

Opportunity Title: EPA Fellowship on Protecting and Restoring Great Lakes

Ecosystem Health

Opportunity Reference Code: EPA-REG5-GLNPO-2024-01

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. All transcripts must be in English or include an official English translation. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations. Click [here](#) for detailed information about recommendations.

All documents must be in English or include an official English translation.

Application Deadline 2/23/2024 3:00:00 PM Eastern Time Zone

Description *Applications may be reviewed on a rolling-basis.

EPA Office/Lab and Location: Four research opportunities available with the (EPA) Great Lakes National Program Office (GLNPO) in Chicago, Illinois.

GLNPO coordinates U.S. efforts with Canada under the Great Lakes Water Quality Agreement (GLWQA) to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin Ecosystem. GLNPO brings together federal, state, tribal, local, and industry partners under the Great Lakes Restoration Initiative (GLRI) to accomplish the objectives of GLRI action plan which in turn fulfills the aims of the GLWQA. For information about the Great Lakes Monitoring programs, visit: <https://www.epa.gov/great-lakes-monitoring>

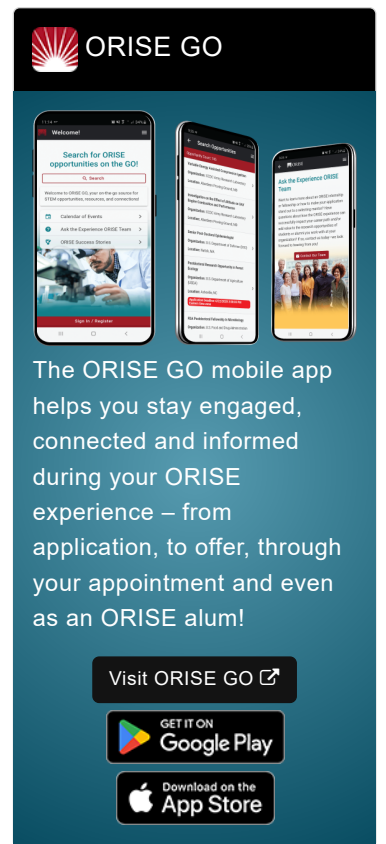
Research Project: Under the guidance of a mentor, research participants may be involved in the following research projects.

The description below contains partial, but not complete, lists of activities for each project:

1. Science, Monitoring, Evaluation, and Reporting – 2 participants


GLNPO has a fundamental role to collect and disseminate data on the physical, chemical, and biological condition of the Great Lakes. The specific activities in which GLNPO engages are determined in large measure by the data and information needed to support the GLWQA, Lakewide Action and Management Plans, and other specific needs of our federal, state, and tribal partners to implement the GLRI.


Great Lakes Monitoring Program Support. This activity involves conducting




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data review, statistical data analysis, drafting technical reports, and developing website content in support of GLNPO's long-term Great Lakes monitoring programs, as well as researching and developing content for manuscripts, presentations, and other media to communicate technical topics to the public.

GLWQA State of the Great Lakes (SOGL) Reporting. This activity involves participating with U.S. and Canadian teams to prepare SOGL reports. Project elements that the participant may be involved in could include scientific literature searches and identification of sources of environmental data, development of Great Lakes environmental indicators and indices, collection and analysis of environmental data, preparation of reports on environmental indicators, and preparation of oral and visual presentations.

2. Areas of Concern – 1 participant

The GLWQA and the Great Lakes Restoration Initiative call for cleaning up Great Lakes Areas of Concern (AOCs), which involves implementing projects to address Beneficial Use Impairments (BUIs). Projects include contaminated sediment remediation, habitat restoration, beach health, local and state-wide AOC BUI studies/analyses, and other actions. Once actions have been taken to clean up and restore sites, verification monitoring is conducted to determine whether restoration goals have been achieved. Ensuring that EPA uses environmental data to support its decisions is critical to both effective implementation of those projects and appropriate reporting on progress. Restoring Great Lakes AOCs is one of the top priorities of the GLRI.

In this project, the participant will learn about the AOC program and help with assessing and reporting on various aspects of the AOC program, including: management action lists, BUI removals, reports to Congress and binational reporting on program progress, website updates, and helping with the Great Lakes AOC conference. The participant will also learn about the AOC restoration process and will interact with multiple partners within EPA and other federal and state agencies and local community groups in each AOC.

3. Great Lakes Restoration Initiative and Great Lakes Water Quality Agreement – 1 participant

In this project, the participant will learn about domestic and binational efforts to restore and protect the Great Lakes under the GLWQA. The participant will help with reporting and communicating on the progress achieved under the GLWQA. The participant will also learn collaborative skills as a member of a small binational team with Environment and Climate Change Canada charged with planning the work of the GLWQA, including for the triennial Great Lakes Public Forum. Project elements may also include preparation of presentations and briefings, updates to web content, and mapping.

The participant will also learn about federal, state, and tribal efforts to restore and protect the Great Lakes under the GLRI. The participant will

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help with reporting and communicating on the process achieved through web sites (glri.us), reports to Congress, and other means. The participant will also learn collaborative skills as a member of a team responsible for planning interagency work to accomplish the commitments and measures in the GLRI Action Plan. The participant will also learn how to coordinate, train users, and problem solve the use of a large database used to track environmental progress of all GLRI-funded projects. Project elements may also include preparation of presentations and briefings, updates to web content, and mapping.

Additional Activities for Participants:

Great Lakes sampling aboard the R/V Lake Guardian.* Since 1983, GLNPO has monitored the water quality and biology of the Great Lakes using the 180-foot research vessel (R/V) Lake Guardian. Water samples are collected and analyzed for nutrients and standard limnological parameters. Phytoplankton, zooplankton and benthic samples are collected and analyzed to assess the status of lower food web health. Opportunities will be available to participate on R/V Lake Guardian surveys to: measure water quality parameters in an on-board lab, prepare and preserve samples for lab analyses, elutriate ponar samples, and assist with special studies. Note: participation requires living onboard the R/V Lake Guardian up to several weeks on any or all of the Great Lakes, as well as physical abilities and stamina (to be able to stand and navigate throughout the ship during inclement weather). *This activity is required of participants selected for opportunity 1 and optional for participants selected for opportunities 2 and 3.

EPA Office of Research and Development (ORD) assessments at AOCs. Participants may have opportunities to assist with ORD field sampling and analysis at AOCs around the Great Lakes basin. Past opportunities have included bird monitoring, stream/river/nearshore sampling for invertebrates and fish, and analysis of field camera data.

Mentor(s): Please contact mentor for questions about this opportunity - Ben Alsip (Alsip.benjamin@epa.gov).

Anticipated Start Date: February 19, 2024. Start dates may vary depending on numerous factors.

Appointment Length: The appointment may initially be for one year and may be renewed up to three additional years upon EPA recommendation and subject to availability of funding.

Level of Participation: The appointment is full-time.

Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. Funding may be made available to reimburse travel expenses to present the research at scientific conferences. Click [here](#) for detailed information about full-time stipends.

Qualifications EPA Security Clearance: Completion of a successful background

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investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and EPA. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility.

Questions: Please see the FAQs . If you have additional questions, please email ORISE.EPA.REG@orau.org and include the reference code for this opportunity.

The qualified candidate should have received a bachelor's or master's degree in one of the relevant fields, or be currently pursuing one of the degrees with completion before the appointment start date. Degree must have been received within five years of the start date. Ability to participate in occasional travel from a few days duration up to several weeks duration is preferred.

Preferred skills:

1. Experience in field sampling and laboratory analysis in freshwater and/or marine environments
2. Basic knowledge of the Great Lakes basin ecosystems
3. Demonstrated technical writing skills
4. Experience communicating technical topics to non-technical audiences
5. Independent research experience (e.g., undergraduate or graduate research project)
6. Familiarity with ESRI and ArcGIS software
7. Familiarity with statistical analysis and visualization techniques, including analysis software such as MATLAB, R, or Python
8. Ability to collaborate simultaneously and effectively on multiple projects and areas of interest
9. Detail oriented

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 6/30/2024 12:00:00 AM.
- **Academic Level(s):** Post-Bachelor's or Post-Master's.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([9](#))
 - **Communications and Graphics Design** ([1](#))
 - **Computer, Information, and Data Sciences** ([4](#))

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- **Earth and Geosciences** ([21](#))
- **Engineering** ([2](#))
- **Environmental and Marine Sciences** ([14](#))
- **Life Health and Medical Sciences** ([19](#))
- **Mathematics and Statistics** ([3](#))
- **Physics** ([3](#))
- **Social and Behavioral Sciences** ([3](#))