Save Lake Superior Association WINTER 2011

Dedicated to the restoration and preservation of this Great Lake www.savelakesuperior.org

Ships transporting ballast water still hiding in the fog

When it comes to transparency on ballast water treatment the lakers and salties that use ballast water in transit are still being hidden in the fog of bureaucracy and economics. Will equipment for removing invasive living organisms be added to ships' ballast water systems before it no longer matters? A condition called "stasis" develops when invasive species exist in an ecosystem and reproduce indefinitely without being replenished. If a majority of invasive species reached this state, arguments for installing treatment systems would become almost moot. Is this a strategy or a consequence of apathy? Will there always remain the potential for a mutated species lurking in the ships hulls that could wipe out a fishing industry?

The presentations at the recent 2010 MNWI Aquatic Invasive Species Conference did little to clarify the ballast water strategies of the main players in shipping, agencies, regulation and academia. Apparently permits to discharge these pollutants will be issued and programs to monitor symptoms of their presence will continue well into this century. Our position and that of many others is that no living organisms should be dumped into our harbors by either domestic lakers or foreign salties. It is becoming apparent that the IMO ballast water standards used worldwide for salt water ships is the best that we will get in the fresh water Great Lakes. Even reaching this modest standard of 10 large living organisms per cubic meter of discharge is portrayed as a monumental task that will threaten the existence of the entire shipping, mining and ground transportation industries in the Lake Superior watershed.

Many species of small fish, plankton, bacteria, viruses and other pathogens, either natural or engineered travel in ballast water. Industry and agency spokespeople are still suggesting that the millions of living organisms that would continue to be discharged into our harbors with the billions of gallons of ballast water is acceptable as a standard for ballast treatment systems. A final and most puzzling reason for not making zero discharge of living organisms a goal is that it cannot be measured. In this era of technology that can measure light from sources billions of light years away you would think that we could measure the presence of living organisms in water running out of a ship right before our eyes. Statistics, probability and engineered experiments are all very useful tools available to analyze data from test equipment of high sensitivity. Where there is a will, there is a way.

Good news/bad news on lamprey control

A drop in lamprey numbers of 90% can now be claimed by the Great Lakes Fisheries Commission. This is mostly due to the application of a chemical since the 1950s that kills this parasite but doesn't harm other species. The future for lake trout, the primary victim of the eel-like lamprey, looks good. But there's still the need to reducing the remaining ten percent.

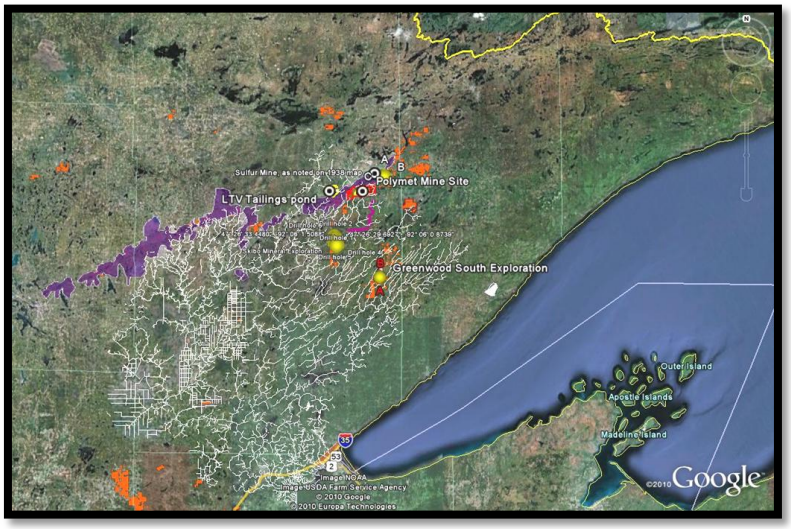
The Commission uses the biocide in 175streams across the Great Lakes, returning to each for re-application on a rotating schedule. Rivers were chosen as the most effective location to inject the poison. It does so under high pressure so the fluid can penetrate the muddy stream bottoms where the young lamprey spend the first stage of their lives.

Technicians for the bi-national agency are adding a new lampreycide called TFM to try to wipe out more of the remaining ten percent, one that employs three diverse weapons. One involves appealing to the sense of smell to trick the females into believing eligible males are near and ready to mate.

The chemical is called a pheromone and in pursuing it the amorous females are lured into a trap. A second fragrance simulates the odor of baby lampreys and the adults are drawn to it. The third deception has the opposite effect. Sensing the smell of a mixture of rotting members of their species, the lamprey are repelled and vulnerable to eradication as they flee.

The Commission has little hope of ever totally eliminating the lamprey but plans to reduce their numbers enough to maintain the $7 billion dollar Great Lakes fishing industry.

Sulfate Trifecta



Len Anderson, a retired biology teacher and environmentalist with a wealth of knowledge about the St. Louis River and on Iron Range mining waste, gave us his response to the news on the rehabilitation of this river's estuary.

The good news is that the new designation for the St Louis River estuary should give it more protection and more research dollars. The bad news is that proposed metallic sulfide mining presents a potential threat. Here is a brief primer on sulfate concentrations in our Lake Superior watersheds.

We live in a region that is naturally sulfate poor. As the St Louis River flows past the Iron Range it picks up many times the normal concentrations of sulfate, which causes elevated sulfate all the way to Lake Superior. This causes three serious threats which I like to call the "sulfate trifecta".

The first threat involves mercury. Mercury in the sediments can be methylated by bacteria when the sulfate level reaches a threshold. This produces methyl mercury, which is the form that contaminates our fish.

The second threat is to wild rice. Wild rice was beautifully adapted to our sulfate poor watershed; however, the present higher levels of sulfate are severely depleting historic stands.

The third threat is to our harbor infrastructure. You may have heard of the severe corrosion or pitting that is happening to all the steel in the harbor and you may have wondered why other Lake Superior harbors don't have our problem. The answer again appears appears to be that those unaffected harbors are sulfate poor, whereas we have an unnaturally high sulfate level.

Similar to mercury methylation, bacteria in the presence of unnaturally high sulfate forms nodules on the steel plates and the changed chemistry corrodes holes in the steel. The present sulfate pollution comes from the taconite industries, but we have a new player on the field, that is metallic sulfide mining. In regards to sulfate pollution, metallic sulfide mining is like taconite on steroids. What we need to be aware of is that there are serious, well-financed efforts to weaken the state sulfate standards. Those efforts are in the legislature, in recent court filings, and in administrative rule changes in the MPCA. These current efforts are all designed to increase the "sulfate trifecta" in our estuary.

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Keeping the carp confined

We have yet to see a definitive study or computer model output to project the possible appearance of Asian carp in western Lake Superior. The gravity of the serious problem became more intense recently when a 20 pound sexually mature male of that species was netted within just six miles from Lake Michigan! At that location it was well beyond the last set of locks and the electrified blanket in the Chicago Waterway system. How it made it that far is unknown.

Because the Save Lake Superior Association realizes that no one could guarantee that the ravenous pest will never find its way into western Lake Superior, we have proudly became a part of a group of eight organizations that collected a total of 13,000 signatures urging President Obama to take action to halt the spread of this unwanted invasive fish.

During the wildly popular visit of the Tall Ships in Duluth/Superior this past summer SLSA volunteers staffed a table under a large tent within yards of the imposing sailing vessels during the entire time the ships were in port. Hundreds stopped by to learn about the threat to native aquatic life and most signed the petitions.

The disposition of the post cards and petitions, under the leadership of Great Lakes United and Freshwater Future, were hand-delivered to the office of the President. The eight person delivery delegation also met with John Goss, the new Asian Carp Director of the White House Council on Environmental Quality. The group then met with twenty members of Congress to impress on them the need to follow their suggestions for protecting the Great Lakes.

SLSA has long opposed the continued use of the Chicago Waterway system as being little more than a means of flushing away that city's fluid waste with water diverted from Lake Michigan. Obviously the Asian carp find it to be a fine habitat.

To get the current information on this issue you may want to check their website at www.freshwaterfuture.org

Surf balls, a curiosity

The mystery balls found on the shore next to Duluth's Lakewalk last fall went unidentified until early January. At that time Glenn Maxham, SLSA vice-president, took them to the offices of Minnesota Sea Grant so the experts on Lake Superior could examine them. They were quite excited about the objects and none had ever seen or heard of them before. They did a search on the web and learned from a source in Oregon that they are "surf balls", so called because they're formed from tiny bits of vegetative debris rolled into a sphere by wave action. There's no indication that they are in any way harmful, just a curiosity.

Canadians move to force accountability on mining companies.

Our environmentally concerned Canadian neighbors, we are pleased to report, are making a greater effort to make its polluters of Lake Superior more accountable. The new impetus began last July when, for the first time, figures on the amount and types of toxic substances from the mining companies were released to the public...the picture is pretty ugly, especially when considering their abuses are heaped upon that which our American firms continue to dump into Lake Superior.

John Jackson of Great Lakes United reports that figures from the Canadian Pollution Inventory reveal the accumulation of At least 500,000 tons (expressed as tonnes in that country) of fluids and waste rock in tailings ponds annually. Canada has 86 companies mining metals but only 58 of them responded to the Pollutant Release Inventory.* Cited as an example of revealing the required data was the toxic legacy of the Williams gold mine 40 kilometers east of Marathon, Ontario.. It's in the Great Lakes Basin and with watershed drainage threatening Lake Superior.

The mandatory report from the company showed the presence of 4,000 tons of various waste materials deposited in its tailings ponds over a four year period. The known or suspected carcinogens at the gold mine harmful to humans include arsenic, cadmium, lead and nickel. The mine has been operating for the last 32 years and will not close for two more years.

The demand for a release of mining company data is the result of court action in 2009. There is no mention at this time of new or planned restrictions or actions by the Canadian government obligating the mining firms to remediate, reduce or eliminate the runoff of toxics now reaching Lake Superior.

Jackson explained that acquisition of the data will allow our friends to the north to develop a more complete understanding of the toxic situation facing the Great Lakes Basin. We congratulate Environment Canada for moving in the right direction.

*Some are excused from following the directive.

Please see the address label for your membership expiration date.

Quagga mussels may cause bird deaths!

Lake Superior birdlife has, thus far, been spared a die off that has caused thousands of carcasses found on Lake Michigan shores—loons, mergansers, gulls and other species of migratory waterfowl. The deaths, numbering more than 100,000 in the past 15 years, were caused by botulism. It's point of origination is still not entirely clear but the invasive quagga and zebra mussels are the main suspects.

The unwelcome mussels are filter feeders and take in botulism than occurs naturally. The problem arises when another non-native creature, the round gobies, eat them. The gobies, it's believed, pass on the toxins when the fish are eaten by the waterfowl and pay for that dinner with their lives.

The Michigan DNR says it has no solution to the problem at this time and that the best it can do is to continue to monitor the situation.

Please send us your change of address when applicable.

Save Lake Superior Ass'n
P.O. Box 101
Two Harbors, MN 55616

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IMPORTANT NOTICE

In an effort to increase attendance at our annual membership meeting, the board of directors of SLSA have changed the date of our meeting to Saturday, September 24, 2011.

Same time:
8:30 registration - 9am meeting.
Same place:
Trail Center, Split Rock State Park
Different date:
Saturday, September 24, 2011

Please plan accordingly and we hope to see you there.

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