## Safety On The Lake North Shore Community School Ms. Jackson's Class May 24, 2023 Silvee Romberg

On my trip to River Quest, Vista Star, and the DECC I learned a lot on how to take care and protect our rivers, lakes, and streams. Before 1978 the St. Louis River was nothing more than a trash filled sewer. People would often throw muddy water straight into the river. Before WLSSD cleaned and filtered the St. Louis River no one was fishing, boating, or swimming there. It wasn't even out of the ordinary to see dead fish and large piles of mud just lying around. Now that many places including WLSSD have helped to clean out the river it is now a very common place for people to swim and boat. Now that our beautiful St. Louis River is clean; we need to keep it that way. Many oil spills and other tragedies are harming it and many other rivers and lakes. In my essay I'm going to tell you many ways you can help save and protect our waterways.

There are many oil spills in Lake Superior and it's very hard to get the oil out. Getting that oil out without arming any of our wildlife and water is hard. You might think just scoop out the oil and yes that could be a solution but you might be taking out a lot of water with you. If I have a glass cup and fill it with water then dump some oil in it, it's very difficult to get out. People have tried to come up with ways to help get this oil out but only a few of them worked. And one of those ways was using this absorbing material. That it didn't absorb the water but the oil. Like putting a strip of cotton like material into some oil infested water and it would just absorb all that nasty oil. The Vista Star even uses this method. Even though we came up with this method, boats can still spill oil straight out the back of their ship. Another way to prevent that is before you take off make sure your bolts are tightened on your engine and there are no leaks or holes in your engine.

The St. Louis River and Lake Superior is an estuary. A freshwater estuary is a place where two different bodies of water meet and mix. An estuary is also a major place for animals and plants to live. Most estuaries are found where a river meets a Great Lake. Like the St. Louis River and Lake Superior.

By far the largest tonnage port on the Great lakes and in the top 20 in the nation is the Port of Duluth Superior. And it even has an average of 35 million tons of luggage. Around 7,800 jobs are employed each year and business revenues are at 1.4 billion. Huge lake ships are called "lakers" and most of the smaller ships are called "salties". These ships mainly carry big cargoes of iron ore, limestone grain, coal, cement and salt. Located around the farthest inland at 2,342 miles from the Atlantic ocean, the port at Duluth Superior links North America's heartland to the rest of the world. To get to Twin ports from the ocean, salties must go through 16 locks to safely sail a nearly 602 foot elevation change in water level. Because the sea level is different then these lake and river levels. On a 1,000 foot laker around 14 million gallons of water will be pumped out while 70,000 tons of iron ore or coal is loaded on.

Nearly 10 people drown every day in the United States. Almost 88% of these people were not wearing life jackets. Life jackets float and you don't. The reason why life jackets float is because they are less dense and more buoyant than water. Now density is the measurement of how tightly something is packed together. If something is packed together less tightly it will float like gas, but if packed very tightly it will sink like a solid. But what really depends is if it is less or more dense than water. If an object is less dense it will float but if more dense it will sink. An example of density is an apple since the apple is less dense than the water it will float. Life Jackets are less dense that's why they float. But there are many different kinds of life jackets. The most common one is one that you probably wear to a pool, lake, or to do many water activities, but this life jacket will not keep your head above the water it will make you float but your head could still go underwater. The next one is an orange one that you will probably see on boats and ships, this life jacket will keep your head above the water and even can have reflective tape so people can see you if you go overboard. The last one is a blow up on, you pull a string and then it blows up so you stay above the water. But the bad part about this Jacket is that you need to pull it to activate it to blow up. So if you get knocked out you can't activate it and when it's not activated it will not do much for you. So it depends on what you're doing but the orange reflectant life jacket is probably the safer option.