



# River Crossings in the Backcountry

***River crossings can be deceptively hazardous and Alaskan rivers are unlike those in the Lower 48. The following are some tips for crossing rivers safely.***

## ***Preparation***

All rivers in Alaska can pose challenges to inexperienced and veteran backcountry travellers, alike. Unlike most places in the Lower 48, when you leave the reaches of civilization, you will find yourself without the conveniences of trails, bridges, campsites, and outhouses. Travelers are forced to either select routes within drainages or to accept the risk of crossing bodies of water without the assistance of man-made bridges. Glaciers, groundwater, and precipitation feed each river's hunger and cause dangerously cold water temperatures. Cold immersion, the initial cold shock your body feels and the tightening of muscles, can quickly lead to hypothermia. Be aware of hypothermia signs, shivering, loss of manual dexterity and coordination, slurred speech, mental impairment, and know how to properly treat its victims by rewarming their core body temperature. Even a very shallow, swiftly flowing body of water can pack enough force to endanger the unwary.

**If in doubt as to whether a river is safe to cross, find an alternate route.**

However, river beds are often the highways of backcountry travel and the best route available. They can provide comparatively solid, stable, and brush-free walking for miles. If you can learn to accept wet feet, travelling the wide gravel bars of braided rivers can prove to be the fastest routes and offer excellent visibility for bear safety and navigation.

Prior to crossing any river, ensure the security of dry firestarter, warm clothing, and, if camping, a sleeping bag. Insulation and the ability to start a fire could save your life if subjected to the cold water for long periods. Prepare yourself with the knowledge and skills on how to start a

fire, especially when the fuel will most likely be wet or of low quality.

Alaska's precipitation patterns and short seasons cause water levels to fluctuate drastically in a matter of hours. Plan in advance and watch for rain, which is the major cause of rising water levels. Glacial rivers and streams also rise at times of high temperatures and direct sunlight, as in afternoon and early evening hours. Snow and ice melt with the rising daytime temperature, causing water levels to rise significantly, while overnight and early in the morning water levels will be much lower, due to less melting of the snow and ice. Timing can be critical in safely crossing rivers.

## ***Scouting***

When scouting to cross a river, there are a variety of things to look for to ensure the safest possible route. The most important thing backcountry travellers must assess is the force of the water or the volume of water flowing at a given speed. This is critical in properly and responsibly assessing the situation. The depth and/or the speed at which the water is flowing poses the greatest risk of injury or death, by causing a person to lose stability and be swept downriver.



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Another component of rivers is water clarity, which will determine the visibility of the true depth of the water, as well as challenges and obstacles below the water's surface. Deep holes, size of the rocks underwater, and debris can all be hidden due to poor water clarity, but can, fortunately, be easily observed by reading the surface. Consider the steepness of the banks and the thickness of vegetation, which can both impede entering and exiting the river. Choose a stretch of river that is relatively wide with many braided channels, and therefore shallow, to reduce the water's force on your body. Analyze the currents and select a path that intersects the mellowest sections of the river, in as much of a straight line as possible. Be aware of hazards that may lie downriver and determine a rescue plan and potential take out point. Never attempt to cross above rapids or falls. As in floating rivers, be aware for strainers and sweepers, which are even more dangerous should you be swept downriver.

On a larger scale, take into consideration the air temperature, weather conditions, and time of day in deciding when to cross rivers. Cold, cloudy, and windy conditions can make for uncomfortable, and possibly dangerous, crossings and post-crossing experiences. Water levels are typically lowest in the early morning hours and highest in late afternoon or early evening, after being subjected to the heat of the day. Remoteness of the crossing can also play a major role in determining what level of risk is acceptable for each person's experience and skill level. Be aware that if something were to go wrong, help could be days away.

## **Crossing**

If you've scouted properly and planned accordingly, crossing should be an exciting and memorable experience, as well as a definitive part of any backcountry adventure. Look at your route and if it consists of multiple river crossings or areas that could result in wet feet, keep your socks on and just walk across. If not, take your socks off and wear just your boots so your socks stay dry for the miles ahead. Either way, always wear boots or shoes to protect your feet from injury. This added layer will also keep your feet warmer and help increase stability over an uneven river bottom. Stopping and changing gear or clothes at every river crossing can be very time intensive and is often unnecessary, as the miles of hiking ahead will often dry out your clothing and gear. A common strategy among backcountry experts is to wear non-waterproof hiking shoes and let the breathability of their footwear aid in the drying process. If you try and keep your feet dry, you will most likely put yourself in a more dangerous situation by traversing algae-covered rocks and wet logs. When hiking off-trail, dry feet are an uncommon luxury.

Prior to crossing, unbuckle the waistbelt and sternum strap in order to quickly remove the backpack in case of a fall or unintentional swim while crossing. The heavy backpack will not float, can get snagged on river obstacles and debris, cause extreme difficulty when attempting to swim, and potentially cause you to drown.

There are many techniques for crossing rivers, both solo and with other travelers. Similar to hiking, trekking poles or a staff can greatly enhance stability by increasing the points of contact with the river bottom. Cross by standing abreast or in-line by joining arms or hanging on to each other's backpacks, with the strongest person on the upstream side. Take short, solid steps in unison and talk about each movement. Plan each step prior to moving. If you can retain your balance, feel ahead with your foot for the most secure place to step or use trekking poles to do so. Be cautious of eddies and deep drop-offs or holes created by the current. They are often sudden and have very loose, soft, unstable edges that can give way under little pressure. Eddies are recognized by water flowing against the current or upriver. As water rushes past a large object or embankment, it causes a swirling back-current. These areas are strong enough to cause watercraft to flip over, as well as people to be held underwater.



Gravel bars on braided or wider sections of rivers are the highways of backcountry travel and can provide fast and safe travel routes with good visibility for bear safety and navigation.

If you encounter a soft bottom and the rocks seem to fall away in front of you, there is most likely a deep hole dead ahead. Retrace your footsteps and change your route to avoid the deep areas. Look at the surface of the water to understand what the water looks like in both shallow and deep areas to help you predict the depth in the future. Use everything you can as a learning experience.

If travelling in a group, cross together by standing in a line and put your hands on the shoulders of the person ahead. Stay together and help each other by providing support during each step. Stay out of the fall line of others, as to not be victim of the bowling ball effect should someone slip and go downriver.

**Most importantly, above all else, if you are not comfortable with crossing a river for any reason, DO NOT CROSS. It could save your life.**

For more information on river crossing, including crossing glacial rivers and streams, stop by the Fairbanks Alaska Public Lands Information Center or call (907) 459-3730.