



# Snow travel and high- water crossing

Konor Boland, Kelly Bessem



# Introduction

- After a historically wet and cold winter in the Sierras, back country travelers will inevitably face inherent risk while in the Wilderness this spring as a result of a large snowpack with heavy run-off. The purpose of this presentation is to equip you with the knowledge to help you mitigate the risk of traveling through technical terrain while we work, volunteer, and recreate.

# Snow travel

Mitigating risks while traveling  
over the snow and the art of  
keeping your socks dry



# Post holing

- ❖ Look for existing tracks and stay on packed trail when possible
- ❖ Stay away from tree wells
- ❖ Be aware of what may be under the snowpack (rock gardens, creeks etc.)
- ❖ When needed, use tools such as snowshoes, approach, xc, or touring skis/split boards and trekking poles



# Avalanche terrain

- ❖ Loose wet avalanches are most common in the early spring, often on very steep and rocky terrain
- ❖ Look for pinwheels and rollerballs as obvious precursors
- ❖ Unlikely to cause a burial, but has the potential to injure or move victim into a hazardous zone (cliff, rocks, trees)
- ❖ Pay attention to the temperature, time of day, aspect
- ❖ Never trust a cornice!
- ❖ Avoid traveling under large cornices
- ❖ If you must travel in avalanche terrain, try to avoid doing so during warmest periods of the day and travel from safe zone to safe zone one at a time





# High-water crossing



# Techniques to safely crossing high water

## ❖ The best spot to cross may not always be the trail crossing

- Look for areas where the flow is slower or more broken up by topography
- Find areas with no downstream hazards (waterfalls, deep white water, etc.)
- Angle down stream, avoid crossing perpendicular

## ❖ Time your crossings in the morning when flows are generally slower

## ❖ Use trekking poles or find a walking stick to provide more support

## ❖ Look for natural bridges and use your best judgement on it being safer alternative

## ❖ Use members of your party to provide more support

- Sling an arm around a partner, put the smaller/weaker party member downstream

## ❖ Be prepared to swim

- Unbuckle hip and sternum straps before crossing
- Identify safe zones such as eddies or islands to swim towards in the event of a fall

## ❖ Does it need to happen? Risk vs Reward

# Hypothermia

A close-up photograph of a man's face and upper torso, heavily covered in snow. He has a serious, somewhat distressed expression. The background is a blurred, snowy landscape. The overall color palette is monochromatic, dominated by shades of blue and white, which emphasizes the cold environment.

# Recognizing Hypothermia

- ❖ Drowsiness/lack of energy
- ❖ Slurred speech
- ❖ Weak pulse
- ❖ Lack of coordination
- ❖ Shivering (recognize an emergency if shivering stops without any other improvements)



# Treating hypothermia

- ❖ Preventing hypothermia is the best treatment. Stay dry and eat well.
- ❖ Shelter as best as the situation permits
- ❖ Get out of any wet clothes and into dry ones
- ❖ Get into a sleeping bag or insulated wrap, tandem if possible
- ❖ Get simple sugars, warm tea with sugar or honey or hot coco is a great option
- ❖ Safely add movement when able
- ❖ If patient is not improving or has a decrease in mental status, skin signs or vitals, plan an evacuation. Severe Hypothermia is best treated in a hospital