



Great Lakes Maritime Research Institute

*A University of Wisconsin - Superior and
University of Minnesota Duluth Consortium*

MichiganTech

Great Lakes Maritime Transportation K-12 Education/Outreach Program January 2006 to September 2008

GOALS

- Increase awareness and knowledge of Great Lakes Maritime Transportation by K12 students and the public.
- Facilitate inclusion of Great Lakes Maritime Transportation topics in the K-12 curriculum and public education programs.

Joan Chadde, Education Program Coordinator

Western U.P. Center for Science, Mathematics and Environmental Education

105 Dillman Hall – Michigan Technological University

1400 Townsend Dr., Houghton, MI 49931

Tel: 906-487-3341

Email: jchadde@mtu.edu

Website: www.wupcenter.mtu.edu

The Seaway System



ACCOMPLISHMENTS

Year 1 Activities

1. **Conducted TWO one-week summer teacher institutes (in Duluth and Eastern U.P.)** for 21 teachers from OH, MN, MI, MA.
2. **Developed Great Lakes Maritime Transportation Education/Outreach website.**
http://wupcenter.mtu.edu/education/great_lakes_maritime/index.htm
3. **Developed interactive web module on Great Lakes shipping for middle & high school students.** <http://techalive.mtu.edu/glmri/index.htm>
4. **Developed one prototype teaching trunk of classroom materials for teaching about Great Lakes shipping to loan to teachers.** Includes:

curriculum guides	children's books	samples of Great Lakes' cargo
Lake Superior floor map	videos	Great Lakes floor map,
Shipping/receiving port maps	CDs of GL music	Great Lakes puzzle
5. **Developed Great Lakes Maritime Educators' Guide** containing lessons developed by teacher institute participants) (*in progress*)



ACCOMPLISHMENTS

Year 2 Activities

- 1. Conducted ONE one-week summer teacher institute in Duluth** for 17 teachers from OH, WI, MI, Wash.DC.
- 2. Made presentations at education conferences** (to recruit teacher institute participants and disseminate teaching trunks)
 - No. Am. Assn for Environmental Education conference (Mpls) Oct. 11-14;
 - WI Assn of Environmental Education conference (Manitowoc) Oct. 27-28;
 - Michigan Council of Social Studies teachers (Lansing) Feb. 6-8, '07
 - Michigan Science Teachers Assn (Grand Rapids) March 15-17, '07
- 3. Provided teachers with incentive stipends to conduct outreach** by presenting at conferences, writing articles, conducting workshops, etc.
 - Science Education Council of Ohio in Feb. 2007 & 2008
 - Wisconsin Interpretive Association March 2008
- 4. Assembled and disseminated 12 Great Lakes Maritime Transportation education chests** to maritime museums and education centers who can lend it out and promote its use by educators. (See table listing recipient sites.)



ACCOMPLISHMENTS

Year 3 Activities

1. **Conducted ONE one-week teacher institute in Duluth** for 10 teachers from WI, MI, MN, Wash.D.C.
2. **Made presentations at education conferences**
 - MI Council of Social Studies teachers (Detroit, MI)
 - Michigan Science Teachers Assn (Lansing, MI)
 - National Science Teachers Assn (Boston, MA)
 - Ship Operators Conference (Baltimore, MD)
3. **Provided teachers with incentive stipends to conduct outreach** by presenting at conferences, writing articles, conducting workshops, etc.
4. **Assembled and disseminated 12 Great Lakes Maritime Transportation education chests** to maritime museums and education centers who can lend it out and promote its use by educators. (See table listing recipient sites.)
5. **Published “F is for Freighter: An Introduction to Great Lakes Shipping”**
(in progress)
6. **Published “Whitefish Pt. Lighthouse K-8 Lessons & Activities.”**
7. **Conducted FOUR one-day teacher workshops for 50 teachers** at Whitefish Point, Sault Ste. Marie, Hancock, and Thunder Bay Marine Sanctuary (Alpena) in Michigan.



Sanborn Elementary (gr. 3 students), Alpena, MI



Summary of Teachers, Students, Public Reached 2006-2008

- 4 Summer Teacher Institutes = 41 teachers x 20 students/class/year
= 820 students/year
- 4 Teacher Workshops = 48 teachers x 20 students/class/year
= 960 students/year
- 9 Conference Presentations = 130 teachers x 20 students/class/year
= 2600 students/year
- 24 chests @ Museums & Education Centers x teacher workshops &
community programs @ 250 people/site/year = ~6000 people/year
- Whitefish Point Lesson & Activity Guides – 100 printed; all
distributed; 17 sold for \$15.99 in gift shop since June 08.
- Great Lakes Maritime Transportation Education website = ?

Summary of Teachers, Students, Public Reached 2006-2008 (cont'd)

- Great Lakes Maritime Transportation interactive web module = ?
- F is for Freighter book = 1000's???
- List-serve of 125 participants for publicizing Great Lakes Maritime Transportation information and events
- You-Tube video of 2008 summer teacher institute (by Tim Sweet, Clintonville, WI)
- Article in Great Lakes Seaway Review "Teaching Teachers" (Summer 2007)
- Online radio interview through MN Sea Grant on MN public radio
- Online powerpoints: Great Lakes ships, Tour of Irwin, Great Lakes shipping

TOTAL = 12,000+ and many more that cannot be counted!

QUOTES from participants

- *I will never look at the Duluth waterfront the same again...*
Summer institute Gr. 6 teacher participant.
- *I can't wait to get the "F is for Freighter" book for my class! (Gr. 6 teacher)*
- *"There was not one single thing that I did not like about the Maritime Transportation teacher institute!" (2008 teacher institute participant)*
- *"This is by far the best continuing education activity I've ever been involved with! (2008 Green Bay, WI participant)*
- *I organized a container of shipping education materials to put in our science room for other teachers, and I contacted the Einstein Project in Green Bay to purchase a Maritime trunk. (Lombardi Middle School teacher, Green Bay, WI)*

QUOTES from participants

- Living within the county that houses the largest maintenance facility for 1000-footers, the teacher institute allowed the state parks to connect directly to shipping. I have trained and educated Wisconsin State Park staff (in the Door Peninsula) on many issues and resource that were presented at the institute. (Whitefish Dunes S. P. educator)
- I am teaching my unit for the 3rd year. I take the students to tour the Detroit port and we'll again have the J.W. Westcott mailboat deliver mail to us. (Gr. 3 teacher, Grosse Pte., MI)
- *I now incorporate shipping every year into my 'forces & machines unit.' Kids LOVE the ships!* (Gr. 6 teacher, Grant, MI)
- This summer we hosted 40 middle students from the Menominee Nation Career Awareness Project in Milwaukee. I used the shipping activity with the cargo packets and big floor map...they really enjoyed it! (Wisconsin Maritime Museum educator)

BUDGET (inclusive of 23% university overhead)

<u>Year</u>	<u>Grant Amount</u>	<u>Match \$</u>	<u>Source</u>
2006	\$35,000	\$ 6,000	MTU Institute participants Institute presenters' time (gratis)
2007	\$45,000	\$15,800	MTU Institute participants Teaching trunk recipients Institute presenters' time (gratis)
2008	\$38,000	\$18,840	MTU Institute participants Teaching trunk recipients Lake Carriers Assn.
TOTAL	\$118,000 (\$86,000 actual)	\$40,640	Grt Lks Shipwreck Society NOAA Thunder Bay Sanct. Teacher Workshop & Institute presenters' time (gratis)