



# Risk & Resiliency Workshop Summary

**February 24, 2026, 1:00 – 4:30 p.m., Juneau, AK**

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## Workshop Overview

The Alaska Department of Transportation and Public Facilities (DOT&PF) hosted a workshop for DOT&PF staff representatives on Tuesday, February 24, 2026, at the DOT&PF 7 Mile building in Juneau.

The purpose of the workshop was to assess key risks and resiliency measures to inform strategies for the Southeast Transportation Plan (SEATP) update.

A total of 19 participants joined, in addition to SEATP project team members.

Participants received an overview of the SEATP Update and took part in a hazard-infrastructure assessment activity. An initial roundtable discussion allowed DOT&PF staff to share top concerns related to risk and resilience. The core of the meeting was a structured hazard-infrastructure assessment activity. Participants discussed vulnerabilities across multiple transportation modes. The meeting closed with a roundtable discussion on population and funding considerations.





# Infrastructure Risk Assessment

## Hazard-Infrastructure Assessment Activity

The purpose of the activity was to assess risks for regionally important DOT&PF owned assets in Southeast Alaska, particularly for hazards identified in the Alaska State Hazard Mitigation Plan (SHMP). Those hazards are:

- Earthquake
- Erosion
- Flood
- Ground Failure, Landslide, Avalanche
- Severe Weather
- Tsunami
- Volcano
- Wildfire

The Federal Highway Administration's (FHWA) Vulnerability Assessment and Adaptation Framework methodology to assess vulnerability of transportation infrastructure and systems to extreme weather and climate effects was adapted to assess the risks from these hazards. The level of exposure, sensitivity, and adaptive capacity was ranked for several regionally important infrastructure facilities.

In addition to evaluating asset risk, attendees listed mitigation strategies and potential actions that DOT&PF may consider taking, and that may inform SEATP Update recommendations.

Several handouts were provided to attendees to provide guiding information for the activity, which are included in Appendix 1. The notes below reflect discussion during the opening roundtable and the assessment activity. The results of the assessment activity will be included in the Risk and Resiliency Technical Memorandum.

## Roads

- Concerns for the integrity of the region's aged signal system. There is a future HSIP project under consideration for improvements to the signal system.
- Many communities rely on a single road for all access, creating limited redundancy and making them vulnerable to disruptions from weather, maintenance issues, or hazard events.
- Understanding future traffic (and related needs) can be difficult. Major traffic increases are not forecasted. However, increased tourism and tourism in new areas (including cruise ships visiting communities or areas with limited infrastructure) may add pressure to the system.
- Traffic impacts are not always anticipated as accurately anticipated as they could be. The wording of Traffic Impact Analysis (TIA) regulations can put DOT&PF in a position to be responsible for implementing identified required improvements rather than the developers. This is a continuing concern into the future.
- Right-of-way (ROW) is a limiting factor. A lot of the corridors have tight ROW, making it difficult to widen a road or add a turn lane or other facilities.





- Culverts are deteriorating. The culverts often don't keep up with routine rainfall/snowmelt events, let alone extreme events. DOT&PF is working on a culvert inventory and a culvert asset management plan.
- Deteriorating culverts limit the ability to do roadway preventive maintenance because surface treatments are not an option if the culverts need to be replaced.
- Sea level rise has been countered by isostatic rebound, but may be a concern in the future.
- Some DOT&PF roads serve predominantly local needs, raising the question of whether local ownership might be more suitable under the right conditions.
- Along with identifying roads that are at risk from hazards such as landslides and flooding, DOT&PF staff also identified some of the roads less at risk in the region, including Garteen Highway in the Hoonah-Angoon Census Area and Halibut Point Road in the City and Borough of Sitka.
- DOT&PF staff recommended checking in with the local/regional avalanche program for the most up-to-date information on probability and exposure.
- In areas where severe weather was identified as a potential hazard, DOT&PF staff shared that the impact of the event depends heavily on the availability of equipment and staff. For many of the roadways, it was difficult for participants to choose the level of adaptive capacity, as these variables play such a large role.

## Bridges

- Traffic and vessel collisions should be included as hazard types in the bridge risk assessment.
- Bridge risk is driven primarily by natural deterioration and state-of-good-repair challenges, while hazard-specific risks tend to be less dominant in overall assessments.
- Tunnels should also be considered in the risk assessment, noting that Southeast has two of the state's four tunnels.
- There is a need for a dedicated bridge maintenance crew in the Southcoast Region to support ongoing inspection and preservation work.

## Airports

- Communities that depend on air travel as their only means of access face heightened vulnerability, as limited or no alternative routes make it more difficult to mobilize personnel and resources quickly when issues arise.
- Ferries are not always a reliable alternative to air travel, as service is not daily and operations can be disrupted by weather.





- Automated Weather Observing System (AWOS) is critical for airport operations. Even when weather conditions are flyable, a loss of AWOS can prevent aircraft from using the airport during weather events due to the lack of certified weather reporting.
- Maintaining airport lighting is a critical priority, particularly in Southeast, where many lighting systems are past the FAA useful life of 10 years.
- Although Juneau International Airport is not state-owned, it remains a critical hub for regional mobility, and disruptions there often affect surrounding communities.
- Seaplane bases should also be included in the assessment. Several facilities face significant deterioration, and because some are not eligible for FAA funding, needed improvements can be difficult to address.
- Overall, there was less concern about the impact of hazards at airports. Operations may close due to severe weather, but the impact is probably for a few hours, not an extended duration.
- Consider security vulnerabilities as part of overall system risk, recognizing that breaches can disrupt operations and pose threats to airport safety and reliability.
- Wildlife hazards are a significant safety concern, particularly in regions where deer, bears, and other animals can access runways and movement areas.

## Ferry Terminals/Harbors

- There is limited redundancy in the ferry system, and when a vessel is out of service, another boat cannot easily replace it, resulting in significant service disruptions.
- These facilities are resilient to most hazards because they are already designed to withstand constant wave motion. The risk of damage is to boats trying to dock in severe weather. Due to little concern for specific hazards, the hazard-infrastructure risk assessment was not completed for the ferry terminal and harbor facilities.
- Keeping shoreside facilities in a state of good repair is the priority need. In particular, the current condition of several state harbor and seaplane facilities was cited as a significant concern.
- AMHS is working to standardize the fleet and ferry terminals to increase resiliency.
- While ferry service was cited as a difficult alternative for air service due to infrequency, it was recognized that ferries can play a critical role in redundancy and for emergency response.

## Active Transportation and Transit

- Hazard-Infrastructure assessment was not completed for this group. Risks are similar to those identified for roadways.





- Winter maintenance/snow removal is a concern for active transportation facilities, especially those that require specialized snow removal equipment (e.g., Juneau-Douglas Bridge).
- Transit can be impacted by weather events as there are some routes that buses can't use during heavy snow. These impacts are typically short-duration but can still affect system reliability and access.

## Other / Multi-Modal

- For all modes, adaptive capacity for transportation systems in Southeast is considered to be low due to a lack of redundancy.
- For response to large emergency events, contracting is typically used. Existing M&O staff must continue daily activities.
- Lack of redundancy in the contractor system is a risk. There are a few contractors throughout the region, and there may be only one in certain areas. If they do not have capacity, there may not be others available.
- Technology can help with response and is important to continue to develop. For example, making use of drones or other technology to gain initial awareness of conditions following an event improves efficiency, helping to conserve staff and funding resources.
- Drought isn't on the list, but it may be an emerging hazard in some communities. This was primarily discussed in relation to cisterns used for water, with an example provided for Gustavus. It is unclear what impact there may be on the transportation system.

## Non-Infrastructure Risk Discussion

### Funding

Discussion points included:

- Funding is currently limited primarily to federal aid transportation funds. A state-funded component should be discussed and considered more seriously. Bandwidth for grant opportunities has reached capacity.
- Emergency hazard repair projects cannot be programmed in the STIP because the needs are unpredictable. A state emergency fund would be helpful.
- Additional state money is needed for maintenance as well as capital projects to help reduce overall costs.
- Concerns were raised regarding limited snow-management equipment and snow-storage capacity.
- One participant suggested strengthening partnerships to make greater use of FHWA Tribal Transportation Program funding for bridge projects. Doing so requires tribes to include DOT&PF-owned roads in their Tribal Transportation Facility Inventory, a process that is largely complete in Southeast.





- A significant funding gap relates to both the AMHS ferries and the terminals. Funding ferry service remains extremely challenging.
- AMHS is considering paying for in-state travel for its crews as a means of retaining staff. This is common in the maritime field. This is currently an inequity between out-of-state and in-state staff.
- Funding distribution can create equity challenges because not all programs allocate resources based on demand. Investments cannot be concentrated only in larger communities where more people benefit; smaller and remote communities still have essential transportation needs that must be addressed.
- Funding through the Federal Aviation Administration (FAA) has many parts and pieces. Overall, the 2024 reauthorization provided some relief to Alaska through increased eligibility, but did not provide increased funding.

## Population

Discussion points included:

- Historically, the region has experienced flat or even declining traffic growth.
- Southeast is expecting a population loss, especially among workforce-age residents. Even declining populations need to maintain existing capacity. There may be fewer new facilities or improvement projects. However, there has been an increase in tourism, which may create the need for some system improvements.
- Low population communities still have needs but may have more difficulty competing or justifying high-cost transportation infrastructure improvements for programs that use population as a scoring criterion, including the Aviation Project Evaluation Board (APEB) and the Community Transportation Program. For the APEB, there is consideration for small communities accessed only by one mode, which helps to provide a balance for low population.
- AMHS is facing declining ridership and revenue, which makes it increasingly difficult to justify existing service levels. At the same time, the AMHS Long-Range Plan is focused on strategies to rebuild ridership and strengthen the system's long-term sustainability.





## APPENDIX 1

- Risk-Resilience Workshop Agenda
- Identified Hazards Handout
- Infrastructure Vulnerability Assessment Guide Handout
- Risk by Community Handout





# DOT&PF Risk-Resiliency Workshop

**February 24, 2026, 1:00 – 4:30 PM, 7-Mile Large Conference Room**

## Agenda

### Workshop Purpose

Assess key risks and resiliency measures to inform strategies for the Southeast Transportation Plan (SEATP) update.

### Agenda

#### **1:00 to 1:30 PM – Welcome & Overview:**

- Introductions
- Purpose and status of the SEATP Update

#### **1:30 to 2:00 PM – Roundtable Discussion:**

- DOT&PF Staff: Top concerns related to Risk and Resilience

#### **2:00 to 3:45 PM – Hazard-Infrastructure Assessment Exercise**

*Approximate session timing:*

- 2:00 to 2:20 PM – Roadways
- 2:20 to 2:40 PM – Bridges
- 2:40 to 3:00 PM – Active Transportation and Transit
- 3:00 to 3:15 PM – Break
- 3:15 to 3:35 PM – Airports
- 3:30 to 3:55 PM – Ferry Terminals

#### **4:00 to 4:20 PM – Roundtable Discussion on Population and Funding Considerations**

#### **4:20 to 4:30 PM – Closing Remarks**





**VIRTUAL PARTICIPATION (MICROSOFT TEAMS)  
FOR STAFF UNAVAILABLE IN JUNEAU**

**Join via Teams:**

- <https://teams.microsoft.com/meet/25923180488316?p=2hduy6STHAQVq14UYE>
- Meeting ID: 259 231 804 883 16
- Passcode: TV6Mz2fT

**Dial in by phone:** [+1 907-202-7104,,78192051#](tel:+1907202710478192051) United States, Anchorage

**Phone conference ID:** 781 920 51#

**Video Conferencing Device**

- Tenant key: 260748889@t.plcm.vc
- Video ID: 114 764 715 2





# DOT&PF Risk-Resiliency Workshop

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## Identified Hazards Handout



Earthquake – Although southeast Alaska has not experienced a major earthquake with catastrophic damage to the magnitude that other areas of the state have experienced in recent years, the risk still remains. This hazard often houses events such as land/mud slides, sluffing, avalanches, etc.



Erosion – The act of erosion is often overlooked, as it is a hazard that happens slowly and over an extended period of time. It is often not spotted without the assistance of aerial viewing equipment and comparisons to be able to verify changes over a period of time. It can often be seen when a river encroaches upon transportation infrastructures that, when built, were not near the impending hazard.



Flood – Late spring and summer due to melting snow and wet weather. Causes washouts to existing structures or other instances of extreme damage. If infrastructure is unharmed, often surface transportation is affected due to excess water. Traffic becomes delayed in many of the areas of the interior as there is a lack of redundancy in the transportation system.



Ground failure – Ground failure happens when rock and soil lose stability, causing collapse or movement. Landslides are the downward movement of materials like rock, soil, or fill. Avalanches linked to ground failure include debris avalanches—fast-moving flows from slope collapse or bedrock breakdown. Causes include natural events (earthquakes, wildfires), human activities (construction), or both. In Southeast Alaska, steep slopes and heavy rain often trigger landslides and avalanches.



Tsunami – A tsunami is caused by underwater ocean wave disturbances that are triggered by earthquakes, landslides, or volcanic eruptions. While there are monitorable warning signs, it initially appears as individual, increasingly large waves over several hours. Tsunamis can cause massive damage, flooding, and destroy communities with debris-filled waters and possibly extreme land erosion. Alaska's southeast coastal communities are at particularly high risk.



## Identified Hazards Handout



Volcano - Volcano-generated ash periodically impacts Alaska communities, with impacts most severe for communities closer to volcanoes. Volcanic ash can create severe air quality, water quality, marine, and road transportation impacts, disrupt utility operations, etc.



Severe Weather – Alaska often faces severe weather due to its location and changing climate. Natural weather events can trigger winter storms, heavy rain, freezing rain, thunderstorms, and typhoons. These can lead to secondary hazards such as floods, landslides, snow, and strong winds. In southeast Alaska, extremely heavy rainfall, known as atmospheric rivers, is becoming more common and can cause ground failure, putting communities and resources at risk.



Wildfire – Happen in the warmer months when the weather is dry for extended periods of time, uncommon in southeast Alaska. Wildfires within proximity of transportation infrastructure weaken structural integrity over time. An additional threat to transportation is visually. Wildfires outside of the region generating intense smoke/smog can cause extreme visual disruptions for transportation users.



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## Infrastructure Vulnerability Assessment Guide Handout

The Federal Highway Administration’s (FHWA’s) Vulnerability Assessment and Adaptation Framework provides methodology to assess vulnerability of transportation infrastructure and systems to extreme weather and climate effects. This framework has been adapted to assess the hazards identified in the SHMP.

	Exposure	Sensitivity		Adaptive Capacity
	Exposure refers to whether the asset or system is located in an area experiencing direct effects of hazards.	Sensitivity refers to how the asset or system fares when exposed to a hazard.		Adaptive capacity refers to the system’s ability to adjust to or cope with existing hazard variability or future impacts.
Low	To be rated as low exposure the following conditions may apply: <ul style="list-style-type: none"> <li>The hazard is somewhat likely to happen near the location of the asset, typically seen as events that happen at intervals greater than every 50 years or have a probability of happening 0-50 percent.</li> </ul>	To be rated as low sensitivity the following conditions may apply: <ul style="list-style-type: none"> <li>The loss or damage caused from this hazard would have a minor impact to the economic, transportation and social infrastructure of a community</li> <li>The infrastructure has never experienced prior damage.</li> </ul>	High	To be rated as high adaptive capacity the following conditions may apply: <ul style="list-style-type: none"> <li>There are already mitigation efforts in effect or planned mitigation efforts for the infrastructure.</li> <li>There are redundant facilities and/or detours in place</li> </ul>
Medium	To be rated as medium exposure the following conditions may apply: <ul style="list-style-type: none"> <li>The hazard is likely to happen near the location of the asset, typically seen as events that happen at intervals of every 10 to 50 years or have a probability of happening 50-75 percent.</li> </ul>	To be rated as medium sensitivity the following conditions may apply: <ul style="list-style-type: none"> <li>The loss or damage caused from the hazard would have considerable impacts to the economic, transportation and social infrastructure of a community.</li> <li>The infrastructure has experienced documented damage once.</li> </ul>	Medium	To be rated as medium adaptive capacity the following conditions may apply: <ul style="list-style-type: none"> <li>There are minimal mitigation efforts in effect or planned mitigation efforts for the infrastructure.</li> <li>There are sub-optimal redundant facilities and/or long length detours in place</li> </ul>
High	To be rated as high exposure the following conditions may apply: <ul style="list-style-type: none"> <li>The hazard is highly likely to happen near the location of the asset, typically seen as events that happen at intervals of every 1 to 10 years or have a probability of happening 75-100 percent.</li> </ul>	To be rated as high sensitivity the following conditions may apply: <ul style="list-style-type: none"> <li>The loss or damage caused from this hazard would have significant impacts to the economic, transportation and social infrastructure of a community.</li> <li>The infrastructure has experienced documented damage twice or more.</li> <li>Has been identified in DOT&amp;PF twice damaged report.</li> </ul>	Low	To be rated as low adaptive capacity the following conditions may apply: <ul style="list-style-type: none"> <li>There are no mitigation efforts in effect or planned mitigation efforts for the infrastructure.</li> <li>There are no redundant facilities and/or detours in place.</li> </ul>

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## Risk by Community Handout

The State of Alaska Hazard Mitigation Plan (SHMP) identifies hazards for Alaska. The SHMP documents the following probability and magnitude for each community.

IMPACTED COMMUNITIES	HAZARDS															
	Earthquake		Erosion		Flood		Ground Failure, Landslide, Avalanche		Tsunami		Volcano		Severe Weather		Wildfire	
	Probability	Magnitude	Probability	Magnitude	Probability	Magnitude	Probability	Magnitude	Probability	Magnitude	Probability	Magnitude	Probability	Magnitude	Probability	Magnitude
Haines Borough	4	4	2	1	3	4	3	3	2	3	0	0	4	3	3	1
Hoonah Angoon Census Area																
Angoon	2	2	2	1	1	0	0	0	1	2	0	0	0	0	2	1
Hoonah	3	3	3	3	3	3	3	2	1	2	0	0	3	3	0	0
Kake	1	1	4	1	0	2	2	3	0	0	0	0	2	2	1	1
City and Borough of Juneau	1	2	1	2	2	2	2	3	1	3	1	1	2	2	1	1
Ketchikan Gateway Borough																
Ketchikan	3	1	0	0	1	1	2	0	1	3	0	0	1	2	0	0
Saxman	3	1	0	0	0	1	2	0	1	3	0	0	1	2	0	0
Petersburg Borough	1	1	0	0	1	0	0	2	1	3	0	0	0	0	0	0
Prince of Wales-Hyder Census																
Craig	3	2	4	2	3	4	2	3	0	0	0	0	4	2	1	2
Klawock	2	3	0	0	0	3	2	2	0	0	0	0	3	2	3	3
Thorne Bay	3	1	0	0	2	3	1	1	0	0	1	1	3	1	2	1
Hydaburg	1	1	0	0	1	1	1	1	0	0	0	0	1	1	1	1
Kasaan	1	3	0	0	0	3	3	2	0	0	0	0	3	3	1	2
City and Borough of Sitka	2	3	3	3	3	3	3	2	3	4	0	0	3	3	0	0
Municipality of Skagway Borough	2	3	3	3	3	3	3	3	1	3	0	0	3	3	0	0
City and Borough of Wrangell	2	1	2	1	1	2	2	1	2	1	0	0	2	2	3	1
Yakutat City and Borough	2	3	2	1	1	4	2	2	1	3	0	0	4	2	2	2

Ranking	4	3	2	1	0
Risk Levels	High	High	Medium	Low	Low-None