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Mendenhall River Flood Preparation Outreach 2024

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Presented by: US Army Corps of Engineers



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Outline

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- USACE Advanced Measures
- Preparing for a flood event as homeowners
 - Know your flood risk
 - Flood maps
 - Glacial Lake Outburst Flood (GLOF)
 - Identify flood-prone areas near your house
 - Before an evacuation
 - During an evacuation
 - After an evacuation
 - Flood preparedness checklist for your house
 - What to do before, during, and after a flood
 - Prepare outside the home
 - Prepare inside the home
- Flooding and Public Health
- Sandbagging and HESCO Barriers
- Flood Mitigation Strategies
- National Flood Insurance Program

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Public Law 84-99

Advance Measures



- ✓ Imminent threat of unusual flooding
 - ✓ Governor's Request
 - ✓ Non-Federal interests must commit available resources (labor, supplies, equipment, funds, National Guard Forces etc.)
 - ✓ Benefit to Cost Ratio must be greater than 1.0
 - ✓ Public Sponsor (CBJ) must execute a Cooperative Agreement
- No Assistance for Erosion Damage – assistance solely to prevent erosion damage is not permitted
 - Channel Clearance and Dredging may be authorized to restore channel capacity
 - Permanent improvements are not authorized
 - Public Sponsor must agree to remove Advance Measures Temporary Work when operation is over, at no cost to USACE

Costs:

Investigative Costs: 100% USACE Funded
Engineering and Design: 100% USACE Funded
Temporary Construction: 100% USACE Funded
Removal of Construction: 100% Non-Federal

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Glacial Lake Outburst Flood (GOLF)

Glacial lake outburst flood (GLOF) is a type of [outburst flood](#) caused by the failure of a [dam containing a glacial lake](#).

- an **outburst flood**—a type of **megaflood**—is a high-magnitude, low-frequency catastrophic [flood](#) involving the sudden release of a large quantity of water

Jökulhlaup, meaning “glacier run” in Icelandic describes any catastrophic flood from a glacier dam breach.

Failure can happen due to [erosion](#), a buildup of [water pressure](#), an [avalanche](#) of rock or heavy snow, an [earthquake](#) or [cryoseism](#), [volcanic eruptions](#) under the ice, or massive displacement of water in a glacial lake when a large portion of an adjacent glacier collapses into it.

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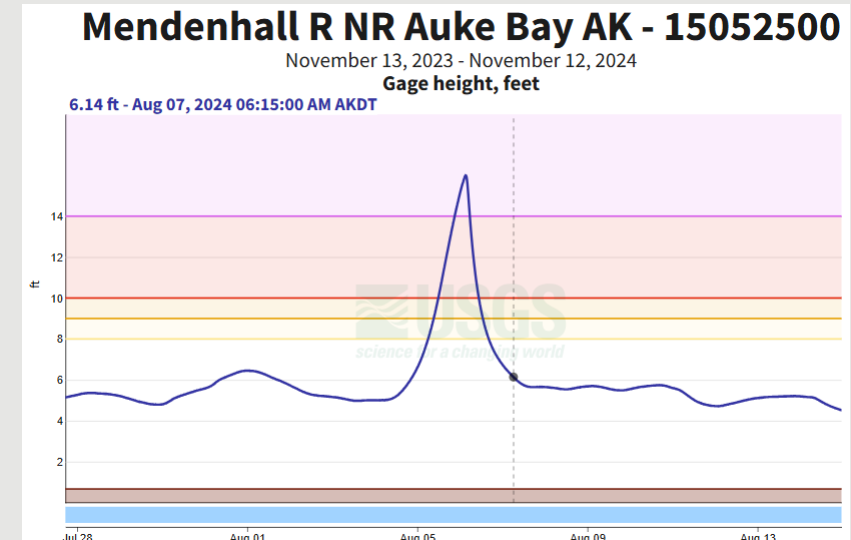
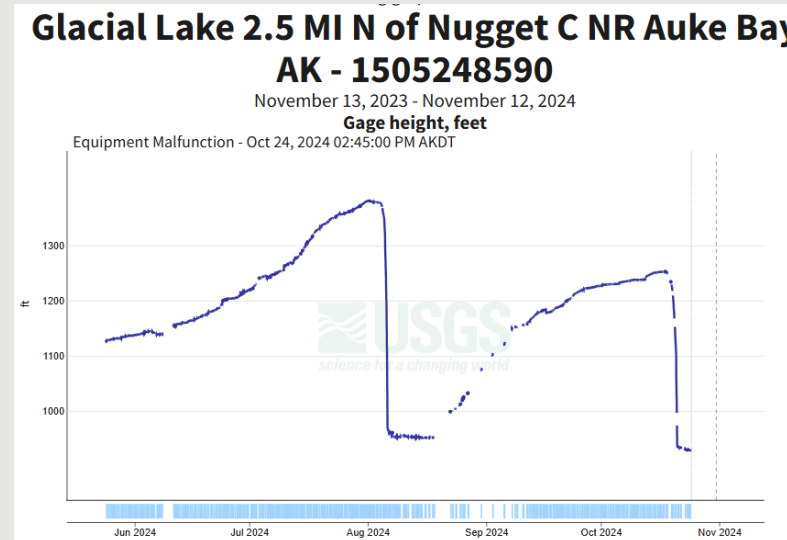
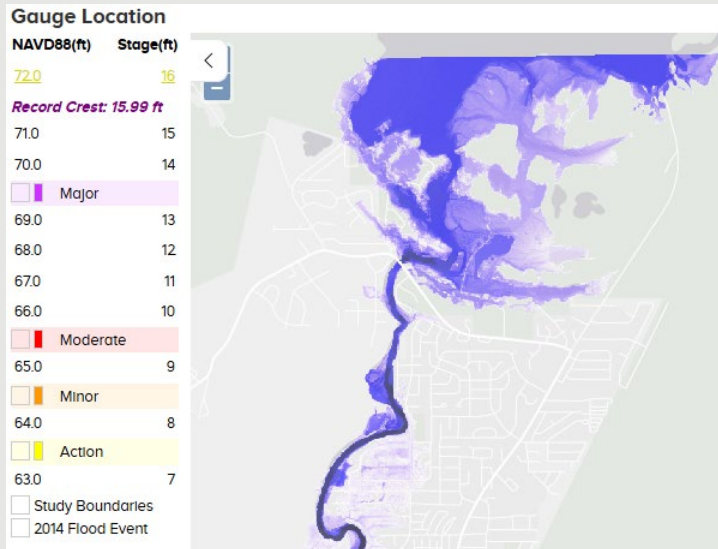
Flood Maps

Flood Inundation Mapper (Google: "Mendenhall River Juneau NOAA")
Scroll down to Gage Location, select Activate MNDA2 FIM Gauge

Suicide Basin Lake Gage (Google: "Glacier Lake near Auke Bay USGS")

Mendenhall River Gage (Google: "Mendenhall River Juneau USGS Streamflow")

FEMA – How to Read a Flood Map PDF





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Identify Flood-Prone Areas Near Your House

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- 1.) Check FEMA flood maps / flood inundation maps
- 2.) Use online Flood Risk Tools
- 3.) Consult your local government
- 4.) Review your property's flood history
- 5.) Talk to neighbor's and community members

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Evacuation

Before, During, and After

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Before an Evacuation

- Learn the types of disasters that are likely in your community and the local emergency, evacuation and shelter plans for each specific disaster
- Plan your evacuation
- Check with local officials about what shelter spaces are available for this year
- Identify several places you could go in an emergency
- If needed, identify a place to stay that will accept pets. Most public shelters allow only service animals
- Be familiar with alternate routes and other means of transportation out of your area
- Always follow the instructions of local officials
- Come up with a family/household
- Prepare a “go-bag” you can carry when you evacuate
- If you have a car:
 - Keep a full tank of gas if an evacuation seems likely
 - Make sure you have a portable emergency kit in the car



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During an Evacuation



- Download the FEMA app
- Listen to a battery-powered radio and follow local evacuation instructions.
- Take your emergency supply kit.
- Leave early enough to avoid being trapped by severe weather.
- Take your pets with you but understand that only service animals may be allowed in public shelters.
 - Plan how you will care for your pets in an emergency now.
- Tell emergency contacts where you are going.
- Secure your home by closing and locking doors and windows.
- Unplug electrical equipment
- Shut off water, gas and electricity before leaving.
- Follow recommended evacuation routes. Do not take shortcuts, they may be blocked.
- Be alert for road hazards such as washed-out roads or bridges and downed power lines.
 - Do not drive into flooded areas.

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After an Evacuation

- Prepare for disruptions to daily activities when returning to disaster-affected areas
- Returning home before storm debris is cleared is dangerous.
- Let friends and family know before you leave and when you arrive.
- Charge devices and consider getting back-up batteries in case power-outages continue.
- Fill up your gas tank
- Bring supplies such as water and non-perishable food for the car ride.
- Avoid downed power or utility lines

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Prepare Outside The Home

- **Maintain** proper runoff and drainage
 - Clear debris from gutters and downspouts
 - Clean/monitor drainage ditches or storm drain.
 - Improve lot grading
- **Secure**
 - Elevate and anchor tanks, utilities, appliances, equipment
 - Cinder blocks, wooden frames, cam straps, etc
 - Temporary flood barriers
 - Sandbags, earthen berms, commercial gates/shields/flood skirts, DIY versions!
- **Mobile and Manufactured Homes**
 - Permeable skirting
 - Add/improve anchoring (deadman, auger, drive, concrete slab)
 - Secure nearby objects
 - Install bollards (protect property/equipment)
 - Maintain drainage (away from home, clean drainage)



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Prepare Inside The Home

- **Protect Your Valuables**
 - **Pictures/Copies** of all major household appliances, furniture, valuables, documents
 - Important for filing with insurance
 - **Elevate** Furniture, Appliances, Utilities
 - As high as possible -> second floor, cinder blocks, wood frames
- Install
 - Backwater valves (sewer)
 - Flood-resistant building materials (drywall -> plastic/PVC)
 - Anchor (appliances, utilities, fuel tanks, etc)
 - Basement
 - Water alarm
 - Maintain/test sump pump
 - Battery backup sump pump
 - Seal foundation/basement walls



Flooding and Public Health

- Flooding can contaminate drinking water
 - Monitor for Boil Water Advisory
- Spoiled food
 - Throw out food that got wet and/or warm. When in doubt, throw it out!
- Stay away from floodwaters
 - May contain sewage, sharp items, and chemicals + drowning hazard
- If home flooded
 - If possible, dry your home and everything in it as quickly as you can, 24-48 hours
 - Assume mold growth if you cannot return your home to dry within 24-48 hours
 - Keep wet areas well-ventilated. Throw away wet material that cannot be dried
 - Prevent carbon monoxide poisoning
 - Do not use internal combustion devices (ie generators) in enclosed spaces or near air intakes



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Sandbagging

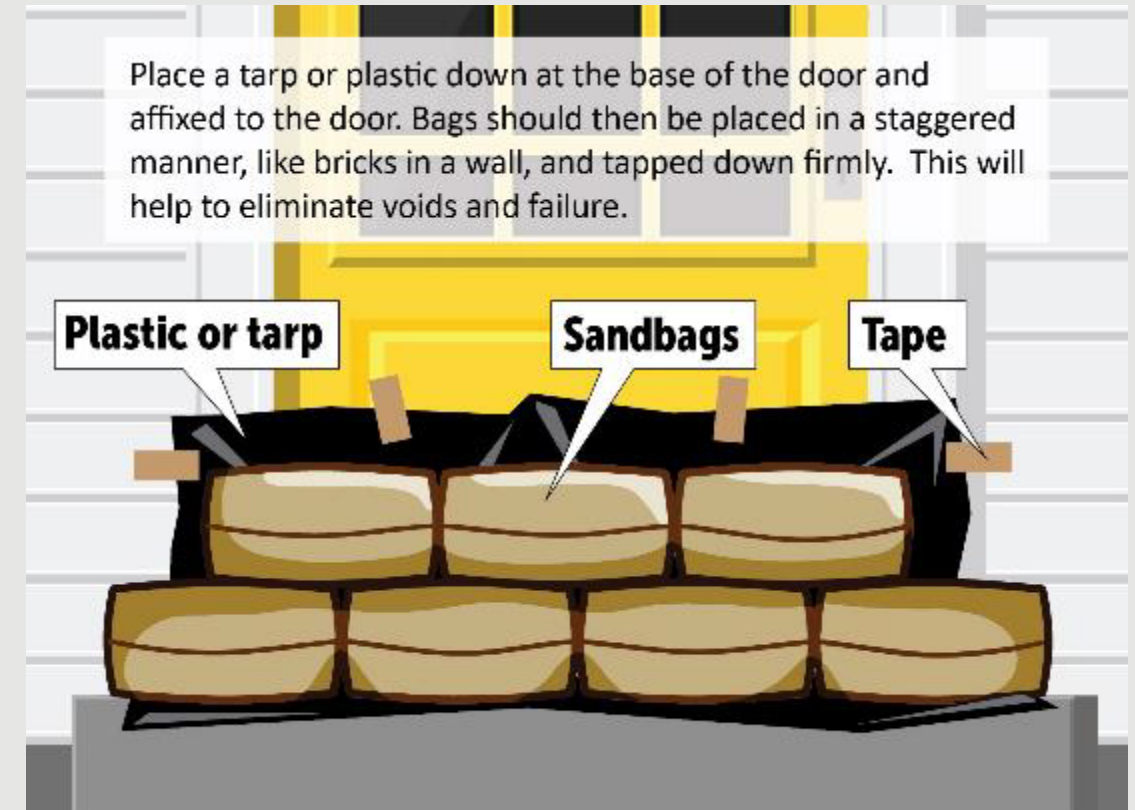
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- Video on proper sandbagging technique:

<https://www.youtube.com/watch?v=-hQPAIFMVtM>

- USACE Flood Fighting Techniques Booklet



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Flood Mitigation Strategies

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Short-term mitigation: Sandbagging, HESCO Barriers, other flood mitigation methods (implemented within 6 months)

Mid-term mitigation: updated hydraulic modeling (6 months to 2 years)

- Impact of HESCO Barriers on river flow
- Inundation Maps

Long-term mitigation: U.S. Army Corp of Engineers - General Investigation Study to develop long-term solutions (7 to 10 years)

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National Flood Insurance Program (NFIP)



NFIP Myths

- × You can't buy flood insurance if your property has flooded before
- × You can't buy flood insurance if you live in a high-risk flood zone
- × Even if my property does flood, it won't cost much to recover
 - The [Cost of Flood tool](#) is a good resource
- × You can only buy flood insurance if you live in a "floodplain"
- × Homeowner's insurance typically covers flooding
- × Flood insurance is only available to homeowners
- × I don't need flood insurance because I can get disaster assistance from FEMA





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NATIONAL FLOOD
INSURANCE PROGRAM



Generally Covered

Building & foundation

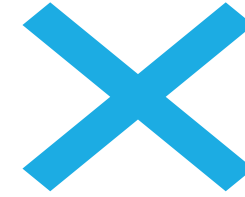
Electrical & plumbing

Central air, furnaces, & water heaters

Detached garage

Debris removal

Clothing, furniture, and electronic equipment



Generally Excluded

Avoidable moisture, mold, & mildew damage

Currency, precious metals, and valuable papers

Property and belongings outside of the building

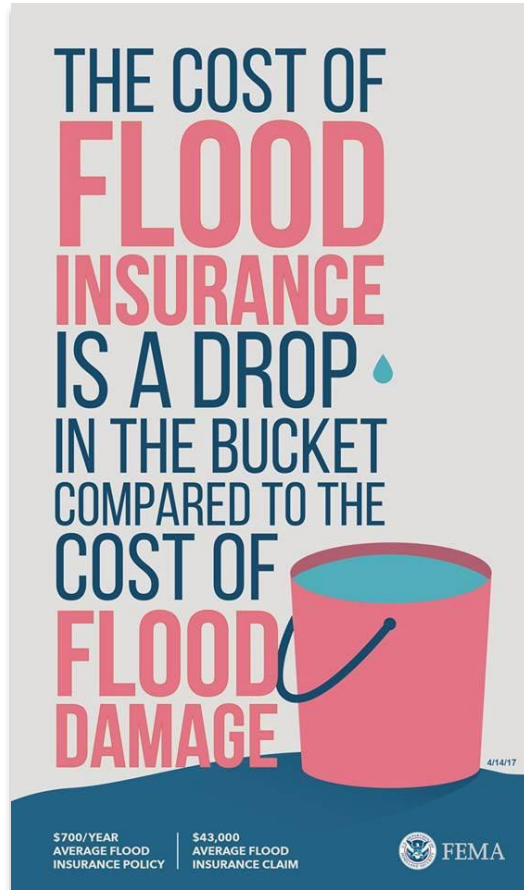
Landscaping

Temporary/additional living expenses

Decks

Summary of Coverage

Four Basic Facts of a Standard Flood Policy from the NFIP



- Single-peril policy.
- Residential and Non-residential policies.
 - Residential coverage limits: \$250,000 for structure, \$100,000 for contents.
 - Non-residential coverage limits: \$500,000 for structure, \$500,000 for contents.
- Renters can get contents only coverage.
 - Content coverage is not automatically included in the policy, except for a Preferred Risk Policy which are available only in moderate to low risk areas.
- Available in any zone.



FEMA

