

CreekWatch Safety and Risk Management

Thank you for volunteering with CreekWatch and helping to make a difference in the management of our urban stormwater. The combination of your enthusiasm, training, awareness and common-sense should keep you safe.

First Priority – Health and Safety

No sample is worth risking health or life. This document describes safety considerations for both field sampling and the proper handling of chemicals.

Insurance

Water quality monitoring is a listed activity under the RiverWatch Institute of Alberta liability insurance policy of \$5 million per occurrence and Worker's Compensation Board coverage.

Safety Equipment

Each portable lab should contain band-aids, gauze, gauze pads, white tape, sterile wipes, bottled water, mosquito spray, hand sanitizer, safety glasses, broken glass container, sharps container for used syringes and separate wastewater bottles for general liquids and chloride testing.

Field Safety Recommendations

The following safety recommendations apply to everyone who is conducting field work:

- Closed-toed shoes are the best footwear for sampling.
- Carry a cell phone – you are in an urban 911 EMS call area.
- Avoid sampling alone and especially if young children accompany you.
- Always inform someone where you are sampling and your expected return time.
- Do not sample if conditions are unsafe (e.g. higher swifter water than usual, extreme weather watches, lightning, suspicious people or unusual activities in the area, construction, weed spraying).
- Stop and postpone any sampling activities if you feel unsure or unsafe.
- Notify the Citizen Science Coordinator of any unsafe conditions or injuries.
- Be alert and look both ways before stepping onto paved pathways used by cyclists and boarders.
- Do not wade into creeks - ideally, use a bucket from a pathway bridge or a painter's extension pole to obtain a mid-creek sample.
- Avoid sampling at the outer bend of a creek where the bank drops-off into deeper, swifter water.
- Wear safety glasses when using liquid or dry chemicals.
- Use hand-sanitizer when sample testing is completed on-site.
- Wash your hands when back at home.

Site Inspection and Hazards

Before beginning each sampling session, it's a good idea to take time for an on-site inspection. There are hazards associated with water quality monitoring along creeks that may include but are not limited to:

- Equipment: the use, misuse, non-use, carrying or failure of any equipment including portable labs.
- Chemicals: allergies, eye, skin or breathing irritation caused by dry or liquid chemicals
- Weather: any exposure to cold or heat, rain, hail, lightning, reflected sunlight or wind.
- Physical Activity: any lifting, walking, stepping or gaining shorelines.
- Terrain: any manner of falls on slippery, rocky, loose, steep, icy or uneven shoreline.
- Animals: any virus, bacteria, insects, stings, bites, spiders or dogs.
- Plants: any stinging nettles, branches or thorns; pollen allergens.
- People: other drivers, cyclists, vagrants, pathway or park users

- Litter: the entanglement in fishing line, machinery, glass, hypodermic needles, condoms, garbage or shopping carts submerged or discarded along the creek.
- Creek: the possibility of sudden immersion in cold moving water complicated by pinning against rocks or bridge pillars; entanglement or collision with rocks, trees or bridges; and the resulting injury or drowning.

Environmental Emergencies or Poaching

If you spot an environmental emergency such as oil on the creek surface, contact the Alberta Energy and Environmental Response 24 Hour Hotline 1-800-222-6514; Non-Emergency Toll Free Alberta 310-ESRD (3773) or email ESRD.Info-Centre@gov.ab.ca. Possible poaching, fishing infractions or wildlife emergencies can be reported toll-free to Report A Poacher 1-800-642-3800.

Eye or Skin Irritation

If your eyes burn or skin itches due to a possible chemical contact, rinse the affected area with bottled water provided in the portable lab. Seek any necessary medical care.

Used Syringe Disposal or Needle Pricks

Intravenous drug use in city parks is a fact of life that may be exacerbated by stormwater runoff that can carry used syringes into creeks. If you encounter a used syringe at your sampling site:

- Closed-toe shoes are the best footwear for sampling.
- Open the yellow sharps container.
- Carefully pick-up and place the used syringe needle-down into the sharps container.
- Close the container lid and double-snap the lid shut.
- Never empty the container.
- Seek emergency medical care if you incur a needle prick.

Broken Glass Disposal or Cuts

There may be broken glass at your sampling site or, you may inadvertently break glassware used in testing procedures. If you have broken glass at your sampling site, take care and place it in the broken glass container for later disposal. If you incur a cut, use first-aid materials stocked in the portable lab and seek any necessary medical treatment.

Wastewater Disposal

Chloride testing wastewater has a separate bottle that should last the season without disposal. When the general wastewater bottle is full, neutralize and then dispose the contents down a toilet.

- Wear safety glasses.
- With access to a toilet, test the wastewater pH by dipping a pH paper strip into the bottle contents.
- If the pH is acidic (lowering than 7), add small amounts of baking soda with repeated pH paper testing until you achieve neutral pH (7).
- Pour the general wastewater into a toilet and flush. Wash your hands.
- The wastewater bottle is once again ready for use.

When in Doubt, Ask

If you have questions or concerns about safety, testing procedures, equipment or injuries, you should stop or postpone further water quality sampling until you have contacted the Citizen Science Coordinator at science@riverwatch.ab.ca or 403.369.8499.

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