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Fact Sheet: Glaciers

Glaciers can be hazardous due to unstable ice and cold temperatures.

- **Falls** - Crevasses (deep open cracks in the ice) can be hidden and seemingly solid ice can break without warning.
- **Falling Materials** - Rock adjacent to lateral moraines can fall without warning. Seracs (ice towers) are inherently unstable and pose a fall risk.
- **Hypothermia** - Body temperature drops to dangerous levels during prolonged exposure to cold temperatures.
- **Frostbite** - Tissue death associated with prolonged exposure to cold temperatures.
- **Snow Blindness** - Snow and ice can reflect UV light and cause burns to your cornea. Higher altitudes have higher amounts of UV light present.

Personal Protective Equipment

- Glacier glasses
- Cold weather clothing
- Crampons
- Mountaineering boots
- Gloves
- Helmet
- Harness and technical ropes

Preparation and Training

- Glacier crossings require specialized training, ropes, and climbing gear for all members of your team. Do not attempt to cross glaciers without training or while traveling alone.
- Consider hiring an experienced guide familiar with glacier crossing techniques and the glacier in question.
- Prior to travel, identify the local emergency service's search and rescue policy for the glacier in question.
- Identify your procedures for handling various emergencies and situations that would require you to abort the crossing.
- It is recommended you take courses in: Crevasse Rescue, Ice Climbing/Mountaineering Wilderness First Aid and/or First Responder

Emergency Response

- If you experience an emergency, call local authorities for guidance and assistance. Keep in mind, even if you are able to call for help, rescuers may not be able to reach you due to weather or location.
- If somebody falls into a crevasse, attempt the crevasse rescue techniques from the training, if it is safe to do so.
- Constantly monitor each team member for signs of hypothermia or medical distress.
- If signs of hypothermia or snow blindness do not abate from first aid measures, discontinue the crossing.
- If frostbite is seen to develop or another injury occurs that impairs movement, discontinue the crossing.

References and Additional Resources

- [US Antarctic Program Field Manual](#)
- Norwegian Water Resources and Energy Directorate: [Glacier Safety – Method Guide](#)
- [Researcher Rescued From Glacier](#)
- Adapted from *Glacier Fact Sheet*, by University of Maryland: Department of Environmental Safety, Sustainability & Risk (<https://essr.umd.edu/about/research-safety/field-research-safety/planning>) with permission.