

FIELD RESEARCH SAFETY HAZARD GUIDELINE

Working Near Water

Hazards	Potential Hazards	<ul style="list-style-type: none"> • Strong currents, undertows, or tidal fluctuations. • Unpredictable weather conditions, including high winds, lightning, or heavy rainfall. • Slippery or unstable surfaces, such as wet rocks, muddy banks, or submerged objects. • Aquatic life, including venomous or dangerous species. • Uneven or eroded ground near the water's edge. • Drowning and Cold-Water Shock • Waterborne illness • Poison ivy
Hazard Controls	Personal Protective Equipment	<ul style="list-style-type: none"> • There are risks near both shallow and deep water. Evaluate the proper protective equipment for each. • Wear a properly fitting personal flotation device (PFD) or life jacket when working near or on deep water. • Lifesaver flotation device or throw ropes when working near deep water. • Utilize appropriate footwear, such as non-slip boots or water shoes, to maintain traction and protect your feet. • Use gloves to protect your hands from sharp objects or hazardous materials. • Carry a waterproof communication device or waterproof bag for device (mobile phone or two-way radio), for immediate contact with emergency services. • Safety whistle
	Preparation and Training	<ul style="list-style-type: none"> • Conduct a comprehensive risk assessment before starting field research near water. • Inform an emergency contact of your intention to travel, what areas you expect to be in, and when you plan to return. • Obtain necessary permits or permissions from relevant authorities for conducting research in water bodies. • Ensure all researchers receive proper water safety training, including basic water rescue techniques, if applicable. • It is recommended you take courses in: <ul style="list-style-type: none"> • <u>CPR</u> • <u>Wilderness First Aid</u> • Establish an emergency action plan and communicate it to all team members. • Consult your primary care physician as to your physical fitness capabilities with the expected level of exertion. Physical stresses like illness, injury, and adjusting to new altitude can affect your stamina and ability to perform certain activities safely.
	General Work Practice Procedures	<ul style="list-style-type: none"> • Never work alone near water. Always have a partner or team present for increased safety. • Maintain situational awareness and avoid distractions while working near water. • Get out of water if thunder or lightning are observed or threatened. • Establish and communicate a safe working distance from the water's edge, considering tides, currents, and potential hazards. • Do not enter the water unless necessary and after assessing the risks. • Avoid traveling over ice covered rivers, lakes, or ponds. • Secure equipment and ensure it is properly anchored or tethered to prevent loss or damage.

Other		<ul style="list-style-type: none"> • Avoid standing or walking on unstable surfaces and be cautious of sudden drops or hidden obstacles. • Follow established protocols for collecting, handling, and storing samples or data near water bodies.
	Waste	<ul style="list-style-type: none"> • Containerize, remove, and properly dispose all generated waste when you leave the area. • Avoid dumping chemicals, solvents, or other hazardous substances into water bodies.
	Emergencies	<ul style="list-style-type: none"> • In the event of being unexpectedly submerged in cold water, assume the Heat Escape Lessening Position (HELP) by crossing your legs below the knees, drawing them up towards your chest, and hugging your arms across your upper body. This position helps conserve body heat and minimizes heat loss. Stay calm, signal for help, and wait for rescue or consider safe self-rescue options. Monitor for signs of hypothermia and seek medical attention promptly. • In case of being swept away, aim to orient your feet downstream, lie on your back, and paddle towards the shore. Keep your feet downstream to absorb impact with exposed rocks and avoid diving under objects like logs or "strainers." If you locate a spot where you can reach the shore, swim vigorously towards it. • If someone else is swept away, refrain from entering the water for a rescue attempt. Instead, remain on the shore, secure yourself firmly, and employ throw ropes to pull them to safety. If available, throw them a flotation device, or a makeshift flotation device such as a rolled-up sleeping pad, to assist them. • Do not attempt an in-water rescue unless you have had lifeguard training. Call emergency services for in-water rescue. • If you get lost, try not to panic. Take a minute to observe your surroundings and try to reorient yourself. Look for hills, water features, or roads that may be helpful in positioning yourself.
	References and Additional Resources	<ul style="list-style-type: none"> • NOAA https://www.weather.gov/safety/ripcurrent • Missouri DPS https://dfs.dps.mo.gov/safetytips/water-ice.php
	Questions	Contact Environmental Health and Radiation Safety (EHRS) at (215) 707-2520