
2.3 Safety Considerations

One of the most critical considerations for a volunteer monitoring program is the safety of its volunteers. All volunteers should be trained in safety procedures and should carry with them a set of safety instructions and the phone number of their program coordinator or team leader. Safety precautions can never be overemphasized.

The following are some basic common sense safety rules. At the site:

- Always monitor with at least one partner. Teams of three or four people are best. Always let someone else know where you are, when you intend to return, and what to do if you don't come back at the appointed time.
 - Develop a safety plan. Find out the location and telephone number of the nearest telephone and write it down. Locate the nearest medical center and write down directions on how to get between the center and your site(s) so that you can direct emergency personnel. Have each member of the sampling team complete a medical form that includes emergency contacts, insurance information, and pertinent health information such as allergies, diabetes, epilepsy, etc.
 - Have a first aid kit handy (see box below). Know any important medical conditions of team members (e.g., heart conditions or allergic reactions to bee stings). It is best if at least one team member has first aid/CPR training.
 - Listen to weather reports. Never go sampling if severe weather is predicted or if a storm occurs while at the site.
- Never wade in swift or high water. Do not monitor if the stream is at flood stage.
 - If you drive, park in a safe location. Be sure your car doesn't pose a hazard to other drivers and that you don't block traffic.
 - Put your wallet and keys in a safe place, such as a watertight bag you keep in a pouch strapped to your waist. Without proper precautions, wallet and keys might end up downstream.
 - Never cross private property without the permission of the landowner. Better yet, sample only at public access points such as bridge or road crossings or public parks. Take along a card identifying you as a volunteer monitor.

First Aid Kit

The minimum first aid kit should contain the following items:

- Telephone numbers of emergency personnel such as the police and an ambulance service.
- Several band-aids for minor cuts.
- Antibacterial or alcohol wipes.
- First aid creme or ointment.
- Several gauze pads 3 or 4 inches square for deep wounds with excessive bleeding.
- Acetaminophen for relieving pain and reducing fever.
- A needle for removing splinters.
- A first aid manual which outlines diagnosis and treatment procedures.
- A single-edged razor blade for minor surgery, cutting tape to size, and shaving hairy spots before taping.
- A 2-inch roll of gauze bandage for large cuts.
- A triangular bandage for large wounds.
- A large compress bandage to hold dressings in place.
- A 3-inch wide elastic bandage for sprains and applying pressure to bleeding wounds.
- If a participant is sensitive to bee stings, include their doctor-prescribed antihistamine.

Be sure you have emergency telephone numbers and medical information with you at the field site for everyone participating in field work (including the leader) in case there is an emergency.

- Confirm that you are at the proper site location by checking maps, site descriptions, or directions.
- Watch for irate dogs, farm animals, wildlife (particularly snakes), and insects such as ticks, hornets, and wasps. Know what to do if you get bitten or stung.
- Watch for poison ivy, poison oak, sumac, and other types of vegetation in your area that can cause rashes and irritation.
- Never drink the water in a stream. Assume it is unsafe to drink, and bring your own water from home. After monitoring, wash your hands with antibacterial soap.
- Do not monitor if the stream is posted as unsafe for body contact. If the water appears to be severely polluted, contact your program coordinator.
- Do not walk on unstable stream banks. Disturbing these banks can accelerate erosion and might prove dangerous if a bank collapses. Disturb streamside vegetation as little as possible.
- Be very careful when walking in the stream itself. Rocky-bottom streams can be very slippery and can contain deep pools; muddy-bottom streams might also prove treacherous in areas where mud, silt, or sand have accumulated in sink holes. If you must cross the stream, use a walking stick to steady yourself and to probe for deep water or muck. Your partner(s) should wait on dry land ready to assist you if you fall. Do not attempt to cross streams that are swift and above the knee in depth. Wear waders and rubber gloves in streams suspected of having significant pollution problems.

- If you are sampling from a bridge, be wary of passing traffic. Never lean over bridge rails unless you are firmly anchored to the ground or the bridge with good hand/foot holds.
- **If at any time you feel uncomfortable about the condition of the stream or your surroundings, stop monitoring and leave the site at once. Your safety is more important than the data!**

When using chemicals:

- Know your equipment, sampling instructions, and procedures before going out into the field. Prepare labels and clean equipment before you get started.
- Keep all equipment and chemicals away from small children. Many of the chemicals used in monitoring are poisonous. Tape the phone number of the local poison control center to your sampling kit.
- Avoid contact between chemical reagents and skin, eye, nose, and mouth. Never use your fingers to stopper a sample bottle (e.g., when you are shaking a solution). Wear safety goggles when performing any chemical test or handling preservatives.
- Know chemical cleanup and disposal procedures. Wipe up all spills when they occur. Return all unused chemicals to your program coordinator for safe disposal. Close all containers tightly after use. Do not switch caps.
- Know how to use and store chemicals. Do not expose chemicals or equipment to temperature extremes or long-term direct sunshine.