



# ALL ABOARD

Shipboard Science Workshop July 9-15, 2018



## LAKE ONTARIO WORKSHOP

Complete applications due by March 14

Notification of acceptance by April 18

Questions? Contact Helen Domske from New York Sea Grant at [hmd4@cornell.edu](mailto:hmd4@cornell.edu)

## Top Ten Reasons to ship out on the U.S. EPA's R/V *Lake Guardian*



1. Experience a once-in-a-lifetime professional development opportunity as you travel across Lake Ontario
2. Live and work alongside scientists from SUNY- College of Environmental Science and Forestry, University at Buffalo and the US Environmental Protection Agency
3. Use state-of-the-art equipment to monitor phytoplankton, zooplankton, benthic organisms and water quality
4. Explore Lake Ontario ecology, geology, geography, weather, biogeochemistry and human impacts
5. Examine curricula and resources and explore Great Lakes literacy classroom activities
6. Build professional networks with Great Lakes educators and scientists
7. Work and learn with 14 other 4-12<sup>th</sup> grade teachers and informal educators from throughout the Great Lakes basin
8. Travel through the Welland Canal, as we make our way from Lake Erie to Lake Ontario
9. Visit ports along Lake Ontario to learn about the ecology, history and economy of the lake.
10. Earn a stipend, and 2 graduate credits from Ashland University (if interested\*)

\*Graduate tuition must be paid by the interested participants.



## Lake Ontario Tentative Schedule

Mid-May Pre-workshop webinar

July 9: Depart from the Buffalo Harbor and cruise through the Welland Canal

July 8-14: Traverse Lake Ontario

July 15: Disembark at Youngstown, NY, along the Niagara River



For application go to <https://www.cgl.org/>

# DETAILS/APPLICATION INFORMATION

The Center for Great Lakes Literacy, Great Lakes Sea Grant Network and U.S. Environmental Protection Agency invite 4<sup>th</sup>-12<sup>th</sup> grade teachers and non-formal educators who:

- Are willing to incorporate Great Lakes science in their teaching
- Work at educational institutions that have Great Lakes exhibits or conduct Great Lakes programming

## Application materials required:

- Completed application form by March 14 – online submission preferred
- Signed letter of reference from principal or supervisor documenting the applicant's professional qualifications and indicating that the administrator will support the teacher's efforts to integrate Great Lakes/ocean science into the curriculum as they apply to state science standards
- Graduate credit tuition and fees must be paid by teachers interested in the optional 2 graduate credits.
- The Center for Great Lakes Literacy will not discriminate on the basis of race, gender, religion, national origin, age, disability, sexual orientation, or marital status in selecting participants or in the administration of this workshop. Participants will be selected to provide regional geographic and ethnic diversity. Native Americans or member of groups underrepresented in science and/or who teach significant numbers of students in these groups are strongly encouraged to apply.



## **Fifteen participants will receive:**

- Housing and meals onboard the R/V *Lake Guardian* - crew's quarters include bunks, desks, lockers, and computer LAN connections. Showers and bathrooms are shared between rooms. Onboard recreation and exercise are available. Space for gear is limited.
- Exemplary Great Lakes curricula and resources
- Long-term support and communication with Great Lakes Sea Grant educators
- A \$500 stipend



The R/V Lake Guardian is operated by the U.S. EPA's Great Lakes National Program Office (GLNPO). It conducts monitoring to assess the health of the Great Lakes ecosystem by using state-of-the-art data collection techniques and instruments.



## **Participants will be expected to:**

Take part in any pre- and post-program teleconferences and/or webinars. Dates to be determined

Create a reflective journal based on activities.

Participate in onboard research protocol development and implementation.

Develop an action plan for continuation of course activities and scientist interactions.

Actively engage in all aspects of program evaluation.

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# ALL ABOARD THE U.S. EPA'S R/V LAKE GUARDIAN

## Get ready for a cruise you won't soon forget!

Educators will work beside scientists, participating in Great Lakes research. Stops in ports will include additional learning experiences. The workshop will offer first-hand explorations of Lake Ontario ecology, geology, geography, weather and biogeochemical processes, with particular emphasis on human impacts. Participants will collect planktonic and benthic organisms, as well as conduct water quality data collection and analysis.

### Workshop Objectives

The cruise is designed to promote Great Lakes sciences in formal and informal education, as well as forging lasting relationships between science researchers and educators.

#### *Participants will:*

- Interact with scientists conducting research during the cruise; collect and analyze data en route.
- Synthesize information and provide examples of how water characteristics interact with land, life, weather, and human activities.
- Infuse Great Lakes information into existing curriculum or informal education media using traditional and/or electronic means.
- Examine Great Lakes systems with regard to issues of human impacts and natural changes over time.



*You can't beat this once-in-a-lifetime professional development experience!*



*We prefer to receive your application electronically. If not possible, send it the traditional way... Print the [application](#) (PDF - Requires [Adobe Reader](#)), fill out, and mail to:*

*Helen Domske  
New York Sea Grant  
229 Jarvis Hall  
SUNY Buffalo  
Buffalo, NY 14260-4400*



#### **CGLL staff will:**

- Introduce teachers to regional Great Lakes science research topics and high quality curricular and educational resources.
- Facilitate interactions between teachers and Great Lakes science researchers.
- Promote inquiry learning through existing curricular and educational resources, aligning with Science Standards and Great Lakes Literacy Principles.
- Facilitate the development, exchange and implementation of curricula and lessons for participant's classrooms.
- Provide for long-term support, evaluation and communication between the Center for Great Lakes Literacy and workshop participants.

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