

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

Meeting Summary

December 2, 2009

Superior Public Library, Superior WI

HTAC Voting Members Present

Organization	Representative	Organization	Representative
City of Duluth	Chuck Froseth	MnDOT	Dick Lambert
City of Superior	Jason Serck	MPCA	Pat Carey
Duluth Seaway Port Authority	Jim Sharrow	St. Louis River Alliance	Julene Boe
Industry-General Bulk	Mike McCoshen	St Louis County	Scott Smith
Industry-General Cargo	Denise McDougall	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	Larry DiDomenico
Industry-Recreation	Joel Johnson	Wis DNR	Nancy Larson
Izaak Walton League	Gary Glass	WisDOT	Martin Forbes
MIC	Ed Anderson (<i>Vice-Chair</i>)	WLSSD	Jack Ezell
		Wisconsin Sea Grant	Gene Clark

HTAC Voting Members Absent

Organization	Representative	Organization	Representative
Douglas County	(vacant)	MN DNR	Patty Fowler
Industry-Coal sector	Marshall Elder	MN Sea Grant	Dale Bergeron
Industry-Grain sector	Doug Christianson	NRCS	Danny Weber
Industry-Harbor Engineering	Ted Smith (<i>Chair</i>)	NWRPC	Jason Laumann
Industry-Harbor Services	Ed Montgomery	US Fish & Wildlife Service	Dave Warburton

Other Stakeholders Present

Organization	Representative	Organization	Representative
AMI Consulting	Chad Scott	MnDNR	Larry Killien
Barr Engineering	Eric Dott	MnDNR	John Lindgren
Barr Engineering	Guy Partch	Naval Research Lab	Brenda J Little
City of Duluth	Chris Kleist	NRRI	Marsha Patelke
City of Duluth	Heidi Timm-Bijold	Seasnake LLC	James Hartung
City of Superior – Meteor Project	Roger Pellett	Seasnake LLC	John Marclely
City of Superior – Public Museums	Susan Anderson	Seasnake LLC	Michael Okash
Duluth Seaway Port Authority	Adele Yorde	Seasnake LLC	Mark Rice
F.I. Salter Real Estate	Sandy Hoff	Seasnake LLC	Michael Rice
GLMRI	Carol Wolosz	St. Louis River Alliance	J Howard McCormick
GLMRI	Stacey Carlson	Technical Advisor	Ted R. Smith
JPG Group	Lisa Neitzel	US ACOE – Detroit District	Dave Bowman
MIC staff	Ron Chicka	USCG Duluth MSU	Harold Millsap
MIC staff	Andy McDonald	US Customs Service	Barbara Lambus
MIC staff	Kody Thurnau	UMD Biology Dept	Jon Bostrom
MIC staff	Rondi Watson	UMD Biology Dept	Andrew Reed
MN House Dist. 7B-Duluth	Rep Roger Reinert	UWS/GLMRI	Dr. Richard Stewart
MnDNR-NS Harbors Program	Cheryl Erickson	WI 73rd Assembly District	Rep. Nick Milroy

1. Agenda Review / Introductions

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

Andy McDonald reviewed that the HTAC Work Program and Budget for 2010. Rondi Watson reviewed the schedule of quarterly HTAC meetings in 2010 and requested that committee members note the dates on their 2010 calendars.

2. Committee Business

September 2 and October 21, 2009 HTAC Meeting Summaries

Chair Anderson reported that the two meeting summaries were not available for approval and would be presented at the March 3rd, 2010 meeting instead.

3. Bayfront District Small Area Plan

Heidi Timm-Bijold (City of Duluth), Larry Killien (MnDNR), and Sandy Hoff (F.I. Salter Real Estate) presented information about the planning process currently underway for redeveloping the area adjacent to the Bayfront Festival Park, which includes property owned by the Duluth Economic Development Authority (DEDA) as well as the LaFarge cement property that recently came up for sale.

Heidi explained that the purpose of the Bayfront District Small Area Plan is to study the area to determine the appropriate mix of land uses, and to recommend zoning changes that would allow a transition to a mixed use for the site. This area, currently zoned waterfront industrial, was one of approximately ten areas called out in the 2006 Comprehensive Plan for further study. It has also been the focus of numerous planning efforts to date; she noted that the current planning process will utilize use the information and recommendations assembled in previous plans as the basis for this plan.

Planning partners include DEDA, the City of Duluth planning department, the Lafarge property buyers, and the MN DNR. Prospective redevelopment ideas for this area include a marina, a hotel, and retail ventures, but this list will be expanded and refined via the study's public participation process.

She mentioned that this area had recently been decertified as a TIF (tax increment financing) district for a previously-proposed outlet mall project, which opens the possibility for a re-designation related to a new project.

She added that a Brownfields grant application has been submitted for the site and environmental and structural geo-technical studies need to be completed.

Larry Killien from the Minnesota DNR explained that they have been working for years to develop a safe harbor and marina system along the north shore of Lake Superior. At present no transient facility exists in the Duluth area, although they've been approached several times about developing something. What the DNR would like to see as part of the mix is a small transient (up to 14 days) boating facility, federally funded by the gas tax. He added that this type of facility would not

replace or compete with existing marinas, but instead would provide restrooms, showers, water, electricity, and a site for administrative functions.

Sandy Hoff from F.I. Salter Real Estate, representing the potential buyer of the LaFarge property, noted that development options for the Bayfront area have been restricted by this site up to this point. With a buyer now identified, the small area plan, with input from the community (which will hopefully include many people on the HTAC), will help to determine the types of activities that take place. He noted that the developer intends this to be the “most remarkable project of its kind on the Great Lakes” and wants it to be a showcase green development as well.

He added that they intend to respect the traditional waterfront interests, adding that the Duluth Seaway Port Authority has already expressed an interest in maintaining a buffer between the two uses.

Questions: what zoning designation did the HTAC’s Landside Port Land Use Plan determine for this area? Andy McDonald responded that no consensus had been reached; therefore it was identified as a “transitional” area. He added that the federally-maintained shipping channel is a valuable resource and it is important to retain industrial maritime uses as part of the mix for the harbor.

Dr. Stewart commented that given the history of cruise lines and passenger ships docking in this area, a secure space for customs, etc. should be included in the mix of uses. Heidi responded that this is certainly on the developer’s radar screen and Sandy added that they will be personally contacting the local US Customs office. Heidi added that they hoped to avoid an “either-or” conversation about potential uses but rather to develop a workable hybrid.

Heidi closed by extending an invitation to attend tonight’s public meeting, the purpose of which is to gather ideas which will drive recommendations regarding land use re-designation. The meeting will be held at 6:30 p.m. in the Great Hall of the Depot. Another public meeting will be held in January and it is anticipated that the Bayfront District Small Area Plan will be completed and ready to present to the Planning Commission and City Council in February 2010.

4. Factors Contributing to Corrosion of Steel Pilings in the Duluth-Superior Harbor

Jim Sharrow introduced speaker Dr. Brenda Little, Senior Scientist, Marine Molecular Processes, from the Naval Research Laboratory at the Stennis Space Center in Mississippi. He thanked her for making the trip to Duluth today to present the highly-anticipated findings from her research study “Factors Contributing to Corrosion of Steel Pilings in Duluth-Superior Harbor,” published this month in CORROSION, The Journal of Science and Engineering (R. Ray, J. Lee and B. Little).

He noted that it has been five years since original study committee was convened to identify possible mechanisms responsible for accelerated steel corrosion in the Duluth-Superior harbor; at that time the research focus was narrowed to certain areas, including microbiologically-influenced corrosion. He lauded the “informal but well-coordinated process” that resulted in a highly productive collaboration among numerous funding sources for this research effort (including the Corps of Engineers; the Great Lakes Maritime Research Institute; the MN and WI Sea Grant

programs; Wisconsin DNR and Coastal Management grants; U of M Center for Urban and Regional Affairs; and the State of MN via the Port Authority).

Dr. Little began by describing the study methodology, which involved placing steel 'coupons' at various sites in the Duluth-Superior harbor, retrieving them two years later, and shipping them wet to her lab for analysis. Field observations and laboratory testing concluded that the aggressive localized corrosion of carbon steel pilings is caused by a specific sequence of biological, chemical and physical events. Iron-oxidizing bacteria attach to the steel structures and produce visible nodules or corrosion "tubercles." Each tubercle consists of several strata of biomass and corrosion products, and it was observed that the strata next to the iron contained high concentrations of copper. She explained that the area underneath the tubercle is anaerobic, setting up the perfect environment for galvanic corrosion, which occurs in the presence of dissimilar metals. The resulting strength of the galvanic current is directly related to the amount of dissolved copper in the water. She commented that copper deposition is a very fast process (they can produce pits in the lab in 8 hours), and that copper in contact with carbon steel is a known corrosion factor.

Additionally, the seasonal occurrence of ice scour in the harbor then breaks the tubercles, which in turn introduces oxygen into the previously anaerobic areas, which in turn causes the steel in the pitted areas to corrode at an even faster rate.

She added that aggressive corrosion seems to stop at a water depth of about 10 feet, but the tubercles indicate that light doesn't play much of a part in this process. Similarly, chloride is so low in this environment, it plays little or no role.

Questions: Ted Smith: why didn't this happen 40-50 years ago? Dr. Little: I don't know, that's a subject of some debate.

Howard McCormick commented that oxygen availability went way up in 1978 when WLSSD came online and cleaned up the harbor water. Dr. Little responded that it was discussed but there is not enough data to draw a conclusion.

Howard McCormick: what can be done to prevent further corrosion? Dr Little responded that anything that insulates from the deposition of copper, e.g., coatings, will prevent or slow the corrosion process. One problem with this solution, however, is that most of the commercially available coatings have not been tested in heavy ice zones.

Howard McCormick: What about the use of sacrificial anodes in the prevention of corrosion? Chad Scott responded that they should know in several weeks, they've been studying this, and will keep the HTAC posted.

Gene Clark commented that the Wisconsin Sea Grant website will publish all study findings on its website at <http://seagrant.wisc.edu/CoastalHazards/>.

5. Seasnake – Innovative Ship Design

James Hartung, Chairman and Executive Vice President of Seasnake LLC, presented information about the Seasnake, a unique waterborne cargo module technology under development by his company. The Seasnake vessel configuration is more characteristic of a train than a traditional ship. It includes a traction (pulling) unit, cargo module(s), and a caboose (pushing) unit, with articulated

connectors allowing each module to move independently. It has been tested for stability, strength of linking mechanisms, and course-keeping ability.

Three models have been designed, two for coastal and intercontinental travel. The 26.5 foot unit is specifically tailored for the Great Lakes. The Seasnake's length is flexible, depending upon the number of cargo modules.

One significant feature of its design is that it eliminates ballast, thereby curbing the introduction of invasive species, addressing a significant issue for the Great Lakes. Additionally its propulsion/hull design improves air emissions and fuel economy.

As former Director of the Toledo Port Authority for 14 years, he stressed his passion for restoring the viability of the Great Lakes system through economic revitalization and environmental protection. Their vision is for the Great Lakes to be the site of construction and product testing and they are enthusiastic about the potential for this new technology to enhance Great Lakes container feeder services and short sea shipping as well as its environmental advantages. They will be presenting information about this new technology throughout the Twin Ports area.

6. Great Lakes Restoration Initiative

Pat Carey, Watershed Unit Supervisor, MPCA-Duluth, presented information about the \$475 million Great Lakes Restoration Initiative (GLRI), recently passed by Congress and signed into law by President Obama as part of the FY2010 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.

He added that this initiative has been in the works for about ten years— the Bush administration initiated the Interagency Task Force and Great Lakes Regional Collaboration which, in turn, identified key priorities for the region and put forward a \$20 billion “restoration blueprint.” This, however, is the first time funding has been dedicated to this effort. 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); and Accountability-monitoring-Evaluation-Communication and Partnerships (\$65M). He

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 will administer a competitive grant application process via an RFP for \$120 million in funds. Proposals for this RFP are due January 29, 2010. Information about this RFP is available

online at <http://www.epa.gov/glnpo/fund/2010rfp01/index.html>. Funding periods are for up to three years, although a few categories are up to five years.

It is anticipated that the EPA will be releasing another RFP in spring 2010. The EPA will also be transferring some of the funds to other partner federal agencies, which will subsequently administer their own RFP process—but no information is available about those funding opportunities at this time.

The GLRI does not address wastewater and drinking water infrastructure, which will continue to be supported under existing programs. Infrastructure projects, land acquisition, contaminated sediments projects are also not eligible (Legacy Act is supposed to cover those projects, but a 35% match is required, difficult for this harbor).

He noted that over the summer, public meetings and comment called for large-scale, bundled projects, but the final results are for more limited projects with caps that obstruct larger coordinated projects. On the positive side, RFP proposals can include funding for staff resources as part of the project costs, and local matches may not be required for all projects.

He closed by noting that an AOC meeting will be held Thursday, 12/3, 1:30 pm at the MPCA. Hopefully this funding will invigorate some longstanding projects.

7. SS Meteor Rehabilitation

Jason Serck, Planning Director for the City of Superior, Susan Anderson, Director of Superior Public Museums, and project volunteers Roger Pellett and Jim Sharrow presented information about the current initiative to preserve, restore and upgrade the display of the unique and historic whaleback ship 'Meteor.'

Jason began by acknowledging his fellow speakers for the expertise of their volunteer efforts and hours spent in developing this project.

Roger Pellett began by reviewing the Meteor's history as the last surviving non-submerged whaleback design ship, built by the American Steel Barge Company in Superior and delivered in 1896 as the Frank Rockefeller. Designed by Alexander McDougall of Duluth, the whaleback steamer featured a distinctive low, rounded hull design that minimized water and wind resistance and maximized cargo carrying capacity. Over her approximately 70 years in service on the Great Lakes, the Meteor had several owners and carried cargoes that ranged from iron ore to grain to sand to automobiles. In 1943 the vessel was converted into a tanker transporting petroleum products until retired from service in 1969. The Meteor was purchased by the city of Superior in 1972 and set on Bakers Island in the Superior Harbor in 1973 as a museum vessel. The Meteor is now owned by the City and is managed by Superior Public Museums.

As Jim Sharrow noted, only in the past 30 years has a science been developed to preserve old vessels—and burying them in sand is not one of those methods. A plan has been devised to remove and relocate the vessel to an elevated dry berth about 50 feet north of its present location on Barkers Island. Elevating the ship will both facilitate its restoration and maintenance and provide a full view of the ship. The idea is to remove the modifications that converted it to a tanker in 1943 and restore the vessel to its 1925 appearance and historic significance as the 'Frank Rockefeller.' The

plan also includes an adjacent interpretive center to present the history of this type of vessel as well as the local shipyard industry.

Funds have already been raised to support a Historic Structures Report, which is almost complete, and following its completion, the Meteor will be nominated as a National Landmark. An overall feasibility report, conducted in 2009 to assess the intended method of perpetual display and engineering work, determined that the vessel can be floated from its current position onto a foundation support that will form an elevated dry berth. Approvals will be sought from the Army Corps of Engineers, the Wisconsin DNR and the State Historic Preservation Office.

Jason noted that they will need to add about one acre of land to accommodate the new site plan, and the Corps requires a mitigation plan for the water lost– similar to wetlands mitigation- as part of the permit submittal. Although the Corps might be open toward a number of projects to replace the water area, there aren't many mitigation plans out there. The concept is wide open, and he stated that they are actively seeking ideas.

Next plans are to undertake a fundraising campaign to raise the estimated \$4 million needed to pay for this project. Phase I of the proposed timeline would move the vessel in 2011, followed by Phase II- building the interpretive center and shops, and Phase III- restoring the vessel.

He closed with an appeal for support of this project, by becoming a “Friend of the Meteor,” providing assistance with research and locating Meteor and whaleback artifacts, or by volunteering to critically review publications.

8. Subcommittee Updates

Dredging Subcommittee: Jim Sharrow reported that they met on November 17 and were given presentations on the Erie Pier Marketing plan from the UMD Economics Department. The subcommittee has been asked to review and comment prior to its release. This study is focusing on what it will cost and what are the best (most economical) ways to handle and transport the materials to remove them from the facility.

He added that they have also received the draft report from the Sea Grant National Law Center examining case law in regard to setting up this type of recycling facility; it will have relevance to the update of the DMMP. Ted R. Smith commented that it raises another question that was not anticipated; that of developing an interstate Port Authority. Those who are interested in that topic might want to read it.

Eric Dott from Barr Engineering reported that they were looking for funding to try out the Tremie Diffuser to determine its feasibility for use in remediating lightly contaminated areas in the AOC that do not have a Responsible Party.

9. Roundtable Discussion of Local and Legislative Issues

Jason Serck announced that several bids were anticipated to be received for a dock wall repair project at Gavilon Grain – Connors Point terminal in Superior. A \$2 million state harbor assistance grant will cover 80 percent of the costs of the project, which will allow Gavilon to make substantial repairs to a deteriorating dock wall. It is anticipated that the repairs can be completed this winter.

Jim Sharrow reported that Mn/DOT had received a request for more information about a federal grant application for a Duluth Intermodal Project, which would include construction of a new dock, truck route improvements on local streets to the port, and pavement rehabilitation for 12 miles of I-35 in the Duluth area including replacement of three bridges. MnDOT had submitted a total of five applications to the \$1.5 billion ARRA-funded TIGER grant program in September 2009. This program was very competitive nationwide, but the feedback that has been received about the Duluth Intermodal Project is hopefully a good sign that this project will be funded, for work to take place in 2010.

10. Adjourn

No other items were brought forward for discussion and the meeting was adjourned at 11:59 am.

Respectfully Submitted,

Rondi Watson, Planning Assistant