

## 6 MITIGATION STRATEGY

<b>Standard State Mitigation Plan Regulation Checklist</b>
<b>MITIGATION STRATEGY</b>
S9. Does the mitigation strategy include goals to reduce long-term vulnerabilities from the identified hazards? [44 CFR § 201.4(c)(3)(i)]
S9-a. Does the plan identify hazard mitigation goals representing what the state seeks to accomplish through mitigation plan implementation using a wide range of funding, including non-FEMA funding?
S9-b. Are the goals consistent with the hazards and vulnerabilities identified in the risk assessment?
S10. Does the plan prioritize mitigation actions to reduce vulnerabilities identified in the risk assessment? [44 CFR §§ 201.4(c)(3)(i), 201.4(c)(3)(ii) and 201.4(c)(3)(iii)]
S10-a. Does the plan identify actions based on the current risk assessment to reduce the vulnerability of jurisdictions within the state, as well as the vulnerability of state assets as described in Elements S5 and S6?
S10-b. Does the plan describe the process used by the state to evaluate and prioritize actions that are cost-effective, environmentally sound, and technically feasible?
S10-c. Does the plan describe how each action contributes to the hazard mitigation goals?
S10-d. Does the plan describe how local government mitigation strategies link to the state mitigation strategy?
S11. Does the plan identify current and potential sources of funding to implement mitigation actions and activities? [44 CFR § 201.4(c)(3)(iv)]
S11-a. Do mitigation activities include the identification of current and/or potential sources of federal, state, local or private funding for implementation?
S11-b. Does the plan identify FEMA mitigation funding sources (if applicable), including, but not limited to: HMGP, BRIC, FMA and PA Mitigation, at a minimum?
S12. Was the plan updated to reflect progress in statewide mitigation efforts and changes in priorities? [44 CFR § 201.4(d)]
S12-a. Does the plan provide a narrative of the status of each mitigation action in the previous plan?
S12-b. Was the prioritization of mitigation actions and activities updated based on the updated analysis of risks, capabilities and progress?

Source: FEMA 2022.

### 6.1 GOALS

Mitigation goals are defined as general guidelines that explain what a community wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing a community-wide vision. The goals for the 2023 State Hazard Mitigation Plan (SHMP) are as follows:

- Goal 1: Increase public awareness about the risks from and resilience to the following hazards: cryosphere and permafrost degradation, earthquake, flood and erosion, ground failure, tsunami and seiche, volcano, severe weather, wildland and community fire, and high hazard potential dams.
- Goal 2: Identify locations and State of Alaska (State) critical facilities (CFs) that are vulnerable to the following hazards: cryosphere and permafrost degradation, earthquake, flood and erosion, ground failure, tsunami and seiche, volcano, severe weather, wildland and community fire, and high hazard

potential dams and support local and tribal communities through technical and/or financial assistance in their efforts to do the same.

- Goal 3: Implement projects to reduce risks and increase resilience to the following hazards: cryosphere and permafrost degradation, earthquake, flood and erosion, ground failure, tsunami and seiche, volcano, severe weather, wildland and community fire, and high hazard potential dams and support local and tribal communities through technical and/or financial assistance in their efforts to do the same.

## 6.2 PRIORITIZED MITIGATION ACTIONS

Mitigation actions help achieve the goals of the 2023 SHMP. A list of mitigation actions was developed based on the 2023 SHMP (Section 4, Hazard Identification and Risk Assessment; Section 5, State Capabilities; and Section 7, Local Planning and Coordination and Capability Building), lessons learned from recent disasters, Federal Emergency Management Agency (FEMA) success stories and best management practices, State agency/department plans and reports, and input from the 2023 SHMP Task Force and other relevant practitioners.

As shown in Table 6-1, each mitigation action developed has been grouped in the following categories: hazard mitigation planning, assessment and mapping, structure and infrastructure, nature-based solutions, and outreach and awareness. Each mitigation action has been assigned a priority of “high” or “very high” by the task force based on the action’s ability to address a major capability gap (i.e., lack of necessary data) or address an urgent need (i.e., life-safety) and be cost-effective, environmentally sound, and technically feasible to the greatest extent possible.

Tables 6-2 through 6-6 list detailed project descriptions; hazards mitigated; potential funding sources; project sources; and cost, environmental, and technical considerations for each mitigation action. In addition, for each mitigation action there is description of how the action contributes to the SHMP’s hazards mitigation goals.

Table 6-2 also discusses how mitigation actions identified in local and tribal hazard mitigation plans link to the 2023 SHMP.

**Table 6-1: Prioritized Mitigation Action Plan**

<b>Project Type</b>	<b>Project Name</b>	<b>Priority</b>
Hazard Mitigation Planning	Mitigation Planning Database Expansion	Very high
	Local and Tribal Hazard Mitigation Planning Support	Very high
	Local and Tribal Community Mitigation Strategies Link-Up to State Mitigation Strategy	Very high
Assessment and Mapping	Wildfire Exposure Map Expansion	Very high
	Risk MAP Expansion	Very high
	Coastal Community Flood Assessment Expansion	Very high
	Alaska Climate Change Impact Mitigation Program Expansion	Very high
	Landslide and Avalanche Susceptibility Map Expansion	Very high
	Tsunami Inundation Mapping Program Expansion	Very high
	Alaska Statewide Digital Elevation Model Update	Very high
	Wetland Map Expansion	Very high
	Inundation Mapping Quality and Program Expansion for High Hazard Potential Dams	High
	Erosion Forecast Mapping Expansion	High
	Shoreline Change Mapping Expansion	High
	UAF/SNAP Database Expansion	High
	Expansion of SCERP Program	High
Structure and Infrastructure	State Critical Facility Rapid Visual Screenings Expansion	Very high
	State Critical Facility Structural Hardening Assessments	Very high
	State Critical Facility Defensible Space Assessments	Very high
	Hazard Fuel Reduction Program Expansion	Very high
	Flood Buyout Expansion	Very high
	High Hazard Potential Dams Remedial Investigations and Repair	Very high
	Increase Instrumentation and Data Accessibility for the National Volcano Early Warning System	Very high
	Complete High Hazard Potential Dam Failure Dataset	High
	Statewide Transportation Facilities Comprehensive Dataset Expansion	High
Nature-Based Solutions	Coastal and Riverbank Stabilization Program	High
	Wetlands Action Plan Templates	High
Outreach and Awareness	Hazard Mitigation Training	Very high
	Rural Resilience Workshop Expansion	High
	Tsunami Operations Workshop Expansion	High
	TsunamiReady and StormReady Expansion	High
	Community Wildfire Protection Plan Outreach Expansion	High

**Table 6-1: Prioritized Mitigation Action Plan**

Project Type	Project Name	Priority
	Alaska Firewise Expansion	High
	Continuation of Building Safety Month	High
	Continuation of Fire Prevention Month	High
	Volcano Awareness Month	High
	National Flood Insurance Program Expansion	High
	Increase Awareness of the ShakeOut Program/Drill	High

Notes:

MAP = Mapping, Assessment, and Planning

**Table 6-2: Hazard Mitigation Planning Actions**

Mitigation Planning Database Expansion	
Description	<p>Background: As described in Sections 5 and 7, DHS&amp;EM has created a database that contains information from every local and tribal HMP on file with the State. With this information, DHS&amp;EM can quickly generate community tables/reports.</p> <p>Action: Grow the database to be able to quickly identify threats and hazards within a community or communities and generate a standardized community-specific executive summary sheet that contains hazards/threats, mitigation strategy (goals/prioritized actions), and critical assets (particularly, the owners of the assets). Establish a criterion for hazard probability and magnitude for future updates to Table 4.3-1: Local Jurisdiction Probability and Magnitude. Include interactive hazard mapping within the database.</p> <p>Additional Information: Overall, an expansion of the DHS&amp;EM Mitigation Planning Database will allow local and tribal hazard mitigation plans, including CF lists, risk assessments and mitigation strategies, to be queried by DHS&amp;EM on a regular basis and be captured to include in future versions of the State HMP.</p>
Hazard Mitigation Goal	<p>Goal 2: The expanded DHS&amp;EM Mitigation Planning Database will help DHS&amp;EM staff better understand areas and CFs that are vulnerable to all hazards.</p> <p>Goal 3: The expanded DHS&amp;EM Mitigation Planning Database will help DHS&amp;EM staff develop an inventory of HMP mitigation projects to reduce risks and increase resilience.</p>
Hazards Mitigated	All
Potential Funding Source	BRIC and HMGP
Project Source	DHS&EM
Cost Considerations	Data acquisition, operational and maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with database management capabilities and hazard mitigation program knowledge
Local and Tribal Hazard Mitigation Planning Support	
Description	<p>Background: DHS&amp;EM's Hazard Mitigation Program was initiated in response to DMA 2000, which mandates community hazard mitigation planning for FEMA disaster mitigation funding eligibility. The State supports local and tribal hazard mitigation planning efforts with grant funding opportunities and direct assistance.</p> <p>Action: Continue to support local and tribal communities throughout Alaska with hazard mitigation planning grant funding opportunities and direct assistance.</p>
Hazard Mitigation Goal	<p>Goal 1: Hazard mitigation planning will increase public awareness about all hazards.</p> <p>Goal 2: Hazard mitigation planning will help the State and local and tribal communities identify locations and CFs that are vulnerable to all hazards.</p>

	Goal 3: Hazard mitigation planning and direct assistance will help local and tribal communities implement projects to reduce risks and increase resilience to all hazards.
Hazards Mitigated	All
Potential Funding Source	BRIC and HMGP
Project Source	DHS&EM
Cost Considerations	Travel costs
Environmental Considerations	None
Technical Considerations	Staff with hazard mitigation program knowledge
<b>Local and Tribal Community Mitigation Strategies Link-Up to State Mitigation Strategy</b>	
Description	<p>Background: As noted above, DHS&amp;EM has created a database that contains information from every local and tribal HMP on file with the State. With this information, DHS&amp;EM can quickly generate community tables/reports. The database does not currently include a function to quickly query local and tribal HMP mitigation strategies (goals/actions), and currently DHS&amp;EM must either receive FEMA grant applications from local and tribal communities and/or look up each individual local and tribal HMP to understand how to support local and tribal mitigation efforts.</p> <p>Action: Grow the database to be able to quickly query mitigation strategy (goals/prioritized actions) in local and tribal HMPs. The query function should be able to sort mitigation actions by location, hazard type, mitigation project category (hazard mitigation planning, assessment and mapping, structure and infrastructure, nature-based solutions, and outreach and awareness) and 2023 SHMP goals (Section 6.1).</p>
Hazard Mitigation Goal	Goal 3: Linking up local and tribal mitigation strategies to the 2023 State HMP, specifically the 2023 State HMP mitigation strategy, will help local and tribal communities implement projects to reduce risks and increase resilience from all hazards.
Hazards Mitigated	All
Potential Funding Source	BRIC and HMGP
Project Source	DHS&EM
Cost Considerations	Data acquisition, operational and maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with database management capabilities and hazard mitigation program knowledge

## Notes:

BRIC = Building Resilient Infrastructure and Communities

CF = critical facility

DHS&amp;EM = Alaska Division of Homeland Security and Emergency Management

DMA 2000 = Disaster Mitigation Act of 2000

FEMA = Federal Emergency Management Agency  
HMGP = Hazard Mitigation Grant Program  
HMP = Hazard Mitigation Plan  
State = State of Alaska

**Table 6-3: Assessment and Mapping Actions**

Wildfire Exposure Map Expansion	
Description	<p>Background: As described in Section 5, Table 5-1, AURA is a 4-year program that addresses changing environmental hazards around the Municipalities of Anchorage, Fairbanks, and Whitehorse.</p> <p>Action: Expand wildfire exposure mapping program so that wildfire mapping is completed for the entire state. The expanded mapping program will need to include updated data sets (current wildfire maps do not include data past 2014), more detailed work with vegetation, the identification and mapping of water sources, a public reporting tool, and ongoing maintenance to update old data.</p>
Hazard Mitigation Goal	<p>Goal 1: Wildfire exposure maps will increase awareness of risks and resilience from wildland and community fire hazards.</p> <p>Goal 2: Wildfire exposure maps will help State, local and tribal communities identify location and CFs that are vulnerable to wildland and community fire hazards.</p>
Hazards Mitigated	Wildland and community fires
Potential Funding Source	BRIC and HMGP
Project Source	UAA
Cost Considerations	Data acquisition, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with data acquisition, mapping skills, and public information capabilities
Risk MAP Expansion	
Description	<p>Background: Risk MAP combines flood hazard mapping, risk assessment tools, and mitigation planning into one integrated program with the intent to establish “beneficial partnerships and innovative uses of flood hazard and risk assessment data to ensure the greatest possible reduction in flood losses.”</p> <p>Action: Continue to implement Risk MAP in Alaska. The RMC can provide training and technical assistance to Alaska communities in the areas of BCA, building science, community capability development, CRS, community planning, grant application development, mitigation planning technical assistance, risk assessment, and Risk MAP data availability and tools.</p>
Hazard Mitigation Goal	<p>Goal 1: Risk MAP will increase public awareness about flood hazards.</p> <p>Goal 2: Risk MAP will help the State and local and tribal communities identify locations and CFs that are vulnerable to flood hazards.</p>
Hazards Mitigated	Flood and erosion, severe weather
Potential Funding Source	Cooperating Technical Partnership between FEMA and the State
Project Source	DCRA
Cost Considerations	Engineering, program knowledge and travel costs



Environmental Considerations	None
Technical Considerations	Staff with data acquisition and mapping skills and public information capabilities
<b>Coastal Community Flood Assessment Expansion</b>	
Description	<p>Background: Coastal communities in Alaska experience frequent storm surge flooding, yet the majority do not have a clear and consistent record of flooding. Local and statewide flood mitigation decisions require a clear understanding of flood risk, but the risk for many communities has not been adequately determined due to the difficulty of discovering information or interpreting flood impacts.</p> <p>DGGS is compiling a list of all known floods for individual communities. The flood height is estimated using written accounts, photographs, historical and modern imagery, and elevation models. The current risk of flooding is determined by comparing historical flood extents to current infrastructure. Each community-specific report includes a flood risk category map showing current infrastructure and previous floods. To date, Golovin and Hooper Bay have completed maps, and the next flood assessments will include Alakanuk, Kotlik, and Napakiak.</p> <p>Action: Expand the Coastal Community Flood Assessments to cover additional coastal communities in western Alaska. Community-specific reports include a flood category map showing current infrastructure, and a graphic relating infrastructure heights with previous floods.</p>
Hazard Mitigation Goal	<p>Goal 1: Coastal Community Flood Assessments will increase public awareness about flood, erosion, and severe weather hazards.</p> <p>Goal 2: Coastal Community Flood Assessments will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to flood, erosion, and severe weather hazards.</p>
Hazards Mitigated	Flood and erosion, severe weather
Potential Funding Source	BRIC and NCRF
Project Source	DGGS
Cost Considerations	Data acquisition, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Data acquisition and mapping skills and public information capabilities
<b>Alaska Climate Change Impact Mitigation Program Expansion</b>	
Description	<p>Background: The Alaska Climate Change Impact Mitigation Program (ACCIMP) provides funding to Alaskan communities that meet one or more of the following criteria related to flooding, erosion, melting permafrost or other climate-change-related phenomena: Life/safety risk during storm/flood events, loss of critical infrastructure, public health threats, and loss of 10% of residential dwellings.</p> <p>Action: The Hazard Impact Assessment (HIA) is the first step in the ACCIMP process. The HIA identifies and defines the climate-change-related hazards in the community, establishes current and predicted impacts, and provides recommendations to the community on alternatives to mitigate the impact.</p>

Hazard Mitigation Goal	Goal 1: The ACCIMP will increase public awareness about cryosphere and permafrost degradation, flood and erosion, and severe weather hazards. Goal 2: The ACCIMP will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to cryosphere and permafrost degradation, flood and erosion, and severe weather hazards.
Hazards Mitigated	Cryosphere and permafrost degradation, flood and erosion and severe weather
Potential Funding Source	The ACCIMP funds (\$50,000), Community Planning Grants (\$150,000)
Project Source	DCRA
Cost Considerations	Data acquisition, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with data acquisition and mapping skills and public information capabilities
<b>Landslide and Avalanche Susceptibility Map Expansion</b>	
Description	Background: DGGs is currently involved in a number of landslide assessment and monitoring projects in Alaska, including developing landslide inventory/susceptibility maps and modeling flow run-out of ground failure hazards, including debris flows, landslides, and avalanches for the Sitka and Homer areas. Historic avalanche zone maps have also been created for the Municipality of Anchorage. Action: Develop landslide and avalanche inventory/susceptibility maps and model flow run-out of ground failure hazards, including debris flows, landslides, and avalanches throughout Alaska.
Hazard Mitigation Goal	Goal 1: The ACCIMP will increase public awareness about ground failure hazards. Goal 2: The ACCIMP will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to ground failure hazards.
Hazards Mitigated	Ground failure
Potential Funding Source	BRIC and HMGP
Project Source	DGGs
Cost Considerations	Data acquisition, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with data acquisition and mapping skills and public information capabilities
<b>Tsunami Inundation Mapping Program Expansion</b>	
Description	Background: DGGs, the Alaska Earthquake Center, and UAF help the NTHMP identify at-risk coastal communities in Alaska and provide tsunami hazard maps for hazard mitigation and emergency response training. Communities are selected based on their tsunami hazard exposure, location, infrastructure, availability of data, and willingness to incorporate results in an HMP. Sixty-six local and tribal communities in Alaska have been mapped for tsunami inundation to date.

	Action: Continue to model tsunami wave dynamics for at-risk Alaskan communities. Present findings and raise awareness about known risks.
Hazard Mitigation Goal	Goal 1: The Tsunami Inundation Mapping Program will increase public awareness about tsunami hazards. Goal 2: The Tsunami Inundation Mapping Program will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to tsunami hazards.
Hazards Mitigated	Tsunami
Potential Funding Source	NTHMP
Project Source	DGGS and the Alaska Earthquake Center
Cost Considerations	Staff with data acquisition skills, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Data acquisition and mapping skills and public information capabilities
<b>Alaska Statewide Digital Elevation Model Update</b>	
Description	Background: The primary goal of the Alaska Statewide Digital Mapping Initiative (SDMI) is to acquire new and better maps statewide for Alaska and to make existing map products more easily available. Alaska does not have an adequate statewide DEM maps. Action: Develop accurate, current, seamless, statewide DEM maps, online and for free to the general public.
Hazard Mitigation Goal	Goal 2: Updated and completed DEM maps will help the State as well as local and tribal communities to develop hazard mapping and/or identify locations that are vulnerable to multiple hazards, particularly floods, ground failure, high hazard potential dams, and wildland and community fires.
Hazards Mitigated	Multiple hazards, particularly floods, ground failure, high hazard potential dams, and wildland and community fires.
Potential Funding Source	State funds
Project Source	Statewide Digital Mapping Initiative, Alaska Dam Safety Program
Cost Considerations	Data acquisition, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with data acquisition and mapping skills and public information capabilities
<b>Wetland Map Expansion</b>	
Description	Background: Alaska remains the only state that has not been fully mapped by the National Wetland Inventory (NWI) program. As of 2018, just over 40% of the state has been mapped following the NWI protocols. Action: Mapping and conservation assessment of wetland ecosystems is a necessary step in promoting effective management of wetland habitats by providing a uniform and comprehensive inventory of both common and rare types.

Hazard Mitigation Goal	Goal 2: Updated and completed wetland maps will help the State as well as local and tribal communities to develop hazard mapping and/or identify locations that are vulnerable to multiple hazards, particularly cryosphere, permafrost degradation, floods, and erosion.
Hazards Mitigated	Multiple hazards, particularly cryosphere, permafrost degradation, floods, and erosion.
Potential Funding Source	WPDG
Project Source	UAA, DNR and EPA
Cost Considerations	Data acquisition, operational expenses, public outreach, and ongoing maintenance expenses
Environmental Considerations	None
Technical Considerations	Staff with data acquisition and mapping skills and public information capabilities
<b>Inundation Mapping Quality and Program Expansion for High Hazard Potential Dams</b>	
Description	Background: There are 30 HHPDs in the state. All HHPDs in the state have some level of inundation mapping, however, these maps are of variable quality and detail and maps do not provide loss estimations if a dam were to fail. Action: Expand dam inundation mapping program so that inundation mapping is of high quality and detail for all HHPDs in the state. The expanded mapping program will include more detailed information regarding facilities at risk; associated potential loss estimates; and ongoing maintenance to update old data and maps.
Hazard Mitigation Goal	Goal 2: Updating and increasing the quality of high hazard potential dam inundation maps will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to potential dam failure. Goal 3: Updating and increasing the quality of high hazard potential dam inundation maps will help the State as well as local and tribal communities implement projects to reduce risks and increase resilience to potential dam failure.
Hazards Mitigated	High Hazard Potential Dams
Potential Funding Source	State Funds
Project Source	Alaska Dam Safety Program
Cost Considerations	Costs will vary depending on level of quality of maps selected; some travel expenses may be necessary
Environmental Considerations	None
Technical Considerations	Staff with subject matter expertise and inundation mapping capabilities
<b>Erosion Forecast Mapping Expansion</b>	
Description	Background: In 2021, DGGS published extensive erosion exposure assessment reports for 48 individual communities. This mapping is a vital tool used for developing local hazard mitigation plans and strategies to address erosion. Action: Expand erosion forecast mapping to include more communities at risk of coastal and riverine erosion.
Hazard Mitigation Goal	Goal 2: Expanding erosion forecast mapping will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to erosion.

	Goal 3: Expanding erosion forecast mapping will help the State as well as local and tribal communities implement projects to reduce risks and increase resilience to erosion.
Hazards Mitigated	Erosion
Potential Funding Source	Denali Commission Village Infrastructure Protection Program
Project Source	DNR, DGGGS
Cost Considerations	Travel costs; development of maps
Environmental Considerations	None
Technical Considerations	Staff with subject matter expertise and forecast/mapping capabilities
<b>Shoreline Change Mapping Expansion</b>	
Description	Background: In 2020, DGGGS published detailed shoreline change maps for 46 individual communities. Maps of shoreline change and erosion rates are used by local community entities for planning and communication with state and federal agencies. Action: Expand shoreline change mapping to include more coastal communities at risk of coastal erosion.
Hazard Mitigation Goal	Goal 2: Expanding shoreline change mapping will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to erosion. Goal 3: Expanding shoreline change mapping will help State as well as local and tribal communities implement projects to reduce risks and increase resilience to erosion.
Hazards Mitigated	Erosion
Potential Funding Source	FEMA, State of Alaska, Denali Commission, and the U.S. Bureau of Indian Affairs
Project Source	DNR, DGGGS
Cost Considerations	Travel costs; development of maps
Environmental Considerations	None
Technical Considerations	Staff with subject matter expertise and forecast/mapping capabilities
<b>UAF/SNAP Database Expansion</b>	
Description	Background: The University of Alaska's (UAF) Scenarios Network for Alaska + Arctic Planning (SNAP) database uses data to help Alaskan communities envision future climate scenarios. The SNAP database uses weather forecasts and climate models to predict changes in various environmental factors that are susceptible to climate change (winds, temperature, precipitation, permafrost profiles, wildfires). This database is a tool regularly used by State, local, and tribal hazard mitigation planners and communities. Action: Expand the SNAP database to include more Alaskan communities at risk of environmental changes due to climate change.
Hazard Mitigation Goal	Goal 2: Expanding the SNAP database will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to all relevant hazards. Goal 3: Expanding the SNAP database will help the State as well as local and tribal communities implement projects to reduce risks and increase resilience to all relevant hazards.

Hazards Mitigated	Cryosphere, Severe Weather, Wildfire
Potential Funding Source	State Funds
Project Source	UAF
Cost Considerations	Travel costs; database upgrades and modelling
Environmental Considerations	None
Technical Considerations	Staff with subject matter expertise and modelling capabilities
<b>Expansion of SCERP Program</b>	
Description	Background: A Small Community Emergency Response Plan (SCERP) is a customized flipbook with essential, community-specific information for responding during the first 72 hours of a disaster. SCERP toolkits are provided by DHS&EM at no cost for eligible communities. As of 05/01/2023, 134 communities have a SCERP in place. Action: Increase the number of SCERP Ready Communities and coordinate with communities to review and update existing SCERPs every 3 years.
Hazard Mitigation Goal	Goal 1: Expanding the SCERP program will increase public awareness about all hazards and assist communities to have a plan in place before a disaster occurs. Goal 2: Expanding the SCERP program will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to all hazards. Goal 3: Expanding the SCERP program will help State as well as local and tribal communities implement projects to reduce risks and increase resilience to all hazards.
Hazards Mitigated	All
Potential Funding Source	DHS&EM, assistance from ANTHC, American Red Cross of Alaska
Project Source	DHS&EM
Cost Considerations	Coordination with rural communities; development/update of SCERP
Environmental Considerations	None
Technical Considerations	Adequate staff with technical experience

## Notes:

ACCIMP = Alaska Climate Change Impact Mitigation Program

AURA = Arctic Urban Risks and Adaptations

BCA = Benefit Cost Analysis

BRIC = Building Resilient Infrastructure and Communities

CF = critical facility

CRS = Community Rating System

DCRA = Alaska Division of Community and Regional Affairs

DEM = Digital Elevation Model

DGGS = Alaska Division of Geological &amp; Geophysical Surveys

DNR = Alaska Department of Natural Resources

EPA = U.S. Environmental Protection Agency

FEMA = Federal Emergency Management Agency

HIA = Hazard Impact Assessment  
HMGP = Hazard Mitigation Grant Program  
HMP = Hazard Mitigation Plan  
MAP = Mapping, Assessment, and Planning  
NCRF = National Coastal Resilience Fund  
NTHMP = National Tsunami Hazard Mitigation Program  
NWI = National Wetland Inventory  
RMC = Risk MAP Coordinator  
State = State of Alaska  
UAA = University of Alaska, Anchorage  
WPDG = Wetland Program Development Grant

**Table 6-4: Structure and Infrastructure Actions**

State Critical Facility Rapid Visual Screenings Expansion	
Description	Background: To date, the Seismic Hazard Safety Commission has worked with several Alaska school districts to complete FEMA’s Rapid Visual Screening (RVS) of their school facilities to identify those at risk of damage in a seismic event. Action: Continue current program to complete the screening of all school districts and expand program to include RVS of all State CFs (Section 4.2) located in areas of perceived severe and violent shaking. RVS is the first of three steps to improve the seismic safety of a facility. Step 2 involves engineering evaluations to confirm that the facility is at risk and prepare a retrofit project design. Step 3 is the actual seismic retrofit.
Hazard Mitigation Goal	Goal 2: RVS will help identify State CFs that are vulnerable to earthquake hazards. Goal 3: Seismic retrofits as a result of the RVS will reduce risks and increase resilience to earthquake hazards.
Hazards Mitigated	Earthquake
Potential Funding Source	BRIC, HMGP, and NEHRP ISEA
Project Source	Seismic Hazard Safety Commission
Cost Considerations	The RVS inspection, data collection, and decision-making processes are typically completed at the building site and are expected to take less than a few hours per building.
Environmental Considerations	For the RVS only: Known historic property/district information
Technical Considerations	For the RVS only: Program manager, supervising engineer, screener resources and training, pre-identified planning, pre-field data, and existing building plans and construction documents
State Critical Facility Structural Hardening Assessments	
Description	Action: Based on the 2023 SHMP risk assessment (Section 4.2), develop a structural hardening assessment strategy for State CFs that are in areas that have significant and/or considerable exposure to hazardous/highly flammable vegetation. Identify project areas in which structural hardening assessments will occur, reach out to State departments/agencies that have State CFs in assessment areas, and conduct assessments. The final step would be to implement selected structural hardening strategies.
Hazard Mitigation Goal	Goal 2: Structural hardening assessment will help the State identify CFs that are vulnerable to wildland and community fire hazards. Goal 3: The structural hardening that results from the structural hardening assessment will reduce risks and increase resilience from wildland and community fires.
Hazards Mitigated	Wildland and community fires
Potential Funding Source	Community Wildfire Defense Grant, BRIC, and HMGP–Post Fire, Public Assistance Mitigation
Project Source	2021 Wildfire Resilience Sonoma County BRIC Project; 2021, Nevada County and Fire Safe Council of Nevada County BRIC Project



Cost Considerations	Priority for USFS Community Wildfire Defense Grants is for low-income areas recently impacted by disaster or in a wildfire hazard location.
Environmental Considerations	For the RVS only: Known historic property/district information
Technical Considerations	For the assessment only: Program manager, assessor resources and training, pre-identified planning, pre-field data, and existing building plans and construction documents
<b>State Critical Facility Defensible Space Assessments</b>	
Description	Action: Based on the 2023 SHMP risk assessment (Section 4.2), develop a defensible space assessment strategy for State CFs that are in areas that have significant and/or considerable exposure to hazardous/highly flammable vegetation. Identify project area where defensible space assessments will occur, reach out to State department/agencies that have State CFs and infrastructure in assessment areas, and conduct assessment. The final step would be to implement selected defensible space strategies.
Hazard Mitigation Goal	Goal 2: Defensible space assessment will help the State identify State CFs that are vulnerable to wildland and community fire hazards. Goal 3: Defensible space as a result of the defensible space assessment will reduce risks and increase resilience from wildland and community fire hazards.
Hazards Mitigated	Wildland and community fires
Potential Funding Source	Community Wildfire Defense Grant, BRIC, and HMGP–Post Fire, Public Assistance Mitigation
Project Source	2021 Wildfire Resilience Sonoma County BRIC Project; 2021 Nevada County and Fire Safe Council of Nevada County BRIC Project
Cost Considerations	For the assessment only: Costs associated with program manager, assessor resources and training, pre-identified planning, pre-field data, and site observations. For defensible space strategies: According to FEMA, defensible space is one of the most cost-effective ways of protecting a structure from a wildfire.
Environmental Considerations	For the assessment only: None
Technical Considerations	For the assessment only: Program manager, assessor resources and training, pre-identified planning, pre-field data, and site observations.
<b>Hazard Fuel Reduction Program Expansion</b>	
Description	Background: As described in Table 5-1, DOF manages a Hazard Fuel Reduction Program. DOF’s protection responsibilities are geographically split into six separate areas, and within each area the Hazard Fuel Reduction Program is carried out through hand crews, mechanical treatment, prescribed burns, and public outreach. The program has expanded over the past several years as fuel reduction has proven effective in mitigating wildfire. As demand for fuel reduction grows, so too does the need for this program.

	Action: Expand the Hazard Fuel Reduction Program in DOF's six areas. As part of the program expansion, utilize DHS&EM's Mitigation Planning Database to identify communities that have pre-identified CFs at risk to wildland fires and also have pre-identified wildfire mitigation projects in their local/tribal HMPs and/or CWPPs.
Hazard Mitigation Goal	Goal 3: A defensible space hazard fuel reduction program will reduce risks and increase resilience from wildland and community fire hazards.
Hazards Mitigated	Wildland and community fire
Potential Funding Source	Community Wildfire Defense Grant, BRIC, and HMGP-Post Fire
Project Source	DOF
Cost Considerations	Priority for USFS Community Wildfire Defense Grants is for low-income areas recently impacted by disaster or in a wildfire hazard location.
Environmental Considerations	Changes in vegetation may impact habitat, species, surface water, groundwater, floodplains or visual aesthetics. The methods used to manage vegetation may increase erosion and sedimentation, impact species, or affect human communities. Ground disturbances could affect archaeological resources, soils, or utilities.
Technical Considerations	Site observations, maps, past similar projects, project planners, construction contractors, engineers, advice from fire management professionals, and fire mitigation reports from agencies.
<b>Flood Buyout Expansion</b>	
Description	Action: Support community-led efforts to plan for, develop, and launch buyout programs. Consider creating a State-supported GIS mapping to help both officials and community members better understand jurisdictional and ownership boundaries, flood vulnerability, infrastructure, and demographics, including social vulnerability. Assist local and tribal communities with developing acquisition and relocation priorities, including the NFIP's RL and SRL structures (Section 5.1.2), vulnerable populations, and additional structures identified as at-risk through other assessments. Additional information: Utilize DHS&EM's Mitigation Planning Database and/or the 2023 SHMP's risk assessment (Section 4.3) to identify communities that have pre-identified CFs at risk to flooding and pre-identified flood mitigation projects in their local/tribal HMPs for potential flood buyout projects.
Hazard Mitigation Goal	Goal 3: Flood buyouts and relocations will reduce risk and increase resilience from cryosphere and permafrost degradation, flood and erosion, and severe weather hazards.
Hazards Mitigated	Cryosphere and permafrost degradation, flood and erosion, and severe weather
Potential Funding Source	BRIC, FMA, HMGP, CDBG-DR, and NRCS-EWP
Project Source	FEMA, NOAA and DCRA
Cost Considerations	Buyouts provide a permanent solution. If a home is eligible for a buyout, the homeowner is offered a pre-disaster fair-market value for the property as determined by a certified appraiser.

	<p>Buyout offers can be made for structures outside of Special Flood Hazard Areas, depending on the results of cost-benefit analyses; acquisition of structures inside a flood zone is assumed to meet the cost-benefit threshold if the purchase price is \$276,000 or less (Pew Trust 2022). Sellers may receive the pre-disaster value of the property.</p> <p>HUD permits its grant funds to be used even if the property was acquired post-disaster. HUD also allows the acquisition of commercial, agricultural, and/or vacant land if the buyout/acquisition supports one of CDBG’s national objectives: benefiting persons of low and moderate income; preventing slum or blight; or meeting an urgent community development need (Pew Trust 2022).</p>
Environmental Considerations	Effective buyouts prevent future damage, make people safer, and ideally protect entire neighborhoods or communities. Once bought-out properties become open space, they can provide an added benefit of floodplain and wildland restoration (Pew Trust 2022).
Technical Considerations	Buyouts require an agreement by local government officials, the State, and FEMA. A buyout also requires a certified appraiser.
<b>High Hazard Potential Dams Remedial Investigations and Repair</b>	
Description	<p>Background: As noted in the 2017 Guidelines for Cooperation with the Alaska Dam Safety Program, routine inspections, PSIs, or special engineering evaluations may indicate that certain repairs are necessary to reduce the probability for failure for the long-term safety of a dam. However, the repairs may not be required immediately, and remedial investigations may be necessary to determine the magnitude of the problem, the optimum solution, or both.</p> <p>Action: Conduct or continue to conduct remedial investigations for high or significant hazard potential dams that receive a “poor” or “unsatisfactory” condition assessment. Repair and remediate as necessary. Ensure all HHPDs have condition assessment ratings.</p>
Hazard Mitigation Goal	<p>Goal 2: Remedial investigations will help the State identify dams that are vulnerable due to a dam safety deficiency.</p> <p>Goal 3: Remedial investigations and repair will reduce risk and increase resilience from high hazard potential dams.</p>
Hazards Mitigated	High hazard potential dams
Potential Funding Source	CWIFP and HHPD Grant Program (repair portion)
Project Source	Alaska Dam Safety Program, National Inventory of Dams
Cost Considerations	For remedial investigation only: Professional licensed engineers, existing plans and construction documents, analysis and reports
Environmental Considerations	For remedial investigation only: None
Technical Considerations	For remedial investigation only: Staff with dam design, safety, construction and maintenance experience
<b>Complete High Hazard Potential Dam Failure Dataset</b>	
Description	Background: Dam failure events have not been historically common in Alaska. The historical data provided by the Dam Safety Office has data gaps, as historical data is not readily available or is unknown.

	Action: Complete the historical dam failure dataset (current agency ownership, incident driver/mechanism, incident duration).
Hazard Mitigation Goal	Goal 2: Updating and completing high hazard potential dam failure specifications/details will help the State as well as local and tribal communities identify locations and CFs that are vulnerable to potential dam failure. Goal 3: Updating and completing high hazard potential dam failure specifications/details will help the State as well as local and tribal communities implement projects to reduce risks and increase resilience to potential dam failure.
Hazards Mitigated	High Hazard Potential Dams
Potential Funding Source	State Funds
Project Source	Alaska Dam Safety Program
Cost Considerations	Historical data may not be available for all components; dataset may be incomplete
Environmental Considerations	None
Technical Considerations	Historical data may not be available or reliable
<b>Statewide Transportation Facilities Comprehensive Dataset Expansion</b>	
Description	Background: In Section 4, estimated values for statewide transportation facilities were not available for vulnerability exposure analysis. These facilities (airports, bridges, ferry terminals, harbors, maintenance facilities, ports, and railroad facilities) are critical facilities and infrastructure for Alaskans. A comprehensive dataset for these facilities is not currently available. Action: Expand the State's transportation facilities dataset to include estimated values for potential losses for future HMP updates. This will enable the State's future risk assessments to be accurate.
Hazard Mitigation Goal	Goal 2: Expanding the transportation facilities dataset will help the State as well as local and tribal communities identify locations and transportation CFs that are vulnerable to all hazards. Goal 3: Expanding the transportation facilities dataset will help State as well as local and tribal communities implement projects to reduce risks and increase resilience of transportation facilities to all hazards.
Hazards Mitigated	All
Potential Funding Source	State Funds
Project Source	DOT
Cost Considerations	Creating database; compiling datasets from many agencies
Environmental Considerations	None
Technical Considerations	Cooperation among many agencies will be required
<b>Increase Instrumentation and Data Accessibility for the National Volcano Early Warning System</b>	
Description	Background: Many volcanoes in the U.S. have insufficient monitoring systems and/or obsolete equipment. The goals of the National Volcano Early Warning System are to ensure that the most hazardous volcanoes will be properly monitored, to make it possible for scientists to improve the timeliness and accuracy of hazard forecasts, and for communities to take action and reduce risks.

	Action: Increase instrumentation to monitor Alaska volcanoes at levels commensurate to their threats, build a unified system (National Volcano Information Service) to collect, aggregate, store and distribute volcano data, create and track internal alarm systems from all sensor types, and develop software tools for monitoring, visualizing, and analyzing volcano monitoring data. These actions are addressed and outlined further in the National Volcano Early Warning System developed by the USGS Volcano Hazard Program and its affiliated partners in state and academic institutions. Alaska volcanoes prioritized under NVEWS for additional instrumentation in immediate years include Redoubt, Akutan, Makushin, Spurr, Augustine, Okmok, Iliamna, Aniakchak, Katmai, Veniaminof, Atka, Hayes, Churchill, Kanaga, Kaguyak, Kasatochi, Moffett, and Seguam.
Hazard Mitigation Goal	Goal 1: Increased instrumentation for the National Volcano Warning System will increase public awareness about volcanoes. Goal 2: Increased instrumentation will help the State and partners to better identify threats from volcanoes.
Hazards Mitigated	Volcanoes
Potential Funding Source	USGS
Project Source	USGS
Cost Considerations	Cost of equipment and equipment installation, staffing, and automation to improve 24/7 monitoring of volcanoes, computer systems to distribute data, and ongoing operations and maintenance.
Environmental Considerations	All environmental laws will need to be met and/or exceeded for instrumentation location. Design alternatives will need to be developed to avoid and/or minimize effects to cultural and natural resources.
Technical Considerations	Equipment and staffing capabilities

## Notes:

BRIC = Building Resilient Infrastructure and Communities

CF = critical facility

CWPP = Community Wildfire Protection Plan

DCRA = Alaska Division of Community and Regional Affairs

CDBG-DR = Community Development Block Grant–Disaster Recovery

DHS&amp;EM = Division of Homeland Security and Emergency Management

DOF = Division of Forestry

FEMA = Federal Emergency Management Agency

FMA = Flood Mitigation Assistance

GIS = geographic information system

HHPD = high hazard potential dam

HMGP = Hazard Mitigation Grant Program

HMP = Hazard Mitigation Plan

HUD = U.S. Department of Housing and Urban Development

ISEA = Individual State Earthquake Assistance

NEHRP = National Earthquake Hazards Reduction Program

NFIP = National Flood Insurance Program

NOAA = National Oceanic and Atmospheric Administration

NRCS-EWP = Natural Resources Conservation Service–Emergency Watershed Protection Program

PSI = Periodic Safety Inspection  
RL = Repetitive Loss  
RVS = Rapid Visual Screening  
SHMP = State Hazard Mitigation Program  
SRL = Severe Repetitive Loss  
State = State of Alaska  
USFS = U.S. Forest Service  
USGS = U.S. Geological Survey

**Table 6-5: Nature-Based Solution Actions**

Coastal and Riverbank Stabilization Program	
Description	<p>Background: Traditional engineered hard “gray” shorelines use materials like steel, wood, concrete, or rock with no vegetation and include sloped armoring, vertical armoring, seawalls, and shore stabilization. In most locations in Alaska, these types of projects are necessary. While hard or gray shoreline projects are difficult to modify once completed, they are able to withstand the harsh Alaskan environment where nature-based solutions may not be as effective.</p> <p>Action: Prevent further coastal and riverbank loss and increase flood storage capacity through nature-based coastal and stream techniques where considered to be effective; otherwise use traditional engineered hard “gray” shoreline use materials that have been proven to withstand the harsh Alaskan weather conditions.</p>
Hazard Mitigation Goal	Goal 3: Coastal and riverbank stabilization projects will reduce risks and increase resilience to cryosphere and permafrost degradation, flood and erosion, tsunami and seiche, severe weather, and high hazard dam hazards.
Hazards Mitigated	Cryosphere and permafrost degradation, flood and erosion, tsunami and seiche, severe weather, and high hazard potential dam hazards
Potential Funding Source	NCRF
Project Source	FEMA, EPA, National Parks Service
Cost Considerations	Park and/or community planners, engineers, and scientists evaluate data, design alternatives, and develop detailed engineering. Project manager and construction crew to implement stabilization construction activities.
Environmental Considerations	Projects should be compatible with the natural processes of the rivers, climate adaptable, sustainable, aesthetically pleasing, and cost-effective. All environmental laws will need to be met and/or exceeded. Design alternatives will need to be developed to avoid and/or minimize effects to cultural and natural resources.
Technical Considerations	Data collected will need to include the identification of soil type, geology, wetlands, rare plants, historical and cultural features, water levels, and terrestrial and aquatic species. Staff with subject matter/experience to conduct assessments; design, public outreach, construction management, and construction will be needed.
Wetlands Action Plan Templates	
Description	<p>Background: A Wetlands Action Plan (WAP) is a guide to plan and implement projects and activities to conserve, protect, restore, and manage wetlands. WAPs can be designed to focus on wetlands in a specific watershed or region or target a wetland type or all surface water resources within the watershed.</p> <p>Action: Develop a WAP template to assist local and tribal communities in Alaska with the development of a WAP and overall wetland planning. WAP templates will focus on identifying and describing wetland resources, natural conditions, anthropogenic stressors that affect wetlands, wetlands baseline conditions, data gaps, restoration and protection site projects, chronic and cumulative impacts to wetlands reduction strategies, financing options, public outreach and stakeholder strategies, and project implementation and monitoring.</p>

Hazard Mitigation Goal	Goal 2: WAPs will help local and tribal communities to identify wetland locations that are vulnerable to multiple hazards, particularly cryosphere, permafrost degradation, floods, erosion, and severe weather. Goal 3: Projects and activities identified in WAPs will reduce risks and increase resilience to cryosphere and permafrost degradation, floods, erosion, and severe weather.
Hazards Mitigated	Cryosphere, permafrost degradation, floods, erosion, and severe weather hazards
Potential Funding Source	WPDG
Project Source	EPA, New Mexico Department of the Environment
Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities

## Notes:

EPA = U.S. Environmental Protection Agency

FEMA = Federal Emergency Management Agency

NCRF = National Coastal Resilience Fund

WAP = Wetlands Action Plan

WPDG = Wetland Program Development Grant



**Table 6-6: Outreach and Awareness Actions**

Hazard Mitigation Training	
Description	Action: Expand hazard mitigation training in Alaska. Training can include FEMA-created webinar recordings, online independent study courses and on-demand workshops. Training should focus on creating / updating effective HMPs as well as developing quality HMA grant applications.
Hazard Mitigation Goal	Goal 1: Hazard mitigation training will increase awareness around all hazards.
Hazards Mitigated	All hazards
Potential Funding Source	FEMA Technical Assistance
Project Source	DHS&EM, FEMA
Cost Considerations	Materials/handouts, travel time and costs, delivering workshop, and/or follow up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
Rural Resilience Workshop Expansion	
Description	Background: DHS&EM conducts workshops to bring community leaders/emergency managers in various regions together to discuss regional disaster planning and response. Workshops focus on community resilience, incident response, emergency management, and more. Action: Continue to expand the size and scope of DHS&EM's Rural Resilience Workshops.
Hazard Mitigation Goal	Goal 1: Rural Resilience Workshops will increase awareness about all hazards.
Hazards Mitigated	All hazards
Potential Funding Source	State Homeland Security Program
Project Source	DHS&EM
Cost Considerations	Materials/handouts, travel time and costs, delivering workshop, and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
Tsunami Operations Workshop Expansion	
Description	Background: Alaska's NTHMP Team conducts tsunami operations workshops to bring awareness to community leaders on the risks they face from tsunamis, to help to develop plans for mitigating and responding to tsunamis, and to provide public education and outreach tools and materials. Action: Continue to expand the size and scope of NTHMP's Tsunami Operations Workshops.
Hazard Mitigation Goal	Goal 1: Tsunami Operations Workshops will increase awareness of tsunami hazards.

Hazards Mitigated	Tsunami
Potential Funding Source	National Weather Service Tsunami Financial Assistance
Project Source	DHS&EM, NTHMP
Cost Considerations	Materials/handouts, travel time and costs, delivering workshop, and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>TsunamiReady and StormReady Expansion</b>	
Description	<p>Background: TsunamiReady and StormReady are collaborative programs among and between local, tribal, State, and federal emergency management agencies, community leaders, and the public to promote tsunami and storm hazard preparedness. The main goal of the program is to:</p> <p>“improve public safety before, during and after tsunami and storm emergencies. It aims to do this by establishing guidelines for a standard level of capability to mitigate, prepare for and respond to tsunamis and storms and working with communities to help them meet the guidelines and ultimately become recognized as TsunamiReady and StormReady by the NWS”.</p> <p>Action: Increase TsunamiReady and StormReady participation in Alaska by increasing public outreach about the program, promoting World Tsunami Awareness Day, Tsunami Preparedness Week, providing/funding additional funding for tsunami evacuation signage, tsunami and severe weather warning systems, and tsunami evacuation plans and hazardous weather plans.</p>
Hazard Mitigation Goal	<p>Goal 1: TsunamiReady will increase awareness about tsunami and severe weather hazards.</p> <p>Goal 2: TsunamiReady will help local and tribal communities identify CFs that are vulnerable to tsunami and severe weather hazards.</p> <p>Goal 3: TsunamiReady will reduce risk and increase resilience to tsunami and severe weather hazards.</p>
Hazards Mitigated	Tsunami
Potential Funding Source	NWS Tsunami Financial Assistance
Project Source	NWS
Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>Community Wildfire Protection Plan Outreach Expansion</b>	
Description	<p>Background: The CWPP is a community-based plan that identifies wildfire risk and provides a “roadmap” of mitigation actions for the community to implement to reduce their risks from wildfires. A CWPP can also address issues such as wildfire response, hazard mitigation, community preparedness, and/or structure protection. USFS wildfire reduction grants</p>

	<p>are available for communities to both write a CWPP and to implement the actions identified in their CWPP. In addition, having a CWPP is one of the first steps to become a Firewise Community. In 2021, DOF identified 10 communities in the Copper River Basin to create or update CWPPs.</p> <p>Action: Continue to expand DOF’s public outreach efforts for communities that have significant and/or considerable exposure to hazardous/highly flammable vegetation to develop and/or update their CWPPs. Identify and expand public outreach efforts geared at communities that have significant and/or considerable exposure to hazardous/highly flammable vegetation through the development and/or update their CWPPs.</p>
Hazard Mitigation Goal	<p>Goal 1: CWPP will increase awareness of wildland and community fire hazards.</p> <p>Goal 2: CWPP will help local and tribal communities identify CFs that are vulnerable to wildland and community fire hazards.</p>
Hazards Mitigated	Wildland and community fire
Potential Funding Source	Community Wildfire Defense Grant
Project Source	DOF
Cost Considerations	Maximum CWDG is \$250K per CWPP.
Environmental Considerations	None
Technical Considerations	Staff with subject matter and workshop facilitator capabilities
<b>Alaska Firewise Expansion</b>	
Description	<p>Background: Alaska Firewise is a cooperative effort among and between local, tribal, State and Federal agencies, community leaders, and the public to promote fire safety in areas vulnerable to wildland and community fires. Firewise Communities must create a Firewise Board and Firewise Task Force or Commission, develop a CWPP, sponsor Wildfire Days public events, volunteer or invest in community wildfire mitigation, and seek certification.</p> <p>Action: Increase Firewise Communities participation in Alaska by increasing public outreach about the program, promoting Wildfire Days (first Saturday in May), and providing/finding additional funding for CWPPs and increasing the availability of wildfire exposure maps.</p>
Hazard Mitigation Goal	<p>Goal 1: Alaska Firewise will increase awareness about wildland and community fire hazards.</p> <p>Goal 2: Alaska Firewise will help local and tribal communities identify CFs that are vulnerable to wildland and community fire hazards.</p> <p>Goal 3: When implemented, Alaska Firewise activities will reduce risks and increase resilience to wildland and community fire hazards.</p>
Hazards Mitigated	Wildland and community fires
Potential Funding Source	CWDG
Project Source	DOF

Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>Continuation of Building Safety Month</b>	
Description	Background: Governor Mike Dunleavy has designated May as Building Safety Month in Alaska. The Building Safety Month campaign has been presented by the International Code Council for over 40 years. The international campaign raises awareness about the critical role of building codes, including safe and sustainable construction, fire and building safety, disaster mitigation, energy conservation, and safe and abundant water supply. Action: Continue to observe Building Safety Month in Alaska.
Hazard Mitigation Goal	Goal 1: Observing Building Safety Month will increase awareness around earthquake, ground failure, severe weather, wildland and community fire hazards.
Hazards Mitigated	Earthquake, ground failure, severe weather, and wildland and community fires
Potential Funding Source	State funds
Project Source	Alaska Department of Public Safety and the Alaska State Fire Marshal
Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>Continuation of Fire Prevention Month</b>	
Description	Background: Governor Mike Dunleavy has designated October as Fire Prevention Month in Alaska. Fire Prevention Month encourages all Alaskans to be proactive and take precautionary measures to avoid fires, and participate in public safety activities offered by the Alaska Department of Public Safety and emergency services throughout Alaska. Action: Continue to observe Fire Prevention Month in Alaska.
Hazard Mitigation Goal	Goal 1: Observing Fire Prevention Month will increase awareness around wildland and community fire hazards.
Hazards Mitigated	Wildland and community fires
Potential Funding Source	State funds
Project Source	Alaska Department of Public Safety and the Alaska State Fire Marshal
Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>Volcano Awareness Month</b>	

Description	Action: Establish a Volcano Awareness Month as part of an effort to increase understanding of Alaskan and Russian volcanoes among residents and visitors. Topics to cover may include a year in review of volcanic activity, ash hazards from Alaskan and Russian volcanoes, recent explosive history of Alaskan and Russian volcanoes, volcanic hazard mapping, and community preparedness measures.
Hazard Mitigation Goal	Goal 1: Volcano Awareness Month will increase awareness of volcanic hazards.
Hazards Mitigated	Volcano
Potential Funding Source	State funds
Project Source	USGS and Hawai'i Volcanoes National Park
Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>National Flood Insurance Program Expansion</b>	
Description	Background: DCRA staff promote the CRS and help communities join the program by explaining the benefits of the CRS to elected officials and other local decision makers so they will encourage their staff to devote the resources needed to join the CRS or improve their classification. The DCRA improves local programs by offering training, templates, models, and examples to help communities improve their floodplain management activities to improve their CRS standing.
Hazard Mitigation Goal	Flood, erosion, and severe weather
Hazards Mitigated	Flood, erosion, and severe weather
Potential Funding Source	State funds
Project Source	DCRA
Cost Considerations	Materials/handouts, travel time and costs (if necessary), and follow-up
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities
<b>Increase Awareness of the ShakeOut Program/Drill</b>	
Description	Background: The Great ShakeOut is a one-day drill aimed to prepare Alaskans for major earthquakes. The ShakeOut Drill occurs yearly on the 3 <sup>rd</sup> Thursday of October. In 2023, it is scheduled for 10:19 a.m. on October 19, 2023. This means that wherever you are at that moment—at home, at work, at school, anywhere—you should Drop, Cover, and Hold On as if there were a major earthquake occurring at that very moment and stay in this position for at least 60 seconds. Action: Promote the Great Shakeout Program on DHS&EM social media pages and encourage Alaskans to participate in the drill.
Hazard Mitigation Goal	Goal 1: Increasing awareness about the ShakeOut drill will increase public awareness about earthquakes and preparedness.

Hazards Mitigated	Earthquake
Potential Funding Source	State funds
Project Source	DHS&EM
Cost Considerations	None
Environmental Considerations	None
Technical Considerations	Staff with subject matter and public information capabilities

## Notes:

CF = critical facility

CRS = Community Rating System

CWDG = Community Wildfire Defense Grants

CWPP = Community Wildfire Protection Plan

DCRA = Alaska Division of Community and Regional Affairs

DHS&amp;EM = Division of Homeland Security and Emergency Management

DOF = Division of Forestry

NTHMP = National Tsunami Hazard Mitigation Program

NWS = National Weather Service

State = State of Alaska

USFS = U.S. Forest Service

USGS = U.S. Geological Survey

### 6.3 PROGRESS IN STATEWIDE MITIGATION EFFORTS

Table 6-7 describes the status of each mitigation action identified in the 2018 SHMP. In addition, it states whether the action has been updated and/or modified and included in the 2023 SHMP Prioritized Mitigation Action Plan.

**Table 6-7: Progress in Statewide Mitigation Efforts**

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
MH 1.1	Host workshops for builders to teach or demonstrate new multi-hazard construction techniques (e.g., seismic, flood, ground failure, weather, wildfire).	Ongoing. The State of Alaska promotes safe and sustainable construction, sustainable construction, fire and building safety, disaster mitigation, and energy conservation throughout the month of May during Building Safety month.	Yes. The State would like to continue to build upon this action through Building Safety Month.
MH 1.2	Continue agency-led programs that provide readily available locational hazard risk information to the public (e.g., seismic, flood, ground failure, weather, wildfire).	Ongoing. The DHS&EM resiliency team provides annual rural resiliency and tsunami operations workshops to communities in rural Alaska. The DHS&EM outreach team has various annual outreach events throughout the state to include the annual emergency management conference every April and to take the earthquake simulator to various communities. The DHS&EM team participates in the resiliency workshops and emergency management conference.	No. This action is currently in action and ongoing. It is now considered a capability.
MH 1.3	Continue all-hazard-focused safety education and preparedness in Alaska's schools.	Ongoing. Alaska schools participate in the Great Alaska Shakeout, which promotes worldwide exercises that focus on earthquake education and emergency preparedness.	No. This action is ongoing and considered routine/efficient.
MH 1.4	Educate Alaskan communities about the benefits of the NFIP, StormReady, and Alaska Firewise programs.	Ongoing. DCRA's NFIP Coordinator, the DHS&EM Preparedness Section, and DOF's Firewise Communities Liaison promote the NFIP, StormReady, and Firewise programs respectively.	Yes. The State would like to continue to reach and teach community leaders, particularly in rural

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
			areas, about various preparedness and mitigation programs.
MH 1.5	Encourage nonstructural mitigation and preparedness activities using an all-hazards approach.	Ongoing. Alaska encourages multi-hazard, nonstructural mitigation and preparedness through many platforms, including comprehensive planning and zoning, which are outlined in the 2012 Alaska Planning Commission Handbook (Alaska Planning Commission 2012).	No. This action is ongoing and considered routine/efficient.
MH 1.6	Expand the number and locations of modern strong motion and broadband seismic recording instruments in “low-noise” installations throughout Alaska to record and evaluate the seismic and volcanic response of built infrastructure for opportunities to improve design and construction in all hazard locations.	Completed. More than 250 seismic stations continuously stream data to the Alaska Earthquake Center.	No. This action has been completed.
MH 1.7	Provide technical assistance and development support for multi-hazard-focused mitigation project grant applications that reduce future earthquake, flood, ground failure, tsunami, weather, wildland fire, and other losses.	Ongoing. Technical assistance/support for hazard grant applications provided by various State departments and agencies (DCRA, DHS&EM, DOF, etc.).	Yes. The State would like to continue to provide technical assistance and grant application support with a particular focus on reaching rural areas.
MH 1.8	Disseminate Alaska and Russian volcano hazard information to the civilian and military aviation communities, trade shows, and other public events.	Ongoing. Volcano hazard information can be found through the Alaska Volcano Observatory's Hazard Notification System (HANS), website, social media, and AVO Radio, a weekly 2 minute radio program carried on 10 public radio stations throughout Alaska. AVO also conducts outreach via schools, educational programs, and community engagement in multiple communities. Volcano hazard information is also shared	No. This action is ongoing and considered routine/efficient.



Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
		at Rural Resilience workshops. Russian volcano eruption information is no longer distributed.	
MH 1.9	Expand volcano hazard information dissemination to all Alaskan maritime and coastal communities.	Ongoing. Volcano hazard information can be found through the Alaska Volcano Observatory’s weekly updates, Facebook page, Twitter page, and radio as well as the USGS volcano alert messages. Volcano hazard information is also shared during Rural Resilience workshops.	No. This action is ongoing and considered routine/efficient.
MH 1.10	Provide planning development, administrative process, technical writing, and grant application development training to improve community leadership capabilities.	Ongoing. DHS&EM provides technical assistance for the preparation of BRIC and HMGP grants.	Yes. The State would like to continue to provide technical assistance and grant application support with a particular focus on reaching rural areas.
MH 2.1	Continue DHS&EM’s Mitigation Section’s forward progress to implement, monitor, review, and evaluate community and tribal mitigation plan identified actions.	Ongoing. As described in Section 5, State Capabilities, Alaska DHS&EM is creating a database to implement, monitor, review, and evaluate local and tribal mitigation plans, including mitigation strategies.	Yes. Alaska DHS&EM is currently in the process of developing a database.
MH 2.2	State agencies will strive to coordinate, incorporate, and integrate mitigation planning provisions into all community planning processes such as comprehensive, capital improvement, land use plans, etc., to demonstrate multi-benefit considerations and facilitate the use of multiple funding sources.	Ongoing. DHS&EM is currently integrating sections of the 2023 SHMP into the 2023 State Emergency Operations Plan.	No. This action is ongoing and considered routine/efficient.
MH 2.3	Encourage all State and local jurisdictions to adopt, update to the current IBC, and enforce commercial and residential construction.	Ongoing. The State of Alaska promotes safe and sustainable construction, sustainable construction, fire and building safety, disaster mitigation, and energy	No. This action is ongoing and

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
		conservation throughout the month of May during Building Safety month.	considered routine/efficient.
MH 2.4	Encourage all communities to adopt or update to the current IBC for residential construction and provide sufficient resources and incentives to ensure compliance.	Ongoing. The State of Alaska promotes safe and sustainable construction, sustainable construction, fire and building safety, disaster mitigation, and energy conservation throughout the month of May during Building Safety month.	No. This action is ongoing and considered routine/efficient.
MH 2.5	Conduct statewide tests of the state’s emergency warning systems annually.	Ongoing. Addressed in the State of Alaska Emergency Alert System (EAS) Plan instead of the 2023 SHMP. The EAS Plan outlines the use of the Federal Communications Commission (FCC)-mandated Emergency Alert System in Alaska.	No. This action is ongoing and considered routine/efficient.
MH 2.6	Provide sufficient resources and incentives necessary to encourage implementing IBC construction compliance for each multi-hazard category.	Deleted. Taken out of regulation in 2017.	No. This action has been deleted.
MH 2.7	Encourage jurisdictions to document natural hazard high-risk areas in land use, zoning, emergency response, and evacuation plans. (e.g., flood, ground failure, tsunami, wildfire)	Ongoing. This action is being addressed through the continued development/update of local and tribal hazard mitigation plans and emergency response plans and small community emergency response plans.	No. This action is ongoing and considered routine/efficient.
MH 2.8	City and Borough of Sitka, LHMP Update	Completed. City and Borough of Sitka has an HMP that is current through 2024.	No. This action has been completed.
MH 2.9	City of Skagway LHMP Update	Completed. The City of Skagway has a plan that is current through 2025.	No. This action has been completed.
MH 3.1	Develop an inventory of historical landslide, landslide-prone, permafrost, and other soil instability locations that is linked to specific ground failure hazard maps.	Ongoing. Alaska DCRA is currently developing landslide inventory/susceptibility maps and modeling potential debris flow run-out for the Sitka and Homer areas.	Yes. This action is still in the development phase.
MH 3.2	Promote development practices that reduce the flood risk (i.e., relocate and elevate at least 2 feet above BFE) or buy out property).	Ongoing. DCRA encourages communities that have land use authority to join the NFIP. The NFIP prevents the development of structures within the floodplain that do not meet the regulations and standards, such as the	No. This action is ongoing and considered routine/efficient.

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
		requirement to build above the BFE. The DCRA and local NFIP communities work to secure grant funding to acquire and relocate at-risk structures.	
MH 3.3	Support community relocation site planning to remove threatened structures outside high hazard threat areas (e.g., areas of cryosphere and permafrost degradation, floodplains, erosion, ground failure).	Ongoing. In response to the 2018 Cook Inlet Earthquake (DR-4413) in January 2020, HUD allocated \$35.86 million CDBG-DR funds into the state of Alaska to address unmet housing needs. The State of Alaska is using the funds in part for the relocation of households to safer areas.  During the summer of 2019, the Innovative Readiness Training program and Ukpeaġvik Iñupiat Corporation Construction completed critical infrastructure at Mertarvik to support the first full-time residents, 21 households with 140 adults and children (about one-third of Newtok's population), who moved from Newtok to Mertarvik in October 2019.	Yes. While this action is ongoing there is more work to be done in terms of the CDBG-DR funds. It is also considered a priority to complete.
MH 3.4	Newtok Village Council, seven home acquisition & demolition projects (RL/SRL).	Ongoing. The seven-home relocation is complete. The project goal is to relocate everyone in Newtok to Mertarvik by 2023.	No. While this action is ongoing, it is expected to be completed imminently.
MH 3.5	Matanuska Susitna Borough (MSB) Matanuska River Erosion Mitigation Project–Butte area (10 properties, 11 homes) (RL/SRL).	Completed. In 2018, FEMA awarded MSB with an HMGP grant to fund the acquisition of land and structures for 10 homes that are at severe risk for flooding and erosion damage along the Matanuska River in Butte from mile 13 to mile 17 along the Old Glenn Highway. The original scope of work was for 11 properties and 10 homes to be acquired and demolished, but only 6 homes were acquired and demolished. Matching funds were provided by the State. The project was completed in July 2021.	No. This action has been completed.

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
MH 3.6	MSB Matanuska River Erosion Mitigation Project–Sutton area (five properties, five homes).	Completed. As a companion project to the 2018 HMGP funds for the Matanuska River–Butte Area, FEMA awarded funds in 2018 for another five properties to be acquired from mile 63.5 to mile 65 of the Glenn Highway near Sutton. The original scope of work was for 5 homes to be acquired and demolished, but only 2 homes were acquired and demolished. Matching funds were also provided by the State. The project was completed in July 2021.	No. This action has been completed.
MH 3.7	State of Alaska, Department of Natural Resources, Division of Parks and Outdoor Recreation (DNR, DOPR), Anchor River State Recreational Area Embankment Stabilization Project	Completed with FEMA closeout.	No. This action has been completed.
MH 3.8	Kenai Peninsula Borough (KPB), GIS software for land cover hazard assessment	Completed. The Kenai Peninsula Borough GIS Land Cover Viewer includes KWF Wetlands Assessment and other vegetation and land cover data sets.	No. This action has been completed.
MH 4.1	Identify and pursue funding opportunities to implement mitigation actions.	Ongoing. As noted in Section 5.2, there have been a number of recent funding opportunities to implement mitigation actions in Alaska. Such funding has been secured through ACCAP, AFG, FMAG, BRIC, HMGP, HMGP–Post Fire, Tsunami Financial Assistance, Fuels Management Program, CDBG-DR, CDBG-MIT, and NCWC, NCRF, and NRCS-EWP.	Yes. The State would like to identify and pursue funding opportunities with a particular focus on reaching rural areas.
MH 4.2	Fund multi-hazard mitigation retrofit projects for public facilities such as schools, bridges, airports, etc.	Ongoing. The State has approved funding for the Port of Anchorage modernization project, which will in part include seismic upgrades and shoreline stabilization measures.	No. More single hazard-specific projects have been identified in the 2023 SHMP.
MH 4.3	Prepare and fund statewide community hazard assessments and prioritize at-risk communities and infrastructure for all hazard types, including flood, erosion, storm surge, ground failure, wildfire.	Ongoing through RVS, AURA, Risk MAP, Coastal Community Flood Assessment, etc.	Yes. While this action is ongoing it is considered a priority to expand

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
			and complete these assessments.
MH 4.5	Support and fund relocating structures and other infrastructure from high hazard risk areas. (e.g., cryosphere, earthquake, flood, ground failure, wildfire).	<p>Ongoing. In March 2018, FEMA awarded the Matanuska-Susitna Borough \$4.46M in HMGP grant funding to buy out 15 residents whose properties are at severe risk for erosion. The grant was awarded with 75% federal funds and 25% State funds.</p> <p>In response to the 2018 Cook Inlet Earthquake (DR-4413), HUD allocated \$35.86 million CDBG-DR funds into the state of Alaska to address unmet housing needs in January 2020. The State is using the funds in part for the relocation of households to safer areas.</p> <p>During the summer of 2019, the Innovative Readiness Training program and Ukpeaġvik Iñupiat Corporation Construction completed critical infrastructure at Mertarvik to support the first full-time residents, 21 households with 140 adults and children (about one-third of Newtok's population), who moved from Newtok to Mertarvik in October 2019.</p>	Yes. While this action is ongoing it is considered a priority.
MH 4.6	Create a prioritized list of potential all-hazard (e.g., cryosphere, earthquake, flood, ground failure, wildfire) damaged or impacted structures and prepare grant applications to relocate them away from high hazard risk areas for potential FEMA funding.	Ongoing. 2023 SHMP includes an analysis of State CFs in hazard areas. In addition, the Mitigation Planning Database will eventually be able to query such information.	Yes. While this action is ongoing it is considered a priority.
MH 4.7	Support and fund community planning initiatives (e.g., CWPP, HMP, other infrastructure protection plan development) by providing State funds to match grant to federal funding.	Ongoing. The State provides matching funds for HMPs using BRIC or HMPG funds.	Yes. While this action is ongoing it is considered a priority.
MH 4.8	Support of impoverished community federal mitigation grant required matching funds for eligible mitigation projects such as HMP, USFS/AKDOF Volunteer Fire Assistance, wildfire protection, and climate change	Ongoing. The State provides matching funds for all HMGP projects in Alaska.	Yes. While this action is ongoing it is considered a priority.

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
	adaptation planning, floodplain mapping, and other eligible construction-project-related grants.		
CR 5.1	Encourage agencies to develop localized landslide and avalanche zone maps and support community risk assessment efforts that provide justification for prohibiting development in high hazard areas.	Avalanche zone maps were created for the Municipality of Anchorage in 2017. However statewide avalanche zone maps do not exist. Likewise, statewide landslide maps do not exist. The State of Alaska is using the funds for the relocation of households to safer areas, affordable housing, other unmet housing needs, and planning activities to aid in regional recovery.	Yes. While this action is ongoing it is considered a priority to complete statewide hazard maps.
EQ 6.1	Deploy modern seismic instrumentation in CFs, infrastructure, and major transportation arteries to provide real-time preliminary damage assessment capability.	Ongoing. Matanuska-Susitna Borough uses the Esri's Damage Assessment solution to have a uniform way to collect, assess, and manage data during an emergency event.	No. This action is not considered a priority currently.
EQ 6.3	Expand the number and locations of modern strong motion and broadband seismic recording instruments in “low-noise” installations throughout Alaska to record and evaluate the seismic response of built infrastructure for opportunities to improve design and construction.	Ongoing. The USGS National Strong-Motion Project has the primary Federal responsibility for acquiring strong motion records of significant earthquakes in the U.S. recorded by sensors placed in the ground and in structural arrays. In Alaska, the following have sensors: one bridge/overpass in Anchorage, one hotel in Anchorage, and four commercial buildings.	No. This action is not considered a priority currently.
FL 7.1	Create a prioritized list of potential flood-damaged or impacted structures and prepare grant applications for FEMA-funded programs.	Ongoing. The DCRA and local NFIP communities work to secure grant funding to acquire and relocate at-risk structures. After a substantial damage event, a property or business owner with flood insurance can secure Increased Cost of Compliance (ICC) funds to elevate their structure to prevent future risk of flood damages.	Yes. While this action is ongoing it is considered a priority to mitigate flood hazards.
FL 7.2	Promote development practices that reduce the flood risk (i.e. relocate and elevate at least 2 feet above BFE or buy-out property).	Ongoing. The State and the DCRA staff support and encourage communities that have land use authority to join the NFIP. The NFIP prevents the development of structures within the floodplain that do not meet the regulations and standards, such as the requirement to build above the BFE.	No. This action is ongoing and considered routine/efficient.

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
GF 8.1	Develop an inventory of historical landslides and landslide-prone areas to use to produce location-specific landslide hazard maps.	Ongoing. Alaska DGGS is currently developing landslide inventory/susceptibility maps and modeling potential debris flow run-out for the Sitka and Homer areas; monitoring the movement of frozen debris lobes encroaching on the Dalton Highway in the southern Brooks Range (in collaboration with the University of Alaska Fairbanks); and assessing the landslide and tsunami hazards in the upper Barry Arm with multiple State, federal, private and university entities.	Yes. While this action is ongoing it is considered a priority to develop landslide / debris flow maps throughout the State where needed.
TS 9.1	Conduct community outreach to encourage all tsunami-threatened communities to participate in the NOAA Tsunami Ready Program. Provide platform for discussing available mitigation partnerships, benefits, and grant opportunities by preparing tsunami hazard mitigation plans / EOP tsunami annexes and identifying tsunami evacuation routes.	Ongoing. DHS&EM hosts Tsunami Operations Workshops for community leaders and emergency managers in tsunami hazard areas to discuss tsunami planning and response. In addition, DHS&EM in partnership with NOAA, UA, and DGGS hosts an annual Alaska Tsunami Preparedness Week.	Yes. The State would like to continue to reach and teach community leaders, particularly in rural coastal areas, about various tsunami programs.
TS 9.2	Contact TsunamiReady-certified communities during the third year of their TsunamiReady certification to support them throughout their renewal process.	Ongoing. One borough and 12 communities have participated in TsunamiReady.	No. This action is ongoing and considered routine/efficient.
TS 9.3	Provide tsunami hazard and evacuation signs for TsunamiReady-certified communities.	Ongoing. U.S. Department of Commerce provides funds to the State of Alaska due to Alaska's high threat for tsunami. The allocation supports the promotion of local-, regional-, and State-level tsunami mitigation and preparedness, including installation of warning communications systems, tsunami signage and promotion of the TsunamiReady program in Alaska.	No. This action is ongoing and considered routine/efficient.
TS 9.4	Install tsunami warning sirens in at-risk tsunami communities.	Ongoing. See TS 9.3.	No. This action is ongoing and

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
			considered routine/efficient.
TS 9.5	Phase funded project: (1) identify, locate, and characterize tsunami sources in Alaska; (2) research and model the tsunami risk for vulnerable coastal communities; (3) obtain bathymetric data for accurate tsunami inundation mapping; (4) research and model the tsunami risk for vulnerable coastal communities; and (5) develop tsunami inundation maps for tsunami-threatened communities statewide.	Ongoing. In partnership with the DGGS and DHS&EM, the Alaska Earthquake Center maps potential inundation using numerical modeling of tsunami wave dynamics. Communities are selected with consideration to their tsunami hazard exposure, location, infrastructure, the availability of data, and willingness to incorporate the results into a hazard mitigation plan.	Yes. While this action is ongoing there are still more coastal communities to map and this action is considered a priority.
TS 9.6	Continue DHS&EM’s participation on the NTHMP with UAF/GI, AEC, and DGGS partnership while advocating for continued joint planning, outreach, and Congressional NTHMP funding.	Ongoing. DHS&EM, UAF/GI, and DGGS continue to actively participate on the NTHMP Coordinating Committee and its subcommittees.	No. This action is ongoing and considered routine/efficient.
TS 9.7	Encourage NOAA to continue researching and developing rapid tsunami warning technologies such as near-real-time moment tensor inversion, extension of earthquake source inversion procedures, and “GPS shield technique” early tsunami warning efforts.	Ongoing. The Alaska Earthquake Center maintains two moment tensor catalogs to provide real-time earthquake detection. NOAA acquires real-time tsunami forecasts through 39 Deep-ocean Assessment and Reporting of Tsunami (DART) stations at sites in regions with a history of generating destructive tsunamis.	No. This action is ongoing and considered routine/efficient.
VO 10.1	Conduct comprehensive volcano hazard and risk assessments for the Cook Inlet and surrounding areas and include the results into hazard mitigation planning.	Ongoing. The USGS completed a hazard assessment for Iliamna Volcano in 1999 and the Augustine Volcano in 1998.	No. This action is not considered a priority currently.
VO 10.2	Conduct and publish individual volcano hazard and risk assessments in Cook Inlet.	Ongoing. The USGS completed a hazard assessment for Iliamna Volcano in 1999 and the Augustine Volcano in 1998.	No. This action is not considered a priority currently.
VO 10.3	Incorporate updated volcanic hazard assessments in State and local hazard mitigation plans as appropriate.	Ongoing. An updated volcano hazard assessment was included in the 2023 SHMP.	No. This action has already been addressed at the State level, ongoing at the local level.



Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
VO 10.4	Include updated volcanic hazard assessments in State and local Emergency Response and Operations Plans as appropriate.	Ongoing. An updated volcanic hazard assessment is included in the 2023 SHMP, and volcanoes are addressed as hazard profiles in the 2023 Alaska State Emergency Operations Plan.	No. This action has already been addressed at the State level, ongoing at the local level.
VO 10.5	Create and disseminate volcano hazard information products.	Ongoing. The USGS, Alaska Volcano Observatory, Alaska Department of Health, and Municipality of Anchorage have several volcano hazard information products available to the public.	No. This action is ongoing and considered routine/efficient.
VO 10.6	Conduct outreach and education on volcanic hazards and risk mitigation for the remote communities of the Alaska Peninsula and the Aleutian Islands.	Ongoing. Beyond Rural Resilience workshops, AVO has conducted individual community engagement activities in the past year, including Perryville, Sitka, and Port Heiden. More are planned for 2023, such as Unalaska and Adak.	No. This action is ongoing and considered routine/efficient.
WX 11.1	Strive to conduct four special statewide outreach and awareness activities to support Lightning Safety Awareness Week, Winter Weather Awareness Week, Flood Awareness Week, Tsunami Ready, and Storm Ready education and certification, as applicable.	Ongoing. The Governor of the State of Alaska proclaimed: the second to last week of March as Tsunami Preparedness Week and the last week of September as Winter Weather Preparedness Week. Flood Awareness week is the second week of March and is promoted by NOAA and FEMA while Lightning Safety Awareness Week is the third week of June and is promoted by the National Lightning Safety Council.	No. This action is ongoing and considered routine/efficient.
WX 11.2	Install more weather stations and “high sites” to the NWR network to facilitate expanding continuous broadcast and warning availability to remote locations.	Uncompleted. There are over 1,000 transmitters in the U.S. However, there are multiple areas in Alaska that do not have coverage, including the North Slope Borough and Yukon–Koyukuk Census Area. In addition, multiple Alaska transmitters were out of service as of February 2023.	No. This action is not considered a priority currently.
WX 11.3	Encourage local communities to employ and register with NOAA to receive warnings via fax, e-mail, radio, and telephone and to transmit to public in redundant methods to fulfill StormReady criteria for redundant warning and	Ongoing. Communities throughout Alaska put out public service announcements regarding registering for NOAA weather alerts via text or email.	No. This action is ongoing and considered routine/efficient.

Number	Description	Status	Updated / Modified Action Included in 2023 SHMP
	emergency information receipt and communitywide dissemination.		
WX 11.4	Conduct workshops to train community volunteers to perform all-season Storm Spotter Network activities such as Riverwatch and other extreme weather event reporting and coordination.	Completed. The NWS has created a 53-page weather-spotting training manual for community volunteers to report hazardous weather and any impacts being observed within their community. <a href="#">Alaska Weather Spotter Training</a> .	No. This action has been completed.
WX 11.5	Conduct agency outreach activities to expand weather monitoring networks to facilitate communicating warnings and severe event communication and warnings.	Completed. The NWS operates 165 weather stations throughout Alaska. DGGs operates an additional seven weather stations in southern and southeastern Alaska.	No. This action has been completed.
WX 11.6	Encourage and conduct education or hands-on training to demonstrate the value of various hazard-resistant construction practices and appropriate materials selection to improve hazard event damage resistance.	Ongoing. The State of Alaska promotes safe and sustainable construction, sustainable construction, fire and building safety, disaster mitigation, and energy conservation throughout the month of May during Building Safety month.	No. This action is ongoing and considered routine/efficient.
WF 12.1	Conduct Firewise and other hazard-resistant construction and materials selection workshops to teach program requirements and best risk mitigation practices.	Ongoing. DOF conducted informational Firewise kiosks in the McGrath, Takotna, Nikolia, and Telida communities in the South-West Area.	Yes. The State would like to continue to reach and teach community leaders, particularly in rural areas, about Firewise and other selected programs.
WF 12.2	Identify, organize, and monitor the various programs responsible for fuel management in the wildland/urban interface.	Ongoing. DOF manages a Hazard Fuel Reduction Program. DOF's protection responsibilities are geographically split into six separate areas, and within each area the Hazard Fuel Reduction Program is carried out through hand crews, mechanical treatment, prescribed burns, and public outreach.	Yes. While this action is ongoing there is more work to be done with the DOF program. It is also considered a priority.

Notes:

Check mark indicates that the proposed action was updated or modified to carry forward in the 2023 SHMP Update

— = not applicable

ACCP = Alaska Center for Climate Assessment and Policy

AEC = Alaska Earthquake Center

AFG = Alaska Department of Fish and Game

AKDOF = Alaska Department of Forestry

AURA = Arctic Urban Risks and Adaptations

BFE = Base Flood Elevation

BRIC = Building Resilient Infrastructure and Communities

CDBG-DR = Community Development Block Grant–Disaster Recovery

CDBG-MIT = Community Development Block Grant–Mitigation

CF = critical facility

Covid-19 = coronavirus disease 2019

CWPP = Community Wildfire Protection Plan

DART = Deep-ocean Assessment and Reporting of Tsunami

DCRA = Alaska Division of Community and Regional Affairs

DGGS = Alaska Division of Geological & Geophysical Surveys

DHS&EM = Division of Homeland Security and Emergency Management

DOF = Division of Forestry

DOPR = Division of Parks and Outdoor Recreation

EAS = Emergency Alert System

EOP = Emergency Operations Plan

FCC = Federal Communications Commission

FEMA = Federal Emergency Management Agency

FMAG = Fire Management Assistance Grant

GIS = geographic information system

GPS = Global Positioning System

NFIP = National Flood Insurance Program

HMGP = Hazard Mitigation Grant Program

HMP = Hazard Mitigation Plan

HUD = U.S. Department of Housing and Urban Development

IBC = International Building Code

ICC = Increased Cost of Compliance

KPB = Kenai Peninsula Borough

KWF = Kenai Watershed Forum

LHMP = Local Hazard Mitigation Plan

MAP = Mapping, Assessment, and Planning

MSB = Matanuska-Susitna Borough

NCRF = National Coastal Resilience Fund

NCWC = National Coastal Wetlands Conservation

NFIP = National Flood Insurance Program

NOAA = National Oceanic and Atmospheric Administration

NRCS-EWP = Natural Resources Conservation Service–Emergency Watershed Protection Program

NTHMP = National Tsunami Hazard Mitigation Program

NWR = National Wildlife Refuge

NWS = National Weather Service

PSI = Periodic Safety Inspection

RL = Repetitive Loss

RVS = Rapid Visual Screening

SHMP = State Hazard Mitigation Program

SRL = Severe Repetitive Loss

State = State of Alaska

UA = University of Alaska

UAF-GI = University of Alaska, Fairbanks Geophysical Institute

USFS = U.S. Forest Service

USGS = U.S. Geological Survey

## 6.4 PRIORITIZATION OF MITIGATION ACTIONS

For the 2018 SHMP, the mitigation action prioritization process was based on the SHMP’s mission and vision statement. Mitigation actions that were consistent with the statement to minimize loss of life and injuries, minimize damages, facilitate the restoration of public services, promote economic development, were assigned a “high” priority (highest ranking).

For the 2023 SHMP, the mitigation action prioritization process was updated to be based on the 2023 SHMP Section 4, Hazard Identification and Risk Assessment, and Section 5, State Capabilities, as follows:

- A very high priority ranking was assigned to actions that addressed urgent need/life safety actions. These actions generally include the State CFs identified in Section 4, Hazard Identification and Risk Assessment, as being located in a hazard area.
- A very high priority ranking was assigned to actions that addressed data gaps. As discussed in Section 5, State Capabilities, a big challenge to hazard mitigation in Alaska is the lack of accurate, statewide hazard data to support mapping, planning, and policy mitigation strategies and risk communication.

In addition, mitigation actions that were listed in the 2018 SHMP and currently identified as ongoing or uncompleted have been updated and/or modified and included in the 2023 SHMP Prioritized Action Plan.