

**Duluth-Superior Metropolitan Interstate Council  
HARBOR TECHNICAL ADVISORY COMMITTEE**

**Meeting Summary**

March 3, 2010

WITC Conference Center, Superior WI

**HTAC Voting Members Present**

<b>Organization</b>	<b>Representative</b>	<b>Organization</b>	<b>Representative</b>
City of Duluth	Chuck Froseth	MN DNR	Patty Fowler
Duluth Seaway Port Authority	Jim Sharrow	MPCA	Pat Carey
Industry-Coal sector	Marshall Elder	NRCS	Danny Weber
Industry-General Cargo	Denise McDougall	St. Louis River Alliance	Julene Boe
Industry-Harbor Engineering	Ted Smith ( <i>Chair</i> )	St Louis County	Scott Smith
Industry-Harbor Services	Ed Montgomery	U.S. Army Corps of Engineers	Steve Brossart
Industry-Ore Sector	Mark Erickson	Save Lake Superior Assoc.	Nancy Paisley
Industry-Pilots/ Vessel Ops	Bob Libby	USCG Duluth MSU	CDR Mike Lebsack
Industry-Recreation	Joel Johnson	Wis DNR	Nancy Larson
Izaak Walton League	Gary Glass	WisDOT	Martin Forbes
MIC	Ed Anderson ( <i>Vice-Chair</i> )	WLSSD	Dan Belden
MnDOT	Dick Lambert	Wisconsin Sea Grant	Gene Clark
		US Fish & Wildlife Service	Dave Warburton

**HTAC Voting Members Absent**

<b>Organization</b>	<b>Representative</b>	<b>Organization</b>	<b>Representative</b>
City of Superior	Jason Serck	Industry-Grain sector	Doug Christianson
Douglas County	(vacant)	MN Sea Grant	Dale Bergeron
Industry-General Bulk	Mike McCoshen	NWRPC	Jason Laumann

**Other Stakeholders Present**

<b>Organization</b>	<b>Representative</b>	<b>Organization</b>	<b>Representative</b>
AMI Consulting	Chad Scott	MIC staff	Andy McDonald
Barr Engineering	Eric Dott	MIC staff	Kody Thurnau
Congressman Oberstar's Office	Jackie Morris	MIC staff	Rondi Watson
GLMRI	Carol Wolosz	USCG Duluth MSU	Larry DiDomenico
JPG Group	Lisa Neitzel	US Customs/Border Protect	Rick Olson
MIC staff	Tim Hohn	USDA-APHIS-PPQ	James Triebwasser
MIC staff	Ron Chicka	Wisconsin Sea Grant	Moira Harrington

**1. Agenda Review / Introductions**

HTAC Vice-Chair **Ted Smith** called the meeting to order at 9:05 am. All participants introduced themselves. No changes to the agenda were put forward.

**2. Committee Business**

**September 2, October 21 and December 2, 2009 HTAC Meeting Summaries**

Chair Smith called for changes to the previous three meeting summaries. Hearing none, he asked for a motion to approve.

*Motion by Ed Anderson/Martin Forbes to approve the three previous Meeting Summaries with no changes. Motion carried unanimously.*

### 3. Captain of the Port – U.S. Coast Guard Duluth Marine Safety Unit Annual Report

**Commander Michael Lebsack** of the US Coast Guard Duluth Marine Safety Unit gave an update of MSO activities for the past year. There was a dramatic drop this year in 2009 vessel arrivals (with an associated economic impact to this port). He complimented the local shipping industry that they're still maintaining a focus on the material condition of their vessels even in a down economy. There was a high level of compliance in this port, with no detentions for structural, maintenance or safety deficiencies.

The new Vintage Vessel National Center of Expertise is getting up and running with new personnel. He explained that locally there are vessels still in service that are over 100 years old, which provides a unique opportunity to train new inspectors with the legacy knowledge of older equipment (steam, riveted-hull construction vessels) and processes. This is one of seven Coast Guard NCOEs being established around the country to provide venues for professional development and exchange between industry partners and the Coast Guard. They are planning some type of event this spring.

He reported that FEMA reviews recently took place, and hopefully funds from 2008 grant rounds will become available soon. There was a resumption of the trade area maritime security plan, they are looking for industry and stakeholder input as to its implementation, as part of that they will be requesting participation in a voluntary Port Recovery Unit Committee – to make recommendations about priorities and how to go about doing business in case we have an incident. He added that there was a 100% improvement in oil/hazardous spill incidents in 2009 as well.

Port security grants – they are working on \$5 million in spending right now for security upgrades – Warren LaPlante is in charge and will be contacting industry/private sector for input.

In regard to the upcoming opening of the port, the Aerial Lift Bridge repainting project is a bit delayed, but it will be open and ready to go by the end of March.

The Alder will come out of annual maintenance period, and is likely to have a challenging start of the icebreaking season, especially in Superior.

He also reported that an initiative was established in 2009 to extend their reach to mariners about America's Waterways Watch citizen-based security program.

He closed by noting that his change of command will occur on July 16<sup>th</sup> –he will be relocating to Elizabeth City National strike force center in Elizabeth City, NC – responsible for hazardous spill readiness oversight. The new incoming CDR has 30 years of service, very knowledgeable, downside: he's coming from Rotterdam, so there won't be much lead time for advance meetings and briefings. He encouraged all interested parties to make a point to get in and meet with him after he's installed here.

#### 4. Accelerated Freshwater Corrosion Study & Remediation of Steel Structures

Chad Scott, AMI Consulting Engineers, presented an update on corrosion remediation efforts in the Duluth-Superior harbor, building on Dr. Little's freshwater corrosion research. He began by noting that the corrosion project has blossomed into numerous entities and individuals becoming involved.

He reviewed key aspects of the situation: corrosion was first noted in 1998 during routine dock inspections and became increasingly evident. Corrosion study panels were convened, including a local steering committee and a national expert panel. Their short term recommendations included physical inspections, corrosion rate monitoring, water chemistry analysis – all have either been conducted or are currently underway.

Corrosion rates in our harbor are “kind of alarming” – pitting rate is about 7.5 times the uniform rate of corrosion. Normal corrosion rates are significantly less in a freshwater environment – some structures have lasted for almost 100 years, but the clean water act and WLSSD coming online cleaned up the environment, but also (ironically) created an environment for the bacteria to create this corrosion problem.

Sheet piling is being attacked, with lots of craters, rough-looking. Damage is most severe at those facilities with H-piles, steel is almost perforated. Problem is really isolated to about the first 10 feet underwater. Harbor navigation cells are also being attacked, looks like Swiss cheese, but their concrete construction stabilizes them. Standard marine epoxy coatings that were applied by MnDOT provided a small measure of protection, but haven't lasted very long, they are looking for alternatives.

They have developed some measures of corrosion rates in an attempt to predict risk to existing structures. Short term (instantaneous) corrosion rate measurements involves linear polarization resistance to measure corrosion potential over a relatively short period of time. This does give a range to be able to predict corrosion and pitting rates for structures in this harbor.

Big question: what's causing the corrosion in a freshwater port? Basically it's a type of bacterial corrosion, two major types, combined with abundant copper, unique conditions. In addition to Dr. Little's work, Dr Randall Hicks at UMD is studying the microbiology (go to their website to review their work at <http://www.d.umn.edu/~rhicks/lab/Corrosion.html>)

Part of the increased rate of corrosion is due to the ice scour which clears off the tubercules and re-exposes the iron, which starts the process over again. Seems to develop up to a certain point, moves over, then colonizes adjacent area.

They are currently testing, with assistance of the Army Corps, a variety of protection systems including coatings; study has been underway for a couple of years now. They are looking to see how well different coatings hold up to abrasion and impacts and are tracking the performance of existing coatings, including those other than epoxies.

A combined anode/coating test showed anodes do provide a limited amount of protection with certain size anodes, they are still determining what level of protection can be provided. The trial study ran for one full year, brand new pipe with coating was pulled from the water after one year, in areas where magnesium anodes were located, it was determined that they did provide a limited amount of protection.

Another alternative is to utilize jackets – for H- and Pipe-pile protection; several different designs are being utilized. The fiberglass jackets are holding up better than anticipated. Epoxy bonds the jacket to the steel—it does not increase the strength of steel piling, but does help to fully restore wood piling.

Continuing efforts: Gene Clark and Wisconsin Sea Grant program has done a lot of work, deserves a lot of credit to move this project forward even in a low-funding environment. Studies are all available on Sea Grant website: <http://seagrant.wisc.edu/CoastalHazards/Default.aspx?tabid=1537>.

These are necessarily long-term, ongoing study efforts. They have a tremendous amount of data, but to put it all together in a GIS database is an important goal.

They also will be inspecting and testing and assessing upstream areas of harbor

Another study where they will apply alternative sheet pile protection, via pre-made panel systems to be installed underwater “panelizing dock systems.” Also looking at the effectiveness of galvanized sheet pile structures and testing new type of steel developed for high corrosion environments.

Ed Montgomery asked if there are similar problems in other areas? Yes, especially in environments with high copper, there are plans to conduct outreach to other areas, more and more are finding similar issues. There are plans to conduct outreach to other areas, they want to start collecting and comparing samples.

Carol Wolocz commented that Dr. Hicks’ research is being funded by the Great Lakes Maritime Research Institute (GLMRI), for which he has prepared a summary reports, viewable online at <http://www.glmri.org/research/>.

She added that more funding is in the works for 2009, yet to be disbursed, ACOE also is providing funding.

## 5. Great Lakes Restoration Initiative – Update on Project Submittals

Pat Carey, Watershed Unit Supervisor, MPCA-Duluth, gave a quick overview of the \$475 million Great Lakes Restoration Initiative (GLRI), recently passed by Congress and signed into law by President Obama as part of the FY 2010 budget, to protect and clean up the Great Lakes by addressing the most significant problems including invasive aquatic species, non-point source pollution and critical habitat protection. It is intended to build on (but not take the place of) existing federal activities and partnerships with states, cities, tribes and nongovernmental entities, by significantly accelerating the pace of Great Lakes cleanup efforts.

Originally intended to be funded at a level of \$475 million per year for 5 years, Congress passed the GLRI for a single year, so it is hoped that this will only be the first of a multi-year effort to fully implement the restoration strategy. The Initiative has five focus areas:

- Toxic Substances and Areas of Concern (\$147M),
- Invasive Species (\$60M);

- Nearshore Health and Nonpoint Pollution (\$98M);
- Habitat and Wildlife Protection and Restoration (\$105M);
- Accountability, Monitoring, Evaluation, Communication and Partnerships (\$65M).

He noted that many of these focus areas are relevant to the Duluth-Superior area, for example, the potential to re-use dredge materials in habitat restoration projects.

The Initiative is organized as a multi-agency effort led by the Environmental Protection Agency (EPA), which is administering a competitive grant application process via an RFP for \$120 million in funds. 16 federal agencies are involved.

Almost 1100 proposals were submitted, totaling almost \$1 billion, which he noted does offer strong support for justifying the five-years of funding. There is a great need out there.

He then went on to review the proposals submitted by MPCA, MnDNR, Mn Sea Grant, etc., covering many different subject areas. Hopefully the effort put in to the applications will have been worth it, based on what projects in Minnesota and Wisconsin get funded. We'll know by the end of March.

A lot of the focus of the MPCA was on projects for the St. Louis River area; this is the highest priority watershed due to historical industrial uses, AOC designation. Their projects involved approximately twenty local partners.

Nancy Larson noted that WisDNR submitted projects, made a lot of effort to coordinate projects among different groups including UW-Superior, the Chequamegon Bay area in particular had a lot of support.

Pat closed by commenting that the ongoing challenge will be to identify specific areas of contamination in the harbor, will allow them to move forward more quickly with habitat restoration, to dust off all the plans and ideas we've had for many years.

## 6. Asian Gypsy Moth and Emerald Ash Borer Update for the Maritime Industry

### **Asian Gypsy Moth (AGM) Inspection Program**

Rick Olson, Agriculture Specialist, U. S. Customs and Border Protection, presented information about the Asian Gypsy Moth (AGM) Inspection Program for the maritime industry. This program was created by the U.S. Department of Homeland Security in cooperation with the U.S. Department of Agriculture, they need to work closely and share many common goals.

The AGM Inspection Program has four major objectives:

- Provide background information on Asian Gypsy Moth (AGM).
- Identify challenges and risks associated with the introduction and spread of AGM.
- Identify the consequences of AGM discoveries on vessels.

- Provide information and guidance to port stakeholders on recognition and response to AGM finds.

He noted that the Asian Gypsy Moth is currently not established in North America. It was first discovered in Vancouver, CA in 1991 and eradicated. The goal is to keep it that way—Asian Gypsy Moths feed on over 600 plant species and could seriously damage our agricultural and forest resources.

Egg masses and insects may be found pretty much anywhere and everywhere on vessels, and on cargoes. Any AGM find on a vessel may require the vessel be refused entry, denied permission to unload cargo, and/or be required to undergo treatment and e-inspection. Main take-away message is that everyone can contribute to AGM detection and prevention, all are encouraged to contact Customs Office.

### **Cooperative Emerald Ash Borer Project**

Jim Triebwasser, Plant Health Safety Specialist from USDA, presented information about the Emerald Ash Borer (EAB). The EAB is an exotic beetle that was discovered in southeastern Michigan near Detroit in the summer of 2002 and now poses a significant threat to Midwestern forests and urban areas due to the prevalence of ash trees. It is an aggressive insect that attacks healthy trees and is poised to cause serious impacts to these environments as mortality to ash trees is 100%. He added that it has already killed millions of trees in the infested area.

Its native range is NE China, Japan, Korea and we don't have its natural predators. Research is being conducted to understand its life cycle, find ways to detect new infestations, and contain the infestation. Chemical control is very expensive and labor-intensive, not used except for areas of high value trees. Possible biological control measures include native parasitic wasp species.

High risk areas now include Duluth and Superior, due to the availability of ash and the likelihood that it could be introduced. Movement of firewood is the number one method of spreading the insect.

A cooperative Emerald Ash Borer Project is now underway, a nationwide effort with a focus on educating the general population to observe the firewood quarantines in place to prevent infested ash firewood, logs or nursery trees from being transported and starting new infestations.

More information is available online at <http://www.emeraldashborer.info/index.cfm>.

## **7. Subcommittee Updates**

### **Modeling Subcommittee**

Gary Glass noted that they are still waiting to receive data sets for their work to move forward.

### **Dredging Subcommittee**

Gene Clark noted that current issues being addressed include the update of the Harbor Partnering Agreement, with a focus on fostering the cooperative spirit fostered by the HTAC.

The report from the Sea Grant National Law Center on the Erie Pier is also nearing completion.

He added that MIC Director Ron Chicka's recent visit to Washington brought the Erie Pier issue forward, there was quite a lot of interest at Congressman Oberstar's office, they actually sent back a request for language to include in the upcoming WRDA bill. MIC staff, working with members of the Dredging Subcommittee, drafted language to be included in the bill which would dedicate funding to convert Erie Pier to a reuse and processing facility without using funds dedicated for dredging activities in the port.

Ted Smith reported that he too was in Washington to lobby for the Erie Pier project; main issue has to do with funding, and right now the Asian Carp is dominating the focus at the national political level. He added that other ports on the GL are very interested in seeing if our efforts pan out.

Andy McDonald reported that they are moving forward with renewing the harbor partnering agreement; at a recent meeting they developed goals and objectives, statement of purpose, etc. Now they are waiting to hear back from the signatory agencies about the language--hopefully will be able to complete this project within 3 to 6 months.

Jim Sharrow reported that the Duluth Seaway Port Authority has a number of projects hopefully on the verge of happening – it was a bit of a surprise to learn the Corps is required under NEPA to develop an environmental assessment to be able to move and reuse the fine materials – urging them to move forward with this process, public comment period to be announced first, hope to have final approvals by May. They are basing the federal review on the work done by the HTAC with the Erie Pier Management Plan.

MnDOT is considering using the Erie Pier materials in the nearby I-35 reconstruction project, this has their attention but it may not be good timing to be able to use it in this project--there is an ongoing transition that needs to happen in the mindset about using these materials.

## **8. Roundtable Discussion of Local and Legislative Issues**

Ed Montgomery reported on the Coast Guard's ballast water working group, citing a recent report showing that current regulations and ballast water practices have significantly reduced the risk of a ballast water introduction of aquatic invasive species into the Great Lakes. During the 2008 shipping season, 99% of ocean vessels entering the St Lawrence Seaway received a ballast water examination with high levels of industry compliance with ballast water exchange observed.

He commented that the Asian Carp issue is still a very hot topic, adding that the prospect of closing the O'Brien lock, one of three major locks in Chicago, is of great concern to the maritime industry.

He added they are also feeling cautiously optimistic about prospects for the upcoming shipping season.

## **9. Adjourn**

No other items were brought forward for discussion and the meeting was adjourned at 12:05 pm.

Respectfully Submitted,

Rondi Watson, Planning Assistant