

Collecting a Salt Watch Sample at your Lake

Minnesota is the land of 10000 lakes! Chloride can have a detrimental impact on freshwater resources and can disturb the natural function of a lake. Salt water is denser than freshwater, so in a lake it sinks towards the bottom and can require a few more steps to monitor properly.

You have a few options for monitoring your lake for salt. They depend on your access to the lake, access to equipment, and the time you can go out. **Please note in your submission if you got a deep or surface sample.**

If you want to get a surface sample:

1. Can you find the stream inflow to the lake? Use that stream for the Salt Watch protocol.
2. Do you have a boat, canoe, or dock? Go towards the middle of the lake and collect a surface sample there, and then proceed with the Salt Watch protocol.

Timing of your sample:

- Surface waters are most likely to have chloride spikes after rain or thaw events in the winter. Get a baseline sample in late Fall and compare it to samples you collect after rain or thaw events later in the Winter and early Spring, between December and April.

If you want to get a sample at depth:

1. Are you part of a monitoring group with access to a *discrete depth sampler*? If so, use the sampler to collect water 2 meters above the bottom of the lake, and then proceed with the normal Salt Watch protocol.
2. Do you have a boat or a dock? The best water samples come from further out in the lake. Go out towards the middle of the water on a dock or in a boat and drop a bucket down towards the bottom to collect a non-surface sample. You can then proceed with the Salt Watch protocol.

Timing of your sample:

- Most chloride spikes found at depth in lakes often happen later in the Spring. It would be good to go out in late winter (February/March) and go out again in May, to document the change in chloride levels. You can check again in the Fall to see if chloride levels have fallen.

Learn more about Citizen Science in Minnesota at www.pca.state.mn.us/water/resources-volunteers

MPCA Citizen Science Safety Guidelines

Always take the appropriate safety precautions when conducting your monitoring activities. What may seem like simple, routine monitoring can turn dangerous very quickly. Using the “buddy system” when conducting monitoring activities is not only more fun, it can also reduce danger in case of an emergency. The following are some tips to ensure your safety while boating and/or conducting your monitoring activities:

Boating Tips

1. Know and follow all boating rules.
2. Learn how to swim.
3. Make sure you and all occupants of your boat, especially children, wear a Personal Flotation Device (PFD or life jacket) at all times.
4. If your boat should tip over and it still floats, stay with it. If it capsizes, try to right it and re-board. If you cannot right your boat, climb on top and hang on. Immersion in cold water can quickly cause hypothermia.
5. Always obey signs and keep away from lock and dam structures on river systems.
6. Never consume alcohol while boating – this can potentially be a deadly combination.
7. Watch out for other boaters to avoid collisions – for your safety as well as theirs.
8. Minnesota weather can change quickly, so be alert to current weather conditions. Watch for wind shifts or distant lightening. **Never monitor when lightning is present.**
9. Tell someone where you are going and when you expect to return. If there is an emergency, this will help authorities looking for you find you faster.
10. If you get caught in rough waters, head to shore, making sure to head into heavy waves at an angle.

Taking appropriate safety precautions refers not only to following boating tips, but also to having safety equipment along that can help you in times of emergency. The Minnesota Department of Natural Resources (MDNR) offers boating safety information. Some of the free publications you can get include: Minnesota Boating Guide; Hypothermia: The Cold Facts; and Danger-Thin Ice. Call the Boat and Water Safety Section of the MDNR at 651-259-5400 or toll-free at 1-888-MINNDNR for more information. Information is also available online at: www.dnr.state.mn.us/safety/boatwater/index.html.