



# Save Lake Superior Association – winter 2010

Dedicated to the restoration and preservation of this Great Lake

[www.savelakesuperior.org](http://www.savelakesuperior.org)

## **Memberships and Contributions well Spent**

SLSA continues as the elder statesman of environmental organizations dedicated to preserving the quality of water and air in Lake Superior and its watershed. The Board approved the recent increase in membership fees after long and thoughtful consideration. Operating fees and expenses have all increased in the last 20 years. All of your membership fees and voluntary contributions are used to fund educational, legal and grant writing costs plus functions such as the Annual Meeting and Lake Superior Day.

On a financial basis, monies received would be considered a good investment. Besides the obvious public health benefits of promoting clean water, funds used to file complaints against polluters are leveraged by anywhere from 10 to 100 times based upon recent actions. Many lawyers experienced in environmental law will work at reduced rates either as part of their professional obligations or in anticipation of recovery of fees from the parties violating or not enforcing laws. So be assured that you are contributing to worthwhile causes and not to supporting administrative expenses.

We are currently focused on writing comments and educating the public on the Draft Environmental Impact Statement for the PolyMet Northmet copper-nickel mining proposal. Our position is that the mining plan presented to the Minnesota Department of Natural Resources will not prevent long term and irreversible water pollution from the mining and processing of copper-nickel sulfide ores in the Lake Superior watershed. The millions of tons of waste sulfide material would produce huge amounts of sulfuric acid and sulfates. These pollutants would, in turn, facilitate the production of mercury compounds and toxic metals that would contaminate fish and drinking water supplies, especially in the St. Louis River watershed. We will continue with this campaign since copper-nickel mining, done incorrectly, is the greatest threat to water quality in NE MN since Reserve Mining dumped 67000 tons of tailings into Lake Superior each day.

Pres. LeRoger Lind

## **Diesel-fueled Lakers Granted Exemption**

The Environmental Protection Agency's directive to reduce harmful emissions from ships calling on ports in Minnesota, Wisconsin and all Great Lake states will be only partially effective. The EPA, recognizing the air pollution health hazard imposed on people in these ports from vessels burning Diesel, had hoped to require all ships to burn only low sulfur fuel by 2012. The directive appeared to be moving ahead unimpeded until the shipping industry's Great Lakes Maritime Task Force met with Congressmen Jim Oberstar of Minnesota and David Obey of Wisconsin to make exceptions to the new rule. The Representatives, both Democrats, convinced the EPA to exempt those ships, generally the older ones, that were steam-powered and used less expensive but more harmful coal with high amounts of sulfur. EPA Administrator Lisa Jackson stated the pollution problem this way; "Port communities have identified Diesel emissions as one of the greatest health threats facing their people, especially their children." Enforcement of the new regulation, on the other hand, would reduce premature deaths in the port cities.

No cutoff date was proposed for reversing the modification of the rule for the twenty lake carriers using Diesel. Reps. Oberstar and Obey considered the financial impact on the shipping industry if the "dirty air producing" lake ships were to be taken out of service. The U.S. fleet, they said, would have been reduced by 25 percent. Compliance by ships not exempted, according to their owners, will mean a 70 percent rise in fuel costs. Ocean vessels must comply with the same rules when in the waters of the St. Lawrence Seaway system.



### **Is this something we will see on Lake Superior?**

Seasnake is a novel cargo ship design patented by mechanical engineer Carlos Kountz of Uruapan, Mexico almost 40 years ago. Although it failed to attract an investor then, a new group, Seasnake World Wide Marketing LLC, is trying again. Basically, the Seasnake looks more like a train: first is the powered tractor unit; last, a motorized caboose; and in-between, a variable number of unmanned cargo modules connected by a ball and socket system. More tractor units can be positioned among the modules to provide additional power.



One of three designed models fits the Great Lakes. A big plus--no ballast water is needed so no new invasive species issues! The individual cargo units can carry a diversity of cargo and be disconnected to leave or take units at various ports and allow the snake to be broken into smaller pieces to fit through the existing locks of the St. Lawrence Seaway system. Cost savings are projected in both construction and operation compared to traditional lake freighters.

### **Four decades-old Great Lakes water quality agreement not fully effective**

That's the conclusion of Great Lakes United. It concedes that the pact between the U.S. and Canada has some accomplishments to its credit but has many more to be realized. Still to be achieved, says GLU, is "Zero discharge" and "virtual elimination" of toxic pollutants that harm our families, fish and wildlife." It also maintains that the focus must remain on water quality issues with broadened concern for the endocrine disruptors, fish farms, flame retardants, pharmaceuticals and nanoparticles. SLSA concurs with GLU's contention that the two governments should state their commitment to the existing or revised Agreement "in a high profile manner."

### **Invasive species extract a large economic toll**

There are no apparent benefits of having invasive species in the Great Lakes but there are many good reasons to eliminate those already here while banning new ones from arriving in the discharged ballast water of domestic and ocean ships. A University of Notre Dame's Center for Aquatic Conservation found that the annual cost of dealing with this problem exceeds 200 million dollars. The economic impact stems from losses in the commercial and sports fishing industries and financial outlays by municipalities that must get the pests such as zebra and quagga mussels cleared from their intake pipes. The Eurasian ruffe reduces the food sources of walleye and yellow perch. The round goby likes to feed from the nests of smallmouth bass. Other damage is likely to be happening but will remain unknown until research has been done on all of the 57 known invasive species. Only 22 of that number have been studied to date.

<b>Membership Dues</b>		
Please check your Newsletter mailing label for expiration date. If the date is 2009 or lower, it needs to be updated. Membership dues increased January 1, 2010. Repeat of new dues structure:		
<u>ALL EXCEPT LIFETIME ARE PER PERSON PER YEAR.</u>		
\$10 Fixed income	\$50 Sustaining	\$200 Lifetime
\$20 General	\$100 Benefactor	(per person)
The Lifetime option is only available to new members or members whose label is <u>2009 or later</u> . Please designate your choice when you renew. We appreciate your interest as well as your support.		

## The disappearing American eel

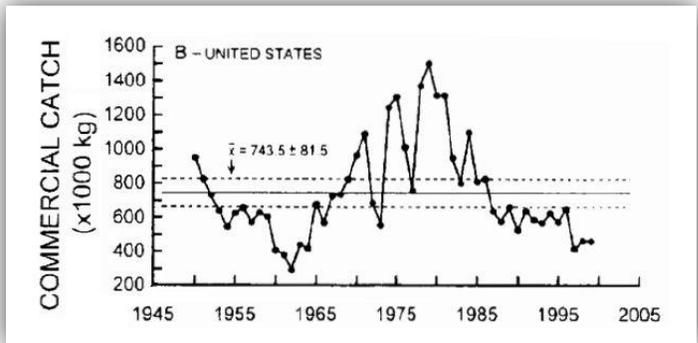
"The American eel, a species native to the Great Lakes, is on the verge of collapse throughout much of its habitat." So stated Doctors Marc Gaden and John Dettmers of the Great Lakes Fisheries Commission. In the Great Lakes United's *Great Lakes News* the Commission members warned that the rate of decline is happening "alarmingly fast"—so fast that recovery here may not be possible.

Certainly not among the handsomest aquatic species in Lake Superior and of minimal commercial value, it nonetheless has long been a part of the ecosystem and causes no harm. It's more frequently seen in the lower Great Lakes but is known to be as far west as Duluth and Thunder Bay.

It begins life in the salt water of the Sargasso Sea off the southeastern coast of North America and travels thousands of miles to mature in fresh water. After as long as twenty years in this environment it must find its way back down the seaway to spawn in the Sargasso and then dies there.

An American Eel Task Group, made up of senior managers of state, provincial and tribal governments, has now been established. Its goal is to "develop policies that all jurisdictions can adopt to immediately reduce human sources of American eel mortality."

Eel deaths in the Great Lakes are due, in part, to fatal injuries when taken into hydro-electric power turbines along their migration route and when halted by dams.



graph courtesy: Great Lakes Fishery Commission

## Gigantic Lake Agassiz's melt water exited via Lake Superior

It would have been a spectacular sight to behold in the final days of the draining of billions of gallons of runoff from the post-glacial lake that inundated the land and encompassed much of northern Minnesota, eastern North Dakota and a lot of Ontario and Saskatchewan---440,000 square kilometers---over a length of 700 miles and a 200 mile width!

It once held more water than all of today's lakes world-wide including the Great Lakes and the Caspian Sea. Initially the melt water flowed into Hudson Bay and other drainage basins but 7000 or 8000 years ago it found its way to Lake Superior, through the lower lakes and into the Atlantic Ocean. The volume was so great it was believed to have raised the oceans around the globe by one inch. It's likely that native Americans witnessed this massive drainage that geologists estimated to have taken as little as a year once the connection was made.

By contrast, the outflows of water from the Great Lakes today is less than one percent. Lake Superior has a retention time of 191 years.



## Floating robot "weatherman" monitors western Lake Superior

Actually it's a meteorological buoy stationed about a mile out from the terminus of the McQuade Road ten miles east of Duluth and it's on duty 24/7 to take readings on the status of the Lake Superior climate. The Large Lakes Observatory on the Campus of UMD, in conjunction with the National Science Foundation, installed the sophisticated monitor record and analyzes transmitted data that would otherwise be unavailable from a location on shore.. Daily readings may appear to be mundane but, in the long term, contribute to establishing trends leading to solid scientific knowledge.

One of the factors the Observatory is studying is the efficiency of the conduction and evaporation transfer of heat from the atmosphere to (and from) the lake. The buoy verified, in one case, what people along the North Shore have known for the millennia:

The prevailing winds are from the northeast and that's what dictates Duluth's "cooler by the lake" weather. From the monitor's data the Observatory is learning more about the influence of wind on the movement of currents and its role in mixing warm surface water with the cold water at greater depths. Sensors record what is technically referred to as short wave radiation. In layperson's vocabulary that simply means it keeps track of sunlight, using geometry when it's cloudy.

**Your SLSA Board Members**

LeRoger Lind (Pres.),  
Nancy Paisley,  
Glenn Maxham (VP),  
Will Munger Jr.,  
Alice Pierce (Treasurer),  
Arnold Overby,  
Todd Ronning,  
Sally Munger,  
Alison Contos –  
Member Emeritus  
Your renewal date appears on the mailing label.  
Please send us your change of address when applicable.

Save Lake Superior Ass'n P.O. Box 101 Two Harbors, MN 55616	Non-profit Org. U.S. Postage Paid Duluth, MN Permit No. 171
<b>RETURN SERVICE REQUESTED</b>	

**Will we ever stop “fouling our own nest?”**

We have never heard of a study to determine whether there's a absolute limit on the collective amount of health-threatening pollution Minnesota can absorb before it becomes an unhealthy and undesirable place to live.

Haunted by the specter of an environmental breakdown in Northeastern Minnesota resulting from the prospect of numerous sulfide mining operations releasing acid runoff and seepage that would find its way into the Lake Superior watershed, SLSA feels compelled to insist that this insult to the environment does not occur.

Listing the nasty chemicals that were legally dumped by industry into Minnesota's waterways in 2007 (the latest available statistics) does not make for pleasant reading. But concerned citizens must read on. Serving as sewers for disposal of waste products, state industries released more than two million pounds of toxic chemicals into our various waterways in that year!

Using public data from the Environmental Protection Agency, the Minnesota Environment coalition developed and released the summary. The "witches brew" flushed into our waters included mercury, formaldehyde, phthalates, tetracholor-ethylene, lead, polycyclic aromatic hydrocarbons, nitrates, ammonia, dioxin, benzene and others. Many are on the warning list as cancer causing!

The Mississippi River took the most abuse with 3M getting rid of more than a million pounds of chemicals in this disposal method. The Rainy River now has 557 more pounds of carcinogenic chemicals from the Boise White Paper Company at International Falls. Flint Hills Resources in the Twin Cities has the dubious honor of being among the three worst polluters of Minnesota waters.