

## **Draft Notes from 2020 Science Vessel Coordination Workshop**

January 9, 2020

Great Wolf Lodge and Conference Center

Traverse City, Michigan

### **Welcome & Introductions** – Tom Crane and Mark Burrows

Tom Crane, Great Lakes Commission (GLC) and Mark Burrows, International Joint Commission (IJC) welcomed the attendees to the 2020 workshop of the Great Lakes Association of Science Ships (GLASS). Crane thanked Northwest Michigan College, especially Hans Van Sumeren and other staff of the Water Studies Institute for hosting an open house and tour of the Marine Center the previous evening.

Crane then communicated some housekeeping and logistical items before introducing the first presenters of the day.

### **Care and Feeding of AUVs/SUVs** – Steve Ruberg, NOAA's Great Lakes Environmental Research Lab (GLERL) and Jamey Anderson, Great Lakes Research Center, Michigan Technological University (MTU)

Ruberg talked about the federal aviation administration (FAA) unmanned aerial system (UAS) best practices for unmanned vehicles focusing both on policy and operations. He also talked about NOAA's Office of Marine and Aviation (OMAO) small boats program which promotes the safe use of small boats and vehicles through risk management.

He gave some examples of different AUVs and products including the Slocum Gliders, and the Seatrac. He also talked about collaborative efforts with the Monterey Bay Aquatic Research Center (MBARI).

He concluded by saying that the use of AUVs/SUVs in research is a top priority for NOAA's admiral.

Anderson gave an overview of MTU's Great Lakes Research Center and talked about how important AUVs/SUVs are in support of aquatic research. He showed a short video highlighting a field test of a new jet ski research vehicle. He talked about some of the research efforts underway using high frequency radar in areas such as the Straits of Mackinac and Buffalo Reef in Lake Superior.

### **SUNY Maritime Institute Partnership Update** – Josh Miller, USGS

Miller provided an update on the SUNY Maritime Institute partnership. He mentioned that the partnership between SUNY Maritime and USGS began as an internship program. The program has provided good opportunity for young professionals to get good opportunities and gain experience primarily as deck hands.

There have been some constraints in the application process and the timing of hiring that has created challenges in recruiting and placing the best people.

Miller concluded by presenting the plans for 2020.

1. USGS is suspending the internship program in favor of hiring full-time staff.
2. Hope to hire two deck hands (licensed deck officers) from SUNY.
3. Bring HR staff to SUNY to streamline the hiring process and hire people right on the spot.
4. Use the federal pathway program to open up process for any federal agency. Pathway program allows the transfer of full-time employees to other federal agencies.

### **Cooperative Science and Monitoring Initiative (CSMI) and Great Lakes Restoration Initiative (GLRI) update – Eric Osantowski, U.S. EPA Region 5**

Osantowski provided a detailed overview of the CSMI schedule. He informed the group that 2022 is a CSMI reporting year and 2023 is a cycle review year.

He mentioned that each year, activities are happening for each lake consistent with the CSMI cycle.

For 2020 the activities are as follows:

Lake Michigan – field year

Lake Erie – data analysis

Lake Ontario – reporting out

Lake Huron – setting priorities for 2022

Lake Superior – planning for 2021

Osantowski gave a brief update on the GLRI Action Plan III which was formalized in November 2019. He mentioned that the GLRI has a lower trophic level emphasis under Action Plan III.

### **Great Lakes Navigation and Online Tools for Mapping – Tom Loeper, Navigation Manager, NOAA**

Loeper talked about updates in navigation charts and aids to navigation. He talked about the sunsetting of raster charts. He commented that in November 2019, NOAA initiated a five-year process to end all raster nautical chart production, including the five traditional paper chart products. He mentioned that NOAA is intent on easing the transition to ENC-based products while continuing to support safe navigation.

He commented that later in the afternoon at 2:00 p.m. there is a navigation chart webinar hosted by NOAA.

He mentioned that the goal is to ensure that the ENC coverage is current on a 1-80,000 scale. He mentioned that Superior and Michigan are the first two lakes to work on.

**Update on Reciprocal U.S. – Canada Research Access on the Great Lakes –**  
Felicia Minotti, Global Affairs Canada and Nadia Spay, U.S. Department of State

Minotti and Spay gave an update presentation to continue the dialogue begun at the 2018 GLASS workshop. They talked about the need to improve communication when research is being planned across borders. They also talked about the need to streamline the approval process between the two countries and to improve consistency in the process.

**Habitat Mapping –** Brandon Krumweide, NOAA (remote presentation)

Krumweide presented remotely, providing information on habitat and ecosystem mapping. Krumweide talked about the importance of planning, inventorying information, evaluation and assessment as important components to mapping. He talked about integrating data collection into a single database.

He then gave background on the Great Lakes Aquatic Habitat Assessment framework.

He then provided some examples of the National Center for Ocean Coastal Science (NCCOS) biomapper, an interactive online map portal designed to let users explore lakebed maps, remotely-sensed imagery, and underwater videos in Lake Michigan off Wisconsin's coast. This portal shows what the lakebed looks like, what it is made of and what is living on it. Additional examples were discussed regarding work in Thunder Bay, the Apostle Islands and Illinois Beach State Park.

**Update from Inland Seas –** Ben Hale, Inland Seas Education Association

Over lunch, Ben Hale provided an update on activities of the Inland Seas Education Association (ISEA). ISEA is a non-profit organization whose mission is to inspire Great Lakes curiosity, stewardship, and passion among the region's youth and citizenry. Students develop an appreciation for the Great Lakes aboard ISEA's traditionally-rigged tall ship schooners, along the Lake Michigan shoreline. Through hands-on, experiential learning activities for people of all ages, participants gain the knowledge needed to understand the commitment necessary for the long-term stewardship of the Great Lakes.

**Fundamentals of Marine Technology – Training Opportunities –** Hans Van Sumeren and Ed Bailey, Northwest Michigan College.

Van Sumeren and Bailey talked about training opportunities that could be offered through the Marine Center of Northwest Michigan College.

Van Sumeren talked about the opportunity to tailor training to meet the needs of GLASS workshop participants. He gave a brief overview of the curriculum for three key areas; fundamentals of marine technology, multibeam sonar and marine project management.

He said that the fundamentals of marine technology class is 4-5 days in length and is designed to provide hands-on training in areas related to electrical systems, hydraulics and remote sensing. He encouraged attendees to consider this class possibly in the late February/March timeframe.

Fundamentals of multibeam sonar is a class taught by R2 Sonic and might be offered in mid-June if there is enough interest.

The marine project management is being looked at with the possibility of providing certification. It might be held in the fall if there is enough interest.

Van Sumeren said that he would utilize the workshop attendees list and the GLASS email list serve to reach out to people shortly after the workshop.

**Vessel and Shipyard Drydock Updates and Lessons Learned** – Brandon Bastar, Wisconsin DNR (session moderator)

Bastar facilitated a discussion session inviting attendees to share experiences with recent new builds or lessons learned from drydock experiences.

Stormi Sutter, USFWS and Captain of the RV Stanford Smith presented on lessons learned from her experiences in captaining the vessel which was built by Moran Iron Works and launched in July of 2018. She had many experiences to share regarding things that she would have done differently during the design and construction phase.

Greg Stamatelakys, University of Wisconsin-Milwaukee (UWM) and Captain of the RV Neeskay talked about UWM's next generation research vessel the RV Maggi Sue. UWM is promoting the Maggi Sue as one of the nation's most technologically advanced freshwater research vessel – and (soon to be) the flagship of UWM's fleet.

Stamatelakys gave a frank description of the challenges of designing and constructing a research vessel while recognizing the institutional and bureaucratic hurdles, financial realities and design limitations. Stamatelakys offered his views of the importance of involving captains and crew (operational staff) early in the process to avoid mistakes that will be costly to overcome down the road.

## **New Business**

GLASS Steering Committee members gave quick updates on ongoing priorities including website advancements, updating vessel-specific information on the website, progress toward a Great Lakes fleet assessment and an update on AIS track line data.

## **Workshop Wrap Up and Action Items**

Crane and Burrows thanked those in attendance and talked about how the GLASS workshops continue to be a great forum for networking, information sharing and discussion. Burrows and Crane reminded the attendees to look for correspondence and additional information from Hans Van Sumeren regarding upcoming training opportunities.

Action Items:

- Email suggestions to Tom Crane and Mark Burrows regarding the workshop and ideas for future meetings/workshops
- Post presentations to the [canamglass.org](http://canamglass.org) website
- Compile workshop notes and post to the [canamglass.org](http://canamglass.org) website
- Work with Hans Van Sumeren to create a formal registration for training classes
- Follow up (offline) with the U.S. State Department and Global Affairs Canada to bring some clarity to the issue of collaborative research and interjurisdictional protocols for entry approval between the U.S. and Canada.

## **Adjourn**

With no further business, the meeting was adjourned at 2:55 p.m. EST.

**Attachment 1 – Final Agenda**

## Attachment 1 – Agenda

### GLASS – Great Lakes Association of Science Ships

24th Annual Science Vessel Coordination Workshop Agenda Great Wolf Lodge - White Pine Ballroom (A & B) Thursday, January 9, 2020 • 7:45 a.m. – 3:00 p.m. (EST) Teleconference line: 1-877-413-4788, Conference Code 4564275

**January 8, 2020**

### Open House - Northwest Michigan College - Water Studies Institute

**2600 Aero Park Drive, Traverse City, MI**

6:00 – 7:30 p.m.	Welcome to Water Studies Institute – Aero Park Campus	Open House Host: Hans Van Sumeren, Director, Water Studies Institute
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**January 9, 2020**

7:15 a.m.		Continental Breakfast	
7:45 a.m.	1.	Welcome and Introductions – Review Workshop Agenda	Tom Crane, GLC and Mark Burrows, IJC
8:00 a.m.	2.	Care and Feeding of AUVs/ASVs (Panel discussion) Report-out on Autonomous Maritime Conference	Steve Ruberg, NOAA, Jamie Anderson, MTU
9:15 a.m.	3.	Career Development/Recruiting – SUNY Maritime Institute partnership update: Recent graduates, interns and SUNY cadets – training and staffing opportunities	Joshua Miller and Kurt Newman, USGS
9:45 a.m.	4.	Cooperative Science and Monitoring & Great Lakes Restoration Initiative Action Plan III Update – USEPA-GLNPO	Eric Osantowski, USEPA
10:15 a.m.	5.	Break	
10:30 a.m.	6.	Great Lakes Navigation: Surveying the Straits of Mackinac Area and on-line tools for mapping	Tom Loeper, Navigation Manager/NOAA
11:00 a.m.	7.	Update on Reciprocal U.S. – Canadian Research Access on the Great Lakes	Global Affairs Canada, U.S. State Dept.; and USCG (speakers TBD)
11:30 a.m.	8.	Habitat Mapping	Brandon Krumweide, NOAA
12:15 p.m.	9.	Lunch – (working lunch provided): Great Lakes Education and Outreach – Update from Inland Seas	Ben Hale, Inland Seas
1:05 p.m.	10.	Fundamentals of Marine Technology – Training Opportunities <ul style="list-style-type: none"> <li>• Technical Training Session</li> <li>• Certification for Project Managers</li> </ul>	Hans Van Sumeren, NMC
1:40 p.m.	11.	Vessel and Shipyard Drydock updates and lessons learned: <ul style="list-style-type: none"> <li>• Arcticus</li> <li>• Laurentian</li> <li>• Lake Explorer</li> <li>• New UW vessel</li> </ul> Others	Brandon Bastar, Wisconsin DNR moderator: various presenters TBA
2:30 p.m.	12.	New Business <ul style="list-style-type: none"> <li>• AIS Tracklines for R/Vs</li> <li>• Great Lakes Fleet Assessment Update</li> </ul>	Various presenters
2:45 p.m.	13.	<ul style="list-style-type: none"> <li>• Workshop Wrap Up and Action Items</li> </ul>	Tom Crane, GLC, Mark Burrows, IJC
3:00 p.m.	14.	Adjourn	