

## Appendix H

### Basic Water Safety

Field activities related to working near deep streams, rivers, lakes, and other water bodies:

#### Water Depth Limits

Before entering a water body, test the depth with a long pole or stick. Never enter water deeper than three feet or within six inches of the top of your waders.

#### Safe Swimming

Working around water requires the ability to swim. Listed below are basic safety rules to ensure a safe swim.

- **Learn to swim.** The best thing anyone can do to stay safe in and around the water is to learn to swim.
- **Always swim with a buddy;** never swim alone.
- **Know your swimming limits** and stay within them. Don't try to keep up with a stronger, skilled swimmer or encourage others to keep up with you.
- **Swim in supervised areas only.**
- **Diving:** Obey "No Diving" signs that indicate the area is unsafe for headfirst entries. Enter feet-first into water rather than head first if you don't know the depth. In addition, learn the correct way to dive from a qualified instructor.
- **Watch out for the "dangerous too's"** -- too tired, too cold, too far from safety, too much sun, too much strenuous activity.
- **Do not chew gum or eat** while you swim; you could easily choke.
- **Use common sense** about swimming after eating. In general, you do not have to wait an hour after eating before you may safely swim. However, if you have had a large meal, it is wise to let digestion get started before doing strenuous activity such as swimming.
- **Alcohol and swimming don't mix.** Alcohol impairs your judgment, balance, and coordination, especially in the water. It affects your swimming and diving skills and reduces your body's ability to stay warm.
- **Always wear a Coast Guard-approved life jacket** when boating and fishing.
- **Know local weather conditions** and prepare for electrical storms. Because water conducts electricity, it is wise to stop swimming or boating as soon as you see or hear a storm.



## Safe Wading Tips That Could Save Your Life

And at the very least make your fishing a lot more fun  
-by Mac Huff-

**Following are a Baker's Dozen of suggestions to make wading safer and your days in the rivers more enjoyable.**

### Minimum beginnings.

Felt soles are minimum wading equipment on your shoes in rocky rivers. Studs and cleats will increase the security of your shoes on rocky surfaces.

### Tri it!

A wading staff is an indispensable piece of equipment when wading conditions are difficult, giving you a vital, third point of support. The third point of support will make all wading easier by letting you maintain two points of contact while one foot is making a stride. A wading staff may make the difference between staying dry and falling in, and lowers your anxiety level during difficult wading.

### Give 'em a belt.

A wading belt is mandatory when using waders. It will slow the flow of water into the legs and boots of your waders and make escape from the river easier. When I fall in, my legs and feet usually remain dry until I get into shallow water and stand up to walk out. I have learned, even as uncomfortable as it is in icy water, to stay horizontal as I approach shore and drain the water out of the tops of my waders before I stand up. My arms are already soaked and will probably require dry garments, but if I drain the water out of the waders and keep my pants and socks dry I can finish my day of fishing in comfort.

### Go slow

This has broader implications than you may think. It obviously includes being careful while wading, but also encompasses taking time to evaluate current conditions and particularly to evaluate conditions when you are visiting unfamiliar rivers or locations. When entering the river and moving through the water, make your moves slow and controlled to minimize the risk of falling. With experience "slow" will become much quicker, but wading is always slower than traveling on dry land and as the hazards become greater your approach demands greater caution.

### Stand firm

Create a wide base to stand on when you are on a slippery surface. Widen your stance so your feet are shoulder-width apart; flex your knees to lower your center of gravity. When I enter a river or stream I automatically shift into a stance with my feet slightly wider than my hips and with my knees flexed. As the wading gets deeper and more difficult, my knee flex increases just as athletes sink deeper into their stances to achieve greater agility. Learn to slide your feet and, as with other athletic activities, never cross your feet. This stance will seem foreign and awkward in the beginning, but practice will make it feel natural - besides, you will have great reinforcement to use this advice when you fall in because your feet are close together or you lose your balance with your feet crossed.

The mechanism that usually makes you fall is having your foot slip under you, or toward the center of your body. By having your feet wide apart your slipping foot tends to shift your center of balance to the opposite foot. With wading experience and practice you will probably find that you are able to wade faster by taking



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advantage of this phenomenon. In "easy" wading situations you will, in effect, "skate" across the bottom, allowing your boot to slide into a secure position by sliding outward and forcing your weight onto your other, secure foot, followed, at roughly a slow walking speed, by the next successive step.

Foot placement and balance are other important and critical elements of safe wading. Typically, your foothold will not be flat and uniform, like a floor, so you must adjust your foot position. Your foot must be turned inward or outward, as well as up or down, to fit the foothold. Precise foot placement is essential to safe wading. Most of the time the foot must be placed precisely in a small area.

In addition, I find that placing my foot in a secure foothold among cobbles or boulders is most secure when I stand on my arch, rather than the ball of my foot. Visualize that you are securing your foot in the junction between rocks so the boot heel holds the foot from sliding forward and the curve of the arch holds the foot from sliding back.

If you are constantly searching for your balance or your foot is constantly slipping from your chosen foothold, then you should evaluate your foot placement and determine whether you are fitting the terrain or hoping that the terrain is fitting your step. Only experience can teach you to recognize the feel of secure footholds and the more you practice wading the easier wading will become.



### Find the low places

In the water, when you can't see where your feet are landing let gravity help. Slide your feet into position and work them into the valleys between rocks and cobbles, rather than standing on rounded top of slippery rocks.

### Step sideways

In shallow water, less than knee deep, you may be able to walk "normally" with a modified, wide stance. As water gets deeper and footing becomes obscured by water depth or turbidity sidestepping will maintain a wide, stable base. NEVER cross your feet while stepping! When I am exploring the bottom with this sidestep method, most of my weight is on my stationary foot, which helps prevent me from falling by either tripping forward over a high rock or slipping spread-eagle over the far edge of a smooth rock ahead of me. The idea is to not commit to the moving foot until you know you can stand on it. Typically, when I'm using this stride I'm in fishing water, so it is an easy method to move and cover water. In these difficult conditions if my next move is 30 feet or more I will wade back to shore, walk down the bank, and then back out into the water.

### Go with the flow

This recommendation is aimed primarily at efforts to cross a stream. It's easier and safer to move at a slight downstream angle with the current than move directly across or against the current. There is often a trick to finding the balance between shallow water with fast current and deeper water with a slower current. Either situation can be disastrous, knocking you down and sweeping you into faster, deeper water, so test the current as you proceed. This is the perfect place to use a wading staff. If you don't carry one, it might be worthwhile to use a streamside stick.

While fishing you will often want to move upstream. Take advantage of slower current while fishing upstream. Move through shallower water or use current breaks behind boulders.

There will be times when you must move against the current to cross or get out of your location. Don't let yourself wade down a gravel bar above deep water to discover that you have to wade back against a current that is too strong to move against! Sometimes apparently moderate currents can be treacherous when the water gets well above your knees, and wading that was easy with the current becomes seemingly impossible when trying to move back against it. Always approach moving water with a great deal of caution until you know your capabilities.

### **Move ahead**

Try to make your movements sideways or forward. Your balance and recovery are better in these directions, where you can see well. If you hook your heel while backing up, your chance of falling increases dramatically. If you must back up, rather than turn around, feel behind you with the lead foot (usually your downstream foot), set it securely and bring the other foot into position. Hooking your heel is often the problem that tips you over while backing up in a stream, but any slip is more hazardous while trying to move backwards. Getting into a predicament that requires you to back up is a situation where you would trade your fly rod and all your flies for a wading staff.

### **Choose your substrate**

Sand and gravel bottoms are usually secure and safe bottoms to wade on. Wade here when you can. Cobbles are more difficult because there are irregular surfaces to deal with and the surface of each cobble is an algae-covered, zero-friction trap looking for a victim. Why hasn't NASA discovered this stuff? Next up the difficulty list is boulders. These add the problem of navigating among large obstacles to the slippery problems of cobbles, and, there are more "tall" rocks to trip you than you find on a cobble beach. The same "tall" rocks that may trip you may provide relief from the current and make wading easier by moving into the slipstreams of upstream boulders. Boulders also will hold pockets of sand and gravel, which cobbles don't, and you may find secure footholds amidst treacherous footing. Once you learn to recognize these substrates they may give you an opportunity to move aggressively from a tenuous position to absolute security.

Mud bottoms may seem safe, but they also hold many pitfalls. Firm mud or clay bottoms are very slippery with felt soles. If the bottom is flat, you probably won't fall, but be careful that you don't get stuck and have difficulty climbing out of the stream. Mud accumulates in slow-current areas, and logs and sticks left by floods may trip you, and the silt you stir up will continue to obscure your vision. Finally, the erosion that occurs in muddy backwaters may create unexpected and slippery drop-offs.

The most treacherous bottom type is bedrock. These are areas with large surfaces of solid rock that have been polished smooth by eons of water erosion. The obvious problem is the large slippery surface. While cobbles are equally slippery, your foot can soon find a joint between rocks for a foothold, but on the large, flat surface of polished bedrock there is no redemption for a misplaced step. Even with careful sidesteps, if your foot slips it may skate so far out that you lose your balance and fall

### **Are you ready to move up?**

It's often tempting to fish from the top of a midstream boulder. The problem comes when it's time to get back down. Be sure you have a safe route back down before you climb up.

### **Plan your escape**

This starts before you even enter the river. Should you even be wading here? What will you do if you fall in?

## Final safety considerations

A personal floatation device is necessary for waders that can't swim and may be a good investment for anyone in big rivers and cold water. Both CO2 inflatable suspenders and solid, kapok-filled vests can be found in stores selling whitewater gear. A whistle is one of a mountaineer's 10 essentials and is an excellent safety item for waders to carry for emergency location.

### Mac's Choice of Waders

Decades ago when I unloaded my one and only pair of stocking-foot waders, I swore I would never own anything except boot foot waders again. My dissatisfactions with stocking foot waders were twofold. First, they were slow to put on. With my boot foot waders I was often in the river fishing while my buddies were still at the car dressing. Second, they were too cold. In the inland Pacific Northwest a great deal of our fall, winter and spring fishing is in water with temperatures in the 30s. The fit and constriction of wading shoes over stocking foot waders caused cold feet in the icy winter waters.

I recently acquired a pair of Orvis' Tailwaters XT waders and now I'm ready to retire my trusty boot foot waders. Orvis raised the bar with their Tailwaters XT waders, giving anglers the benefits of both stocking foot and boot foot waders.

Last December I made steelhead fishing trips to local rivers where water temperatures were in the mid-30s, and was pleasantly surprised at the warmth of the Tailwaters XT boot's insulation. On my first trip I hurriedly packed and forgot the second pair of socks that I wear with my waders. With the water at 35 degrees I was dismayed, but it was an hour's drive back home, so the only choice was to wear just my light liner socks. To my surprise my feet remained warm all day and were warmer than with my trusty neoprene boot foot waders on trips earlier that week.

Additional surprises were the extra support and foot protection that the wading shoes of the Tailwaters XT waders provided. I had long since forgotten how nice firm ankle support could be when wading through boulders and cobbles. Boot foot waders offer no lateral support, and as the boot material wears it creases and rubs my ankles while hiking between drifts. I've fortunate to have sturdy ankles and didn't think about it, but was very pleased with the greater comfort and strength of the Tailwaters XT boot. This feature alone makes wading safer and more comfortable. But I also discovered that the Tailwaters XT wader boots have a hard sole that protects the soles of my feet while walking over the hard, uneven surface of a river bed. I have had stone bruises on my feet through the years of wading with conventional boot foot waders, but I saw few alternatives and walked gently over the cobbles while the bruises healed.

Orvis has given anglers an option that will allow warm feet with all of the support and protection of conventional wading shoes. The boots may be laced firmly for longer hikes and then loosened slightly if you are wading in cold water and your feet begin to chill.

*Mac Huff has lived in and fished northeast Oregon for the last 28 years. He received a degree in Wildlife Biology in 1976, worked as a biological technician for Oregon Department of Fish and Wildlife that summer, and continues to contract biological work for the U.S. Forest Service. He operated a sporting goods store in Enterprise, Ore. for 13 years before selling the business to devote his energy to Eagle Cap Fishing Guides, a business he started in 1994 with partner Frank Conley. Mac has fly fished since childhood, guided for the last 15 years, and is an FFF certified fly casting instructor.*

*River fishing is the emphasis in northeast Oregon and the three rivers that he spends most of his time fishing are the Grande Ronde, Willowa, and Imnaha rivers. Most of his guided trips are float-fishing trips, using*



*either a Clackacraft drift boat or a 14-foot cataraft. Each craft easily accommodates two anglers and can transport up to three anglers. His fishing seasons begin in late May, usually Memorial weekend, when trout season opens, and continues through the summer and winter until April 15, when steelhead season closes. Early season trout fishing is usually good, but trout fishing improves later in the season when water levels drop and continues to be good through Oct. 31 when trout season closes. Steelhead season opens Sept. 1, and a few steelhead are available then, but fishing improves each week through November. Winter fishing depends on the weather, but by late February ice is reliably melted and fishing is fair to fabulous through April 15, depending on water level.*

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