levels on Valdez Glacier Lake and stream due to the annual Ice Dam Lake outburst.
June 12, 2023	Public Safety Announcement. The Valdez Glacier ice-dammed lake (IDL) began releasing this morning. Water levels on the Valdez Glacier Stream can be expected to rise approximately 3 feet over the next 24-36 hours as the glacier dam releases.
August 7, 2023	Due to hot, dry, and windy conditions, a Red flag Warning and Burn Permit Suspension was issued by the Alaska Department of Natural Resources, Division of Forestry & Fire Protection (DOF)
August 26, 2023	Flood advisory for Lowe River that may cause water to overtop the highway.
August 26, 2023	Flood watch. Excessive runoff may result in flooding of rivers, creeks, streams, and other low-lying and flood-prone locations. Creeks and streams may rise out of their banks.
August 28, 2023	Notice that the US National Weather Service Anchorage Alaska, issued another flood watch due to excessive rainfall.
October 3, 2023	Notice that FEMA, in coordination with the Federal Communications Commission (FCC), will conduct a national test of the Integrated Public Alert and Warning System (IPAWS).
October 18, 2023	Announcement for outdoor warning siren testing to take place the following day.
October 19, 2023	Did you hear it? Outdoor warning siren testing feedback request.
November 9, 2023	Highway closure due to heavy snow accumulation.
December 9, 2023	Major winter storm warning.
December 12, 2023	Highway closure due to avalanche hazard.
December 24, 2023	Highway closure due to winter storm and avalanche mitigation.
January 6, 2024	Cold weather alert! With freezing temps around, it's time to take precautions to prevent frozen pipes.
January 16, 2024	High wind warning.
January 28, 2024	Thompson Pass is closed due to snow, blowing snow, and limited visibility.