APPLICATION REQUIREMENTS

The Great Lakes Fishery Trust (GLFT) invites preliminary proposals for Great Lakes fisheries projects under its Ecosystem Health and Sustainable Fish Populations grant program. This request for proposal (RFP) process will be used for the disbursement of up to $1.0 million in grants in 2018 in two grant categories: (1) Ecological and Biological Fisheries Research to Inform Management; and (2) Social, Economic, and Technology Research to Inform Policy and Practice.

This RFP provides submission requirements and application materials for Ecological and Biological Fisheries Research to Inform Management preliminary proposals only. A separate RFP is available at www.glft.org that provides application instructions for Social, Economic, and Technology Research to Inform Policy and Practice preliminary proposals. If you would like more information about which grant category best fits a proposed project, you may contact GLFT staff at (517) 371-7468 or jbeard@glft.org.

This application guide provides background on this funding category and will assist you with the funding criteria and preliminary proposal requirements. The forms and instructions necessary to guide you through the application process are provided below.

Applications must be submitted through the GLFT’s Web-based grant management system.
The Web-based application system will prompt you with the mandatory questions, file uploads, and instructions to guide you through the application process.

To begin, visit the Apply Now page on our website (https://www.glft.org/grants/apply-now) where you will find Application Guidance Documents and other useful information to help you complete an application.

Grant opportunities for which the GLFT is currently accepting applications can be viewed by clicking the Browse Our Active Grant Opportunities button, which will take you to a page with online applications. Click on the title of the grant opportunity in which you are interested and follow the instructions to apply.

You will be required to create a user account to submit an application. You will be asked for an e-mail address and password. If you do not have a user account in our system, click on Create an Account and follow the instructions provided. You may then proceed to the grant application.

If you already have an account but do not know your password, click on Forgot Your Password and instructions for changing your password will be sent to your e-mail address.

The GLFT’s recent enhancements to our website include more robust access to information. If you have previously submitted a grant application to the GLFT, you may already have a user account based on your e-mail address. If you are unable to sign up for an account using your e-mail address, you may already have an account. If you experience this problem, you may reset your password by clicking the Forgot Your Password link. If you need assistance to set up your account, please contact GLFT staff.

**When completing the online application:**

- Remember to save your work often
- When uploading a document, click Save to complete the file transfer
- You may leave your work and return at a later time to complete the application
- To return to an online application you have already begun, click on the Dashboard button which will appear in the upper right corner of the page after you log in (the Dashboard page will provide access to your applications and/or active projects)
- Make sure your answers to each question are within the text field limits
- Check each field before it is submitted
- Be sure to answer all of the required questions
- The system will not allow an application to be submitted if a required question is not answered
- No changes can be made to the application once it is submitted (if an error was made, contact the GLFT staff)

**Applicants are encouraged to log in to the site and review the application well in advance of the submission deadline.**
SUBMISSION AND AWARD DATES
Applications are due by **Friday, January 12, 2018,** at 5:00 PM EST. Late preliminary proposals will not be accepted.

The GLFT’s Scientific Advisory Team (SAT) will review the preliminary proposals and invite a subset of applicants to submit full proposals for funding consideration based upon the criteria identified herein.

APPLICANT ELIGIBILITY
Proposals are encouraged from educational, governmental, tribal, and nonprofit institutions with a 501(c)(3) designation from the IRS. Canadian public and nonprofit organizations may also be eligible, but should contact GLFT staff prior to submitting a preliminary proposal.

QUESTIONS AND ANSWERS
The GLFT will accept questions about our submission and review process, as well as our funding priorities, via e-mail to jbeard@glft.org. Questions received by January 5, 2018, will be posted to our website with a response so all prospective applicants may benefit from the inquiry and response.

ADDITIONAL INFORMATION
This grant announcement, further information on the GLFT, descriptions of projects previously funded by the GLFT, and information regarding funding opportunities for other Great Lakes fishery-related projects can be found on the GLFT website at [www.glft.org](http://www.glft.org).

MISSION AND GOALS OF THE GLFT’S INVESTMENTS IN FISHERIES RESEARCH
The mission of the GLFT is to provide funding to enhance, protect, and rehabilitate Great Lakes fishery resources to compensate for lost use and enjoyment caused by the operation of the Ludington Pumped Storage Plant. The GLFT pursues these goals through investments in three broad categories: Access to the Great Lakes Fishery, Great Lakes Stewardship, and Ecosystem Health and Sustainable Fish Populations.

The broad goals of fisheries research investments are to:

- Create a more resilient and stable fish community
- Increase the sustainable value of the fishery to stakeholders
- Preserve self-sustaining fish populations

Specifically, the key intended outcomes for fisheries research investments are to:

- Enhance the ability of managers/agencies to respond to changes in the fishery and ecosystem
Build research capacity and management expertise needed to understand and manage the Great Lakes ecosystem for sustainable production of valuable species

Reduce the cost of fishery management in relation to benefits provided

**RESEARCH THEMES**

The GLFT pursues its fisheries research efforts through competitive grantmaking within established thematic areas. Funded activities include hypothesis-driven research, as well as tools, resources, and capacity-building efforts that support the development or use and application of research.

Applicants are encouraged to focus on four areas: fish health, fish recruitment, lake sturgeon rehabilitation, or lake whitefish recruitment. See the end of this section for additional guidance on the Lake Michigan priority of the GLFT.

**Fish Health**

The GLFT’s primary interests are in priorities established by the Fish Health Committee of the Great Lakes Fishery Commission, including projects that address one or more of the following:

- Development and validation of new methods for detecting emerging fish pathogens or pathogens of concern in the Great Lakes basin
- Disease ecology and epidemiology
- Nutritional aspects of fish health in the Great Lakes
- Fish pathogen and disease management

The GLFT has greater interest in efforts that yield knowledge, protocols, or practices with application to demonstrated long-term issues of health and/or disease, or to issues of health and disease with relevance to numerous species. Conversely, the GLFT has less interest in efforts limited to a single, specific pathogen or disease outbreak, particularly in circumstances where there is lack of consensus about the severity, persistence, or likelihood of impact of the pathogen or disease and where the timeline for management action is short.

**Fish Recruitment**

The GLFT’s primary interests in this category lie in:

- Research that describes and clarifies mechanisms (such as abiotic conditions, predation, competition, or fish health) that affect the reproduction and recruitment of commercially or recreationally important Great Lakes fish species:
  - Among nonsalmonids, research that targets valuable fish populations experiencing recent unexplained declines in abundance, growth and/or condition factor (e.g., lake whitefish and yellow perch), particularly where aligned with interagency research efforts and priorities

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1 As of the date of this request for proposal, the most recent published list was dated August 2014 (available [http://www.glfc.org/pubs/pdfs/research/Fish%20Health%20Priorities%202014.pdf](http://www.glfc.org/pubs/pdfs/research/Fish%20Health%20Priorities%202014.pdf)).
• Projects related to salmonid recruitment (e.g., steelhead, Chinook, and Coho) may include exploration, development, and application of new technologies and models to better assess natural recruitment and its contribution to adult populations

- Related efforts to build management capacity or collaborative capacity (e.g., conferences and workshops, data-sharing vehicles, synthetic papers)

**Lake Sturgeon Rehabilitation**

Comprehensive lake sturgeon rehabilitation will likely be achieved only on a basin wide scale, either for one of the Great Lakes or the entire basin; thus rehabilitation will require the coordination of multiple research and management agencies. Accordingly, all proposals under this research area must be designed to foster the development of new or existing partnerships among fishery agencies and researchers.

The GLFT has sponsored two workshops to identify research priorities regarding lake sturgeon rehabilitation. The workshop convened in 2000 identified four primary research priorities:

- **Status assessment and rapid survey process** (consolidation of existing information, design of indicators and survey strategies to provide comprehensive and system wide inventories, and coordination of periodic census efforts)
- **Habitat studies** (filling information gaps related to habitat utilization by various life-history stages and detailed habitat classification and inventory)
- **Fish passage technology for lake sturgeon** (design of safe and effective upstream and downstream passage of dams)
- **Propagation techniques and strategy development** (research and development to improve hatchery production and stocking success)

The workshop convened in 2011 further defined the research priorities regarding fish passage technology for lake sturgeon into the following categories:

- **Lake sturgeon behavior during migration and passage**: Specific research activities in this category may include telemetry studies that seek to determine if upstream/downstream migratory routes are random or based on stream flow or the behavior of adults and juveniles after entering impoundments.

- **Physiological consequences of passage**: Recent work suggests that passage compromises the physiological condition of sturgeon in general, but individual sturgeon do recover well from a single passage attempt. Research in this category would benefit from studies seeking to determine the physiological impacts of multiple passage attempts, including trap and transfer techniques, and differences related to size, sex, and reproductive condition.

- **Passage design, technology, implementation, and development of operational windows**: There are many inventive engineering solutions that can be applied to lake sturgeon passage efforts; however, the implementation of these solutions would be greatly enhanced with studies seeking to tie specific technologies with survival rates of adults, juveniles, and larvae.
Advancement of technologies that improve assessment and monitoring: Perhaps one of the largest gaps to lake sturgeon passage involves how to measure success. Thus, research attempting to deploy novel techniques to quantify movement and theoretical or empirical research attempting to tie passage efforts to population level parameters (e.g., recruitment) would be desirable.

Applicants considering a proposal related to lake sturgeon rehabilitation are strongly encouraged to consult both workshop reports and other biennial conference proceedings available at http://www.glft.org/research-to-inform-management/lake-sturgeon-rehab.

Lake Whitefish Recruitment
Lake whitefish has been one of the most highly sought commercial fish species in the Great Lakes for well over a century. Like many native fish species, lake whitefish suffered from the invasion and colonization of sea lamprey, alewife, and rainbow smelt in the 1930s-1940s. However, following implementation of the sea lamprey control program, coupled with the initiation of salmon and trout plantings that both utilized and reduced alewife and rainbow smelt, lake whitefish recovered to historic levels. By the early-1970s, whitefish were the mainstay for the state-licensed commercial fisheries on both lakes, and since the early 1980s, lake whitefish has been the cornerstone for the tribal commercial fishery composing 60-70 percent of total landings.

Strong and consistent reproduction and subsequent recruitment of lake whitefish to the fishable populations in lakes Michigan and Huron during the late 1990s to the early 2000s drove commercial yields to levels not seen in either lake since the early twentieth century. There is growing recognition among management agencies that lake whitefish populations in two of the upper three Great Lakes have experienced a steady and substantial decline over the last 15 years. Additional research is needed to understand the ecosystem dynamics driving these changes, which will then help identify potential management solutions. The GLFT invites proposals that can help advance understanding of ecological factors driving the lake whitefish decline, with an emphasis on recruitment.

Ecosystem Modeling
Through this theme, the GLFT supports research that models critical ecosystem components essential to sustainable population management of the most valued species. The GLFT will support holistic approaches to understanding interspecies relationships that will provide guidance on the optimum mix of species to produce sustainable benefits with the lowest management/maintenance costs.

Emerging Issues
This funding theme allows for applications proposing ecological and biological fisheries research (or related capacity building) that is aligned with management needs and the intent of the strategic plan, but beyond the scope of established themes. This includes:

Research that bears directly on the intended goals and outcomes expressed in the strategic plan, but lies outside the scope of other articulated GLFT research themes
Inquiries initiated under a past, duly funded GLFT grant, where results and need warrant continued support but the content is no longer aligned with the priorities expressed in the strategic plan

Research that bears directly on the priorities and interests expressed in key management documents for the Lake Michigan fishery but lies outside the scope of articulated GLFT research themes

The GLFT has relatively greater interest in this category in efforts that address issues of high management priority or urgency and unmet need. The GLFT will not fund, through this thematic area, research suited to one of its established research theme areas. Additionally, the GLFT does not fund research related to sea lamprey control, inshore fisheries, or the human health effects of environmental toxins present in Great Lakes fish, nor does it fund activities or expenses that have been the traditional responsibility of state natural resource management.

**Lake Michigan Priority**

Whether shore-based fishing access, stewardship, dam removals, or fisheries research, all GLFT-funded projects must have benefits directed primarily to the Great Lakes. The settlement agreement establishing the GLFT further requires that priority be given to efforts that benefit the Lake Michigan fishery. Projects outside of the Lake Michigan basin are considered if their results and outcomes are transferable to Lake Michigan. Projects that examine the consequences of environmental pollutants on the recruitment or health of a Great Lakes fish species are eligible.

It is important to note that the GLFT’s Lake Michigan priority emphasizes benefit to the Lake Michigan fishery, as opposed to activity limited to Lake Michigan. In the context of fisheries research, the question is not whether there are “feet on the ground” in Lake Michigan, but whether proposed research will yield high-priority knowledge and information for the Lake Michigan fishery. For example, in some areas of research inquiry, cross-lake comparative efforts may hasten learning, as compared to studies focused exclusively on Lake Michigan. Such cross-lake studies are encouraged. Applicants may wish to consult documents generated by the Lake Michigan Committee of the Great Lakes Fishery Commission to identify research priorities for the Lake Michigan fishery (further information on this committee is provided immediately below).

**Joint Strategic Plan for Management of the Great Lakes Fisheries**

Through its strategic planning, the GLFT established a close relationship between its intentions for support of Ecological and Biological Fisheries Research to Inform Management and A Joint Strategic Plan for Management of the Great Lakes Fisheries (Joint Plan).

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The interagency management of fishery resources in the Great Lakes was formalized in the 1980s in the Joint Plan, which provides a process and structure for a consensus approach to fish-community management on each of the Great Lakes. This process, facilitated by the Great Lakes Fishery Commission, relies on individual lake committees representing the fishery resource management agencies with management responsibilities on each of the Great Lakes. The lake committees have adopted Fish-Community Objectives for each lake, containing consensus recommendations on goals and objectives for the respective fish communities. The individual lake committees are supported by technical committees, and in many cases, by task or working groups focused on specific species or issues. Through these structures, the management agencies have developed and adopted various planning documents, and routinely identify priority research needs.

As noted in the GLFT’s strategic plan, since the GLFT board and SAT members represent either the agencies involved in the development of the Fish-Community Objectives for Lake Michigan (and other Great Lakes) or the constituent organizations that provided advice, it makes sense that the GLFT’s priorities for management-oriented research support the recommendations contained in the Fish-Community Objectives and the accompanying species plans and research priorities.
Ecosystem Health and Sustainable Fish Populations
Ecological and Biological Fisheries Research to Inform Management

Preliminary Proposal Requirements

The online application will prompt you to provide the following information:

**Basic Information**

Project title

**Applicant eligibility:** Does your organization have a nonprofit status with a 501(c)(3) designation from the IRS (or is a nongovernmental organization that holds charitable status in your country), or is considered to be an educational or governmental (including tribal) organization? (Y/N)

**Organization:** Some individuals who submit proposals to the GLFT have affiliations with multiple entities. You will be asked to select the organization the grant would be awarded to. If the organization you are submitting a proposal under is not listed, you may add the organization online or contact GLFT staff for assistance. All applications should be submitted by the organization that would receive funding from the GLFT.

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**Applicant Information and History**

**Principal investigator (PI) contact information**

**Co-investigator(s):** If the project includes co-investigators, provide the name, organization, and department for each co-investigator.

**Has the PI or co-PI applied to the GLFT before? (Y/N)**

**Has the PI or co-PI previously received a grant award from the GLFT? (Y/N)**

**Prior GLFT-funded projects summary:** If the PI or co-PI has previously received a GLFT grant, provide a brief summary (including the GLFT grant number and title) of the work and identify any publications that resulted from the project(s). (Limit your response to 200 words.)

**Active research commitments:** List all active research commitments (project title and funder) of the PI and the approximate time commitments to each.
Grant Request

Requested amount
Match amount
Project start date
Project end date
Has your organization proposed this project to the GLFT in the past? (Y/N)

Proposal

Project Summary
Briefly explain what the project proposes to accomplish using terminology that would be appropriate to include on the GLFT website to communicate project goals to a general audience. (Limit your response to 75 words.)

GLFT thematic area: Indicate the GLFT thematic area(s) the proposed project would support. The areas are: fish health, fish recruitment, lake sturgeon rehabilitation, lake whitefish recruitment, ecosystem modeling, and emerging issues.

Project Description

1. Problem Statement. Explain in quantitative and qualitative terms the importance of the problem relative to Great Lakes fisheries. Describe the problem affecting Great Lakes fisheries AND the ability of fisheries managers to resolve it. The problem statement (or needs assessment) is a key element of a proposal. An applicant may include data that support the problem statement. The information provided should be both factual and directly related to the problem addressed by the proposal. (Limit your response to 300 words.)

2. Project Goal. Describe the basis for the proposed research and hypotheses and assumptions that will be tested. For basic research projects, provide documentation of a clear consensus that such efforts are essential to address a critical issue facing fishery managers. For capacity-building projects (e.g., workshops, shared databases, white papers) describe the intended goal of the project. (Limit your response to 300 words.)

3. Methods and/or Activities. Describe the activities that will take place in order to achieve project objectives. If relevant, identify any pilot work necessary to substantiate the proposed methodology, describe specific methods that have been successfully applied to other projects, and/or describe alternative research approaches that were considered and explain why they were rejected. (Limit your response to 300 words.)

4. Geographic Focus Area. Explain the geographic impact area of the project. All GLFT-funded projects must have benefits directed primarily to the Great Lakes.

Basic research is work of an exploratory nature conducted in order to acquire knowledge of the underlying foundations of phenomena and observable facts without any obvious practical application in view.
Projects outside of the Lake Michigan basin are considered if their results and outcomes are transferable to Lake Michigan. Refer to the website for more detail about the Lake Michigan priority. (Limit your response to 100 words.)

5. Potential Management Benefits and Outcomes of Proposed Project. Describe the impact of your project and its ability to advance management goals of the Great Lakes fishery (e.g., how will fisheries managers use information developed by the project, and to what end?). (Limit your response to 200 words.)

6. Relationship of the Project to Ongoing Activities. Provide information demonstrating that the proposed project will not duplicate existing research activities in the region. Describe how the project may complement existing research efforts. If the project is closely tied to ongoing work, explain how coordination will occur. (Limit your response to 200 words.)

7. Prior Experience. Provide information that demonstrates your ability to successfully manage grants or projects of similar size and complexity. Identify key members of the project team by name and title. Do not submit curriculum vitae at this time. (Limit your response to 75 words.)

Communications

8. Target Audience. Describe the resource managers at the local, state, tribal, and federal levels who will find the outcome of this research most beneficial. (Limit your response to 100 words.)

9. Usefulness of Results. How will the resource managers, listed above, be able to use this research to solve problems dealing with the fishery? (Limit your response to 100 words.)

10. Distribution of Findings. The GLFT is committed to effectively communicating research to resource managers, and has created a set of communication priorities to that end. Those priorities include research dissemination through the following media: academic journals, conferences/workshops, webinars, and email distribution. Please list the specific medium(s) (e.g., ABC Email Listserv, XYZ Conference, etc.) through which the research results will be disseminated. Note: The GLFT will require all funded researchers to seek a presentation before a relevant committee of the Great Lakes Fishery Commission. For those projects that are designed to synthesize and disseminate information from existing research, explain how your project will aid resource managers. (Limit your response to 150 words.)

Project Budget

Enter the following information on the online application form when prompted.

Budget Narrative

Preliminary proposals must provide a budget highlighting category line items listed below and identify other monies that will be raised to support the proposed work.
Definitions on the budget categories can be found at [www.glft.org](http://www.glft.org) on the Resources page. For the preliminary proposal, provide the cumulative budget information with the amount requested from the GLFT. The expense categories listed below may not be changed. **Note:** According to the GLFT overhead policy for all projects, administrative/overhead costs are limited to 10 percent of the total salaries and wages.

- Salaries
- Fringe benefits
- Materials/supplies
- Other direct expenses
- Contracted services
- Indirect costs (administrative/overhead)
- Amount requested from GLFT
- Matching funds
- Total project cost

Briefly explain how the figures in each budget category were estimated and justify the need for the costs. Projects with financial support from other sources are encouraged. Although matching funds are not required, proposals that include funding from other sources will be favored. If matching funds or in-kind contributions are involved, please:

a) Identify the sources and amounts of these and explain for each whether these have been requested, pledged, or secured; b) explain whether the GLFT funds are to be used as a match requirement, and, if so, what percentage of GLFT funds would be used to complete specific items (e.g., 30 percent of needed funds for a task would be from the GLFT, 70 percent from other sources); and c) address contingency plans if pending funding is not realized. (Limit your response to 150 words.)

**Review Process**

The Scientific Advisory Team, consisting of 12 members representing parties to the Settlement Agreement that established the GLFT (and other fisheries scientists designated under the agreement), will review the preliminary proposals based upon the GLFT’s Funding Criteria (see next section) on Tuesday, February 13, 2018. Invited full proposals will be due on Friday, April 13, 2018. Full proposals will be subjected to external peer review and be evaluated by the SAT. The SAT will then make funding recommendations to the Board of Trustees. Grants are targeted for award in August 2018.

**Additional Questions**

If you have further questions about the funding process, please contact Jonathon Beard, grant manager, at (517) 371-7468.
PROJECT SIZE

There are no cost or time limitations on grant requests; however, projects will be evaluated on the cost versus the expected benefits, as well as upon the reasonableness of the time requested to complete the project.

WHO CAN APPLY?

Proposals are encouraged from educational, governmental, tribal, and nonprofit institutions with a 501(c)(3) designation from the IRS. Canadian public and nonprofit organizations also may be eligible, but should contact GLFT staff prior to submitting a proposal.

EVALUATION OF PRELIMINARY PROPOSALS

Preliminary proposals will be evaluated on the degree to which they meet the following eight criteria:

- Project applicants must be a public entity, nonprofit organization, or private educational institution
  Organizations receiving funds and managing a project must demonstrate evidence of current 501(c)(3) tax status with the IRS.

- Projects must not duplicate ongoing activities in the region or activities funded by alternative sources
  Projects must represent new efforts not currently under way in the Great Lakes region.

- Projects must target RFP priorities and have measurable outcomes
  Project proposals must address research priorities outlined in the request for proposals and contain measurable objectives and processes for measuring success.

- Projects must have direct fisheries management implications
The GLFT funds basic research only when there is a clear consensus that such efforts are essential to address a critical issue facing fishery managers. (See Project Goal in Project Description section for the definition of basic research.)

- **Projects must have scientific merit**
  The GLFT believes strongly in the importance of scientific merit, as determined through an external peer review process and by an independent peer-review panel, when selecting projects for funding.

- **Projects must have benefits directed primarily to the Great Lakes**
  Projects must provide benefits to the Great Lakes fishery. Projects with benefits (e.g., findings, protocols, new capacity) directed primarily to the Lake Michigan fishery are of higher priority than projects without significant benefit to the Lake Michigan fishery.

- **Project applicants must have demonstrated an ability to undertake such projects**
  Project applicants must be able to demonstrate prior experience in successfully managing similar grants or projects.

- **Projects must be feasible and cost-effective**
  Costs should be aligned with potential benefits, and the proposed project timeline should be realistic given the scope of proposed work.

In addition, preliminary proposals that exhibit the following four attributes will be reviewed more favorably than those lacking these qualities:

- **Highly visible results**
  Dissemination of results to resource managers and other appropriate forums or groups should be incorporated into the project proposal. At a minimum, successful applicants will be required to seek the opportunity to present their findings to a relevant audience connected to the Great Lakes Fishery Commission. An additional and broader vision for dissemination of results is encouraged.

- **Management support**
  Projects should have demonstrated support from representatives of the management community, and/or be responsive to published priorities of management agencies. Expressions of broader support (e.g., from organizations interested in Great Lakes fisheries, from the scientific community) are pertinent as well.

- **Collaborative approach**
  Efforts that involve collaboration between and among researchers and management agencies are preferred.

- **Facilitation of future uses of GLFT funds**
  Projects should provide information or results that will help guide future research activities of the GLFT.