

## Keeping a Healthy Ecosystem

My experience at the St. Louis River Quest

May 27th, 2025

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On my trip to River Quest aboard the Vista Star and in the DECC, I learned a lot about the St. Louis River and Lake Superior, and how important it is to keep our bodies of water here in Minnesota healthy and clean, as well as what to watch out for while on the water.

Minnesota lakes and rivers have been preserved and utilized for centuries, by the Native Americans, and now by us—but we aren't treating the water so kindly. While we're getting better about it, we're still harming the bodies of water around us, and it's important to keep them safe, because the whole ecosystem depends on them and we use water for so many essential functions.

Just a few decades ago, the St. Louis River was hardly better than a sewer, with mats of sludge and harmful chemicals that killed the native species everywhere. Wastewater from industrial and residential areas was being dumped straight into the river. Today, WLSSD filters all this wastewater before returning it to the river, and the St. Louis is a much healthier, nicer place.

Each day, WLSSD receives 30 million gallons of wastewater. That's a lot of water! I'm glad that it's all getting filtered. At WLSSD, bacteria do a lot of the filtering work. They eat away all the nutrients in the water and purify it. However, there are some things bacteria can't eat, like medicine, so it's important to keep these out of drains to protect our water and environment. Mercury and gasoline in drains will also kill living organisms.

Other things can end up in watersheds, too, and they can cause damage to the environment. Everything is connected in a watershed, because all the water, from factories, homes, farmland, and all places eventually drains to one place.

If the water is polluted, animals won't have safe drinking water, and the fish and aquatic plants will die. Polluted water can mean polluted soil, and then, native plants can't grow, and animals won't have anything to eat. Any pollution can disrupt the entire ecosystem, so it's imperative to keep all our bodies of water clean and rid of pollutants.

You can help to reduce the problem of pollution by picking up garbage, not putting trash or harmful chemicals into storm drains and bodies of water, and using compostable and more eco-friendly materials.

Out on our favorite Lake Superior, one beach is really suffering. The Minnesota Point Pine Forest SNA, or Scientific and Natural Area, is one of many SNA's that is a protected area to preserve natural features and for scientific research purposes. This beach, located out on the tip of Minnesota Point, also known as Park Point, suffers greatly from erosion and uprooting of trees. In this SNA, huge pines grow on the country's largest sandbar—but huge storms threaten to eat away at the beach and expose tree roots, eventually causing the trees to fall down.

While we can't control the weather, we do our best to prevent additional harm to this beach and others like it. Sand on this sandbar is held together by roots of plants, like beach grass and even poison ivy. These roots grow deep and strong and keep the sand in place. However, trampling these plants and eventually killing them means that there's nothing to hold the beach together, so you can help this issue by remembering to stay on designated trails and keeping out of the beach grass.

While our lakes and rivers face major problems, they can also pose a threat to us if we're not careful. We humans aren't very buoyant, meaning we can't easily float in water, so it's important to wear a life jacket, or Personal Flotation Device. Life jackets can save us if we're caught out in the water and lose energy or can't swim back to shore easily. On average, ten people drown in the USA per day, and over 88% aren't wearing life jackets. There's a good chance that if you're caught away from shore, these vests may save your life.

Another potential danger, particularly on Lake Superior, is rip currents. A rip current is a strong current that will sweep you away from shore out into the open lake. To spot a rip current, watch out for breaking waves—there will be a seemingly smooth spot in between two waves, and this is the path of the rip current, so don't be fooled by seemingly still water.

At Park Point Beach, there are flags that will tell you whether or not it's safe to swim in the lake. A green flag means the water is safe, a yellow flag means that there's potential danger and you should swim with caution if at all, and red means that the water is dangerous and you shouldn't swim. However, if you are caught in a rip current, there is a fairly simple way to escape. Once it

sweeps you out, where the rip current ends, the water will swirl you around. Don't try to swim back the way you came: this will waste too much energy, and even the fastest Olympic swimmer can't fight a rip current. Instead, lie on your back and go with the path of the current. Swim to one side, out of the path of the rip current and parallel to shore, and swim back to shore.

In conclusion, I learned a lot about our lakes and rivers and I'm glad I had this experience. Even if you think you can't help with the problem of pollution, any effort makes a difference. It's so important to keep these bodies of water safe and clean for all generations and species, because we all need it to survive and have a healthy ecosystem.