

## My River Quest Adventure - May 14, 2015

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In the 1960s and early '70s, the St. Louis River was so polluted that thick sludge was floating on the river. Sea Lampreys, an invasive species, are a type of bloodsucking parasite, are not native to Lake Superior. Also, fish with long, torpedo-shaped bodies are predator fish. I learned all of these facts, and more, at River Quest.

At the DECC, we learned how our wastewater is cleaned. The water is transported in tubes to WLSSD, where it is cleaned by bacteria. The bacteria eat all of the waste so the water is clean enough to be put back into Lake Superior. This seems like a simple process, right? Yes, but what if you flush your dead goldfish down the toilet, or if you dump extra medicine down the sink? That goes to WLSSD too. Then, since the bacteria can't eat your dead goldfish, WLSSD has to find other ways to remove Nemo,. So next time, think before your flush!

Did you know, that steel made from one boatload of iron ore pellets can be used to make 55,000 compact cars? I sure didn't, that is, until I went to the River Quest station called Great Lakes Cargo Capital. This station was all about the port of Duluth-Superior, and the ships that enter it. Here, we learned to tell the difference between a salty (a ship that comes in from the sea) and a laker (a ship that stays in the Great Lakes). Salties are shorter and wider than lakers, and at their front they have a bubble-like shape protruding from it. Lakers, on the other hand, are much longer and thinner than salties, and do not have the bubble on their front. My group also took turns filling a model

of a laker first with water (when there are storms and the ship does not have any cargo in it at the time, this helps balance the ship), then, we emptied the ship and filled it with iron ore pellets. From this we learned just how much work goes into our shipping industry.

When we went on the Vista Star, I learned about how many invasive species of fish there are just in Lake Superior. Zebra mussels are overpowering our fish because none of our fish have evolved to eat them. Also, if you release unwanted aquarium fish and plants in to the water, they can become invasive, especially goldfish. Goldfish adapt very well to any habitat, so you should not just put them in a pond because, eventually, they will overpower all the other fish. Fish that are invasive can also carry diseases that they are immune to, but our local fish in the lakes aren't. Or, invasive plants cause waterways to plug or snag on boat propellers. So, next time you are fishing, afterwards, check your boat for any unwanted hitchhikers before you go to another lake.

Imagine you are a fish. You have spiky fins on your back, so you are prey. Suddenly, a long, thin, torpedo-shaped fish (the predator) comes streaking towards you. As you swim away, you almost run into a catfish, a bottom-feeder. This is what it feels like to be a fish. I learned this at the Fishy Physics station. I learned about how fish move from one place to another in the water. To move up, the fish simply allow more air to enter their swim bladder and, voila! They are now one foot higher in the water. Likewise, if a fish wants to move downwards in the water, they will release air from their swim bladder. A swim bladder is a sack in a fish that can inflate and deflate with air, which allows a fish to move around in the water. You're the

aforementioned fish again. Luckily, you add air to your swim bladder, and are able to escape from the sights of your predator.

Right now you are probably thinking, "So what? Why do the St. Louis River and Lake Superior matter so much? It's not like they affect me." Well, they do. If WLSSD just dumped all of our wastewater back into Lake Superior without cleaning it, it would be horrendously filthy. "Well, yeah," you might say, "but I'm not part of WLSSD, I don't have to clean the water." True, but even the little things you do can affect Lake Superior and the St. Louis River in good, or bad ways. When you walk along the beach and pick up any trash you find so it won't go into our water, you are affecting our water in a good way. But, when you leave your grocery bags on the beach, or dump your unwanted pet fish into a pond, you're affecting our water in a bad way. So, think about it, even the tiniest, seemingly unimportant things can affect our water, and anything or everything in and around it. Make the right choice for our lakes, rivers, ponds, and the creatures in them.