



KETCHIKAN GATEWAY BOROUGH
CITY OF KETCHIKAN



Landslide Awareness and Safety Panel
August 28, 2024, 6:00 pm | Event Recap
Hosted by the Ketchikan Emergency Operations Center (EOC)

At 6:00 pm on Wednesday, August 28, 2024, the Emergency Operations Center hosted a panel discussion with the experts that arrived in Ketchikan from across the state to support the landslide recovery and assessment process.

[Click here](#) to watch the stream on the City of Ketchikan YouTube channel.

Panelists Included

- **Rick Hines**, Incident Commander, Ketchikan Emergency Operations Center
- **Aaron Jacobs**, Senior Service Hydrologist/Meteorologist, NOAA/National Weather Service
- **Nicole Ferrin**, Warning Coordination Meteorologist, NOAA/National Weather Service
- **Travis Eckoff**, Regional Materials Engineer, Alaska Department of Transportation and Public Facilities (ADOTPF)
- **Martin (Mort) Larsen**, Geologist, Landslide Hazards Program Manager, Alaska Department of Natural Resources (DNR)
- **LaNita Copeland**, Emergency Management Specialist II, State Emergency Operations Center
- **Rodney Dial**, Second Lieutenant, Southeast Commander, Alaska State Defense Force
- **Kacie Paxton**, Public Information Officer, Ketchikan Emergency Operations Center

Panel Notes

Event-Related Weather – Aaron Jacobs & Nicole Ferrin, National Weather Service

- The precipitation that fell in the Ketchikan area ranged greatly from a couple of inches at the airport to 10 inches at higher elevations.
- Prior to this weather system, Ketchikan had experienced an extended period of dry weather, and the overall precipitation for the year is 25 inches below average.
- The combination of long periods of dry weather met with intense heavy precipitation can create a lot of runoffs that can cause flooding. A combination of weather and geologic conditions can prime an area for a slide.
- Intense precipitation, alone, is not enough to cause a landslide.

- A weather station was placed at the slide side to be able to accurately monitor the area, and the meteorologist team is continuing to review the weather patterns to better understand how this event and others like it occur.
- Rain will affect the slide area and run off, and sediment movement is normal.
- It is common to see trees fall into the slide area. The edge of the slide area is undermined, which would leave these trees vulnerable to falling. This is expected.
- Best source of information to monitor the weather. National Weather Service Juneau: www.weather.gov/juneau;

Geomorphology of the Landslide Area – Travis Eckhoff, ADoTPF

- The team set out with the goal to evaluate slope stability in affected areas using drones, survey equipment, deployable cell towers, and other technology.
- Geologists performed helicopter overflights and traversed the landslide several times on foot to observe the rock and soil and how the material left behind will react to rain.
- The geology team relies on the precipitation data shared by the National Weather Service to understand how the ground reacts to rainfall.
- The team took extensive imagery of the Third Avenue landslide area and the Copper Ridge Area. A digital photo file is available to the public <https://flic.kr/s/aHBqjBEN5g>.
- The team is creating maps and 3D models that geologists and engineers are using, in real time, to provide assessments of the site safety and provide guidance to the work crews.

Landslide Awareness – Mort Larsen, DNR

- Landslide is a general term. Mudslide or rockfall are all types of landslides.
- The motion of the slide and the material the slide is composed of is how we classify landslide.
- Oversaturated soil through intense rainfalls on slopes can destabilize the slope and cause failure.
- Earthquakes can shake loose something that is close to failure.
- Rising groundwater can also cause a slope to fail.
- The type of soil & bedrock all play into the slide potential.
- Improving awareness to mitigate destruction:
 - o State Landslide Hazards Program is working to educate local communities about landslide awareness and services that the state can provide, including landslide susceptibility mapping.
 - o Working on expanding data collection across the region to better identify risks.
 - Better geologic mapping to identify soil types and bedrock
 - LIDAR acquisition to map out ground surfaces

- LIDAR – pulse of light sent down from an airplane or helicopter that reflects data back to identify where the bare earth is. LIDAR is used to create topography. It can strip away the vegetation to digitally expose the geomorphic landscape under the vegetation.
 - Expanding weather station network in SE to better identify and track the microclimates in SE.
 - Developing educational materials.

Individual Assistance Programs and State Resources – LaNita Copeland, State EOC

- Individual Assistance program launched for individuals impacted by this event.
 - Assistance is based on need and extent of damage.
 - Anyone in the affected area is encouraged to apply.
 - Not income dependent.
 - Three formats to apply: phone, online, paper application.
 - Each person who applies is assigned a case worker.
- Community has a meeting on Monday night at the Fire Station
 - Community grief support
 - Red Cross
 - Personnel to help with Individual Assistance applications
- Events like these elicit a lot of emotions, and grief can happen at any time.
 - Community has mental health professionals available.
 - Canine crisis team coming to town next week.

Family Preparedness – Rodney Dial, Alaska State Defense Force

- Bug Out Bag
 - All families should have one and have it in an accessible location.
 - Links on Borough websites for suggestions on what to have in your bag and how to create a family emergency plan.
 - Suggested contents:
 - Readily accessible source of water
 - Water purifier
 - Shelter
 - Tarp
 - Paracord
 - Dry set of clothes in a waterproof bag or garbage bag that's tied
 - Rain gear
 - Way to start a fire
 - Lighter
 - Toilet paper
 - Freeze dried food
 - Solar charger & battery

- Phone cable
 - First aid kit
 - Trauma packs
 - Knives, saws
 - Sleeping mat
 - Emergency blanket
 - Mess kit/cooking set
 - Stove and fuel
 - Flashlight
 - Hand crank radio
- Family Safety Plans
 - Make an emergency preparedness plan. Evaluate yours and your family's risk. Seek out advisories and warnings.
 - Pay attention to your surroundings and look and listen for changes. Be observant about where you live and where you are at. If you see cracking in your driveways, see water coming out of a source you've never seen before, trees starting to slope, be vigilant about that as all could be indicators of the land moving.
 - Keep away from landslide prone areas.
 - Educate yourself about landslides and other natural disasters.

Use Trusted Sources – Kacie Paxton, Ketchikan EOC

- Local weather reports: www.weather.gov/juneau
- Third Avenue Landslide Public Information: <https://www.kgbak.us/1098/3rd-Avenue-Bypass-Landslide>
- Known government social media pages:
 - Ketchikan Gateway Borough: <https://www.facebook.com/kgbak.us>
 - City of Ketchikan: <https://www.facebook.com/cityofketchikanalaska>
- Don't reshare unless you know it's true. Don't add to the misinformation.