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Homeland Waters

My experience of going to River Quest created a sense of meaning on why we need clean waters, why we need to protect all species no matter if they are native to the waters or invasive that traveled afar. In the 1950's the Saint Louis river was a disaster, the waves were made up of sludge mats more than clean water or at sight any water. At that time factories dumped waste water and oil into the river, policies were created to stop the pollution of the water. Although companies were the main cause for this, people also contributed by spraying pesticides in the grasses or dumping unused oil into the water. Stopping these actions helped, but not everyone tried to help the river clear out. Hopefully the new information you will soon learn might change that perspective or inforce new facts as it did for myself and many others.

Without clean rivers and waters Duluth would lose one of our most important and unique features, the shipping. Our ports help the environment thrive, shipping reduces 413.2 million tons of CO2 emissions then the trucking industry. We as humans have come to the agreement that transporting goods by water is the best course of action, it has come so far in the implementation of shipping that we can say 90% of goods are transported by water. Although shipping is great for the environment it can cause harm to the ecosystem and native species in our waters.

Aquatic invasive species attach to the boats arriving and departing from Lake Superior, sometimes the invasive species can travel on boats in their ballast water tanks. Before there had not been a rule to empty the ballast water tank in the ships before entering new bodys of water, this resulted in many invasive species for example zebra mussels and the rusty crayfish to fight the native species for shelter and food. Over the years people have come to the decision that it would be best to discharge any ballast water before traveling through the locks. This solution is a great help but does not fix all the problems, many invasive species travel on fishing boats and swimming gear.

Aquatic invasive species come in many different forms, an animal, plant or disease. Some forms like an invasive animal or plant can be detected very easily, but some like an aquatic invasive disease can be invisible to the naked eye. If, actually, it's more of a when you find that your boat, gear, or used materials have an animal or plant attached to it, remove the object and let it loose into its native waters. Whenever my family goes fishing we always have seaweed or plants wrapped around the motor of our boat, although we always remove these that doesn't necessarily mean all the invasive species have disappeared. Always, **always** remember to leave all gear or used materials (that includes a boat, canoe, ect...) out in the sun, or just to dry for the minimum of 5 days.

Our great lake may be helpful, but in some cases it can be extremely dangerous. The average temperature of Lake Superior is somewhere around 54 degrees, that's not even the winter weather! I can tell you what falling into a frozen over lake feels like or looks like, it doesn't feel good not at all. If you fell into the winter water it would be extremely difficult to stay swimming for even a minute. These cold conditions cause frostbite to occur as soon as 30 minutes, in the stage of numbness of the limbs it can get to be a struggle to keep your head above water. If these events ever take place remember

to contain body heat by positioning yourself and others in the H.E.L.P. position. If you are the only one in the water curl into a ball positioning your head above water, when in this situation with others huddle together with all arms wrapped around each other.

Cold waters are not the only cautions you must take when swimming in Lake Superior, our lake is the only great lake with rip currents. Rip currents are created when waves from deep water travel to shallower water, this creates a depression in the sand by shallow waters, a strong tide of water is formed to travel farther into the lake. This current can be extremely faster, imagine an olympic swimmer, rip currents can travel faster than that, this means that even the best of the best swimmers must take caution. When caught in a rip current you are presented with two choices, if not a confident swimmer let the rip current carry you out then lay flat on your back and call for help. If you are a stronger swimmer then swim diagonally to the rip current, as soon as you find an opening either at the middle or end of a rip current swim out and around careful not to get re-wrapped up into the current.

When learning at this station about the dangers of rip currents all groups also learned how to identify rip currents, two solutions were presented. When currently at a beach or ocean if you see a calm peaceful section of water flanked on either side with waves that is your main cue that the calm surface is a rip current. Maybe you don't see a rip current but there are waves that are coming in fast (rip currents need waves to form) then what would you do? Some beaches like Park-Point and Lake Superior has a flag on land that can either have a red, yellow, or green symbol on it. Red means that the rip currents are dangerous and you should not swim, green means that the water is safe to swim in, yellow well yellow means that rip current would have a possibility of forming.

Both cold water and rip currents have a solution to help you keep safe but, in both situations a life jacket would be extremely helpful. Did you know that size and type of lifejacket or if you want PFD (personal flotation device) matters? Without the correct size a lifejacket may cause more problems than help, too large and it will slip off, too small and it can cause breathing problems. As I stated before, type of lifejackets matter, active activities need a more comfortable life jacket, when other activities require a more floatable device. Trying to tube in an inflatable life jacket is more than a little uncomfortable, it's not only that but that situation was not safe.

Hopefully this essay has helped you understand how and why we can keep the Saint Louis River and Lake Superior or any water form clean and healthy. Remember if you ever find yourself in freezing water, get into the HELP position. Or if you find yourself stuck in a rip currents swim out and around or float and call for help until someone rescues you. I and many others in my class enjoyed the opportunity to go and learn at River Quest. I learned a lot about safety procedures and helping the environment.