

Waterwatch safety guidelines

Waterwatch Australia

Australian Government Department of the Environment and Heritage

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What is Waterwatch?

Waterwatch is a national community-based water quality monitoring program. The program provides funds for community groups to monitor the quality of water in Australia's waterways. Using this information the groups can develop action strategies to help rectify any problems identified by the monitoring.

Safety first

Volunteer safety must be a top priority for water monitoring groups. Safety considerations should include travel to and from the site, pier or bank stability, and testing procedures. The following Waterwatch guidelines have been developed for use by group leaders such as teachers and catchment facilitators to ensure the safety of volunteers throughout Australia. Remember, if monitoring a waterway requires putting a volunteer at risk, do not attempt it.

1. Understand the risks

- Each volunteer should be requested to sign a liability release form before monitoring.
- Teachers should follow standard school procedures to obtain from each student signed parental permission and a list of any special needs or known allergies that the student may have.

2. Choose safe sites

- Don't be content to select sites from a desktop map survey only. Before selecting a site for regular monitoring, check with your local or state conservation department or regional Waterwatch facilitator and visit the site beforehand to see if there are any particular hazards.
- Avoid sites where there are dogs, livestock, snakes, bees, leeches, crocodiles, or prickly plants.
- Choose sites that have safe and easy access to the waters edge and avoid sites that have steep, slippery or unstable banks, or are adjacent to deep, swiftly flowing water.
- Check that sites such as urban storm water drains, creeks or estuaries are not prone to rapid flood or tidewater rise without warning.

- Only choose bridges as sampling sites if they have raised or otherwise protected walkways.

3. Wear appropriate clothing

- Be prepared. If it looks like heavy rain call it off. If its cold and could rain, wear warm clothing, a raincoat and sturdy waterproof shoes. If its sunny, wear a hat and apply sun screen. If the site is heavily vegetated wear long pants, and a long sleeved shirt to avoid scratches. Wear something bright so that you can be easily seen.
- When entering shallow waters for the macroinvertebrate tests, make sure you wear waders, boots, or old sneakers with a good grip. Dont risk injury by going barefoot, you may cut your feet on sticks or broken glass.
- Bring extra clothes and a towel in case someone slips in and gets wet.

4. Bring safety gear and a first aid kit

- Supply lifejackets to students or adult participants monitoring in any location where poor footing or unseen holes might lead to a fall.
- Rubber gloves are essential if anyone has an open or bandaged wound. They are also necessary when handling chemicals or polluted water.
- Group leaders should bring a fully stocked first aid kit to the sampling site. Make sure antihistamines and a sterile saline eyewash are included.
- Ideally, someone in the group should have formal training in first aid. Courses in first aid are run by the St Johns Ambulance Society.

5. Maintain contact with help

- Carry coins, phonecards or a mobile phone in case you need to make an emergency call.
- If you have no access to a mobile phone, let every one know where the nearest phone is located.
- In the event of a serious injury, do not hesitate to call "000".
- In remote areas, carry a map, a compass, and a whistle and let a responsible person know exactly where you will be sampling and approximately how long you will be gone. Ask him or her to take immediate action if you have not returned at the time you promised.

6. Appoint a group leader

- Each monitoring group should appoint a group leader. This person should take responsibility for safety advice, monitoring procedures and group decision-making. The leader should be with the group each time it goes out. On occasions when the leader cannot be present a "Backup" who also has a good understanding of the safety guidelines and monitoring procedures should be present.
- As soon as you arrive at the monitoring site and before you begin monitoring, hold a quick meeting. This is the opportunity for the leader to review the potential hazards of the site and to assess the abilities of the group. Let the volunteers know that it's OK to say "I can't do this." Check that the group has the appropriate footwear, safety gear and monitoring equipment before proceeding to the monitoring site.

7. Never sample alone

- When working in or around a body of water, never sample alone. Work with at least two others and stay within calling distance of the main group. If one is collecting a sweep sample along the streams edge the other can hold and secure a safety line. If someone is injured, one person can go for help and one can stay with the injured person. Make sure everyone knows who they will be working with.
- Do not allow children to sample without adult supervision. There should be at least one adult for every 8-10 children and at least two adults per group. Schools should check their state excursion guidelines.

8. Never go into the water above your knees

- All sampling is done from the water's edge except for the macroinvertebrate tests which are conducted in shallow riffles less than knee deep.
- When conducting the macroinvertebrate tests, use the handle of your monitoring net to probe the water in

front of you for rocks or deep holes.

- Use a pole sampler to avoid getting too close to the waters edge.

9. Avoid contact with polluted water

- Carry drinking water with you. Do not drink water from the water source you are testing as it may contain sewage or chemicals. In particular, when sampling in urban areas, do not put your hands near your mouth, or eat or drink while testing the water.
- When collecting algae samples wear gloves as blue green algae can cause skin and eye irritations in humans.
- Bring hand washing supplies, and make sure you use them after monitoring. This is especially important if the field trip involves a picnic lunch, barbecue or snack.

10. Take proper care when carrying out chemical tests

- Be sure to read through testing procedures and safety instructions before conducting tests.
- Take care when handling chemicals. Always use the safety equipment provided, eg. gloves to avoid potential risk.
- Always wear goggles or some other form of recommended protective eyewear when using chemicals in the field or in the lab. Contact lenses may be irritated by and absorb chemical fumes.
- Never taste chemicals for any reason.
- Always read the label before using a chemical and never assume that you know the contents of an unmarked container.
- Label all containers with permanent markers.
- Do not dispose of used chemicals by dumping on the ground or in the waterway! Bring a container with a tight fitting lid so that wastes can be returned to a laboratory for proper disposal.
- Horseplay at the monitoring site or in the laboratory can lead to possible injury. Monitoring group leaders should emphasise this safety aspect before each testing session.

11. When testing for *E. coli* or faecal coliform

- Treat all bacterial cultures as pathogenic and therefore potentially dangerous. Use gloves and forceps to avoid any possible contamination.
- Wash hands before and after carrying out the analysis.
- To dispose of cultures and resterilise plastic petri dishes:
 - a. Using tongs or wearing rubber gloves remove petri dish covers, and then carefully place covers, dishes, and cultures into a large beaker or pan containing undiluted, liquid household bleach.
 - b. After 10 minutes remove the petri dishes, and rinse them well under running water. The wet pads and filter should be put in plastic bags, the bag sealed and properly discarded.
 - c. Carefully immerse the petri dishes in a solution of 70% isopropyl alcohol for 10 minutes.
 - d. Remove the petri dishes and covers and stack them on a clean surface to dry. Reassemble dishes and covers. They are now ready for storage or reuse.

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Waterwatch Australia: Communities caring for catchments

[Natural Heritage Trust](#)

[Australian Government Department of the Environment, Water, Heritage and the Arts](#)

GPO Box 787 Canberra ACT 2601 Australia

Telephone: +61 02 6274 1111



Natural Heritage Trust

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