

MIDWEST GLACIAL LAKES *Partnership*

Strategic Plan 2020-2025



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Mission

Work together to protect, rehabilitate and enhance sustainable fish habitats in glacial lakes of the Midwest for the use and enjoyment of current and future generations.

Approach

The partnership uses its grant funding and other resources to:

1. Conduct scientific assessments to determine the condition and threats to fish habitats.
2. Enable partners to complete on-the-ground habitat conservation projects.
3. Conduct education and outreach to improve understanding and spark action resulting in fish habitat conservation.
4. Provide a forum for those seeking inland lake fish habitat conservation to share strategies and resources.



Goals

- Protect and maintain intact and healthy lake systems and fish habitats, including fishable populations of gamefish, with an emphasis on native, naturally sustaining populations.
- Prevent further degradation of fish habitats that have been adversely affected.
- Reverse declines in the quality and quantity of aquatic habitats in lakes to improve the overall health of fish and other aquatic organisms.
- Increase the quality and quantity of fish habitats in lakes that support a broad natural diversity of fish and other aquatic species.

Objectives

The following objectives are an aspirational list to be accomplished by the end of 2024. These objectives will be reviewed every 5 years or as the need arises for progress and/or modification.

1. Implement fish habitat conservation projects.

1.1. Protect watersheds to protect Midwest glacial lake fish habitats in member states

Outputs

1.1.1. Protect at least 75% of the land area in one intact lake watershed in each member state.

Outcomes

1.1.1. Maintain production, diversity, and resilience of glacial lake fish populations in one lake watershed

1.2. Restore Midwest glacial lake fish habitats in member states

Outputs

1.2.1. Restore one watershed so that all ecosystem processes are intact by improving at least one ecosystem process in each member state.

1.2.2. Improve the condition of one lake by restoring at least one ecosystem process within a lake to an intact condition within each member state.

Outcomes

1.2.3. Improve production, diversity, and resilience of glacial lake fish populations in one lake.

1.3. Use fish habitat conservation projects to improve conservation outcomes

Outputs

1.3.1. Fund at least one project that creates, evaluates, or develops a fish habitat conservation technique that could be used by MGLP partners.

1.3.2. At least 50% of funded projects include a component that communicates to the target audience the importance of fish habitat conservation.

1.3.3. Develop a project outreach template that provides examples of outreach components for fish habitat conservation projects to use.

Outcomes

1.3.4. Improved understanding of new or existing fish habitat conservation techniques for Midwest glacial lakes.

1.3.5. Improved stakeholder knowledge of the importance of fish habitat conservation.

Summary of Objectives

1. Implement fish habitat conservation projects.
2. Conduct ecological assessments of Midwest glacial lake habitats.
3. Improve efficiency and efficacy of lake habitat conservation projects.
4. Conduct education and outreach to encourage fish habitat conservation.

2. Conduct ecological assessments of Midwest glacial lake habitats.

2.1. Complete and provide to the public a scientific assessment of fish habitat in lakes

Outputs

- 2.1.1.** Generation of list of variables and proposed method for determining prioritization of Midwest glacial lakes for fish habitat conservation activities.
- 2.1.2.** Complete assessment (Phase II) of Midwest glacial lakes.
- 2.1.3.** Provide assessment to the public to view and download.
- 2.1.4.** List of habitat conservation strategies recommended for Midwest glacial lakes based on assessment.

Outcomes

- 2.1.5.** Improve knowledge of factors contributing to current and future habitat degradation.
- 2.1.6.** Ability to prioritize conservation activities across the partnership based upon climate change, land use, and other threats.

2.2. Determine additional data needs and identify prioritization factors for completion of a future assessment

Outputs

- 2.2.1.** Develop a prioritized list of datasets to generate in order to fill gaps that limit assessment or conservation of Midwest glacial lakes.
- 2.2.2.** Generate at least two new datasets for assessment or determination of Midwest glacial lakes fish habitat conservation priorities, one of which is climate-change related.
- 2.2.3.** Generate a revised list of variables and proposed method for determining prioritization of Midwest glacial lakes for fish habitat conservation activities.
- 2.2.4.** Create an updated (Phase III) assessment of inland lake fish habitats incorporating new datasets including climate change for conservation planning.

Outcomes

- 2.2.5.** Improve decision making for conservation projects that target high-priority watersheds with conservation actions tailored to current and future conditions affected by climate, watershed, and local conditions.

2.3. Develop a decision support tool to help prioritize actions for MGLP and other stakeholders

Outputs

- 2.3.1.** Tool is completed and provided to public in web viewer and downloadable format.
- 2.3.2.** Develop MGLP Conservation Guidelines to supplement the decision support tool and provide guidance on the most effective fish habitat conservation techniques for each lake based on the information available for that lake.

Outcomes:

- 2.3.3.** Active use of assessment information in scientific research and management of aquatic habitat across the MGLP by members and other glacial lake stakeholders.
- 2.3.4.** The MGLP communicates key issues affecting Midwest glacial lake fish habitat to the public.
- 2.3.5.** Funds are used more effectively to conserve aquatic habitats.

2.4. Share data with National Fish Habitat Partnership in order to promote science and conservation benefitting Midwest glacial lakes

Outputs

- 2.4.1.** Provision of MGLP data to the NFHP in a compatible format for integration into

national fish habitat assessments and other needs.

2.5. Improve understanding of fish – habitat relationships in Midwest Glacial lakes

Outputs

- 2.5.1.** Complete 10 peer-reviewed journal articles by MGLP Science and Data Team members or others that use MGLP data, resources, or collaboration.
- 2.5.2.** Identify all intact systems within the MGLP area.
- 2.5.3.** Develop lake classification system that allows comparison of fisheries data across the MGLP.
- 2.5.4.** Develop and incorporate science to improve our ability to determine quality and quantity of fish habitats through new technologies such as remote sensing.
- 2.5.5.** Improve understanding of fish population responses to varying levels of habitat quantity and quality.
- 2.5.6.** Complete a fish habitat assessment of cool- and cold-water fisheries to assess threats from climate change and land use/land cover change.
- 2.5.7.** Evaluate habitat conservation project impacts to fish production, diversity, and resilience.

3. Improve efficiency and efficacy of lake habitat conservation projects.

3.1. Leverage the Phase II Assessment of Midwest glacial lake habitats to complete on-the-ground projects, assessments, or outreach initiatives

Outputs

- 3.1.1.** Apply for external funding to complete at least two on-the-ground, assessment, or outreach projects leveraging partnership resources.

Outcomes

- 3.1.2.** The MGLP or its partners use MGLP data and resources obtain outside funding to complete one or more on-the ground fish habitat projects, assessments, or outreach initiatives.

3.2. Ensure that fish and fish habitat are discussed when fish habitat conservation projects are planned and implemented

Outputs

- 3.2.1.** Hold five meetings with conservation entities to provide information about how the assessment and other MGLP resources can be used to conserve fish habitats in Midwest glacial lakes.

Outcomes

- 3.2.2.** MGLP assessment data are formally part of at least one planning process where fish habitat is affected.
- 3.2.3.** Data are used in assessment and conservation actions by organizations both inside and outside the partnership.

3.3. Meet or exceed NFHP evaluation standards to maximize funding

Outputs

- 3.3.1.** Gain 3:1 fund leveraging across the suite of MGLP-funded projects every year.
- 3.3.2.** At least 95% of funded projects within the last three years benefit MGLP priority species or areas.
- 3.3.3.** At least 75% of funded projects within the last three years benefit USFWS priority species and trust resources.
- 3.3.4.** At least 80% of projects within the past five years are completed consistent with project design.

3.3.5. At least 90% of projects within the past three years are monitored and evaluated for successful accomplishment of outputs and outcomes.

3.3.6. All MGLP projects identify goals and objectives in SMART format (Specific, Measurable, Attainable, Realistic, Time-bound).

Outcomes

3.3.7. Achieve Level Three funding from NFHP to increase conservation project funding for MGLP projects.

3.4. Enroll one additional non-governmental FHP member per member state

Outputs

3.4.1. Enroll one additional non-governmental MGLP member per state in the partnership.

Outcomes

3.4.2. Access to resources, information, and funds from new partners.

3.4.3. Increased use of Phase II Assessment of Midwest glacial lake habitats, outreach products, and grant program.

3.4.4. Increased awareness of the MGLP activities and mission among potential partners.

3.4.5. Produce assessment, outreach, and grant programs that address the needs of a broad group of Midwest glacial lakes habitat conservation stakeholders.

3.5. Learn from glacial lakes fish habitat conservation successes and failures

Outputs

3.5.1. Improve relationships among MGLP partners.

3.5.2. Complete a symposium and/or panel discussion at a scientific conference discussing glacial lake fish habitat conservation.

3.5.3. Identify, develop, and share best management practices and tools for Midwest glacial lakes on addressing threats such as climate change, eutrophication, macrophyte and woody debris removal, shoreline development, invasive species, sedimentation, and others.

3.5.4. Complete an article or series of technical articles describing best management practice recommendations with input from a work group of MGLP stakeholders

3.5.5. Compile fish habitat conservation information, resources, and best management practices on MGLP web site.

3.5.6. Create and annually update a database tracking success and failure of projects funded by the MGLP to share results, provide lessons learned, and guide future project selection.

3.5.7. Establish a mechanism for members to seek advice from MGLP subcommittees on technical matters.

Outcomes

3.5.8. Improve efficiency and efficacy of MGLP-funded assessments and habitat conservation projects.

3.5.9. Greater, more consistent application of best management practices across the MGLP.

4. Conduct education and outreach to encourage fish habitat conservation.

4.1. Develop and implement an outreach and education campaign to address the causes of fish habitat degradation and improve conservation outcomes.

Outputs

4.1.1. Create and staff a team to develop and implement an Outreach and Education

Plan

4.1.2. Identify the intended audience(s) of MGLP outreach and education to encourage fish habitat conservation in Midwest glacial lakes. These audiences may differ for different messages.

4.1.3. Complete Outreach and Education Plan.

4.1.4. Conduct a review of existing resources for inland lake habitat conservation to determine what effective mechanisms already exist among member organizations and what gaps need to be filled across the region.

4.1.5. Create a bibliography/clearinghouse of lake habitat conservation resources.

4.1.6. Create a recognition program or award for good fish habitat practices within the MGLP area.

4.1.7. Engage citizen groups, non-profit organizations, and others directly in MGLP as members. These groups should include diverse partners focused on issues affecting lake habitat such as non-point source pollution, climate change, and/or shoreline development.

4.1.8. Recruit at least five new members to the MGLP Steering Committee.

4.1.9. Improve public understanding of the importance of fish habitat, the extent and causes of degradation, solutions, and the timeline needed to see benefits from conservation.

Outcomes

4.1.10. Lake stakeholders use information in the lake habitat conservation resource database to improve conservation outcomes on Midwest Glacial Lakes.

Strategies and Priority Conservation Actions

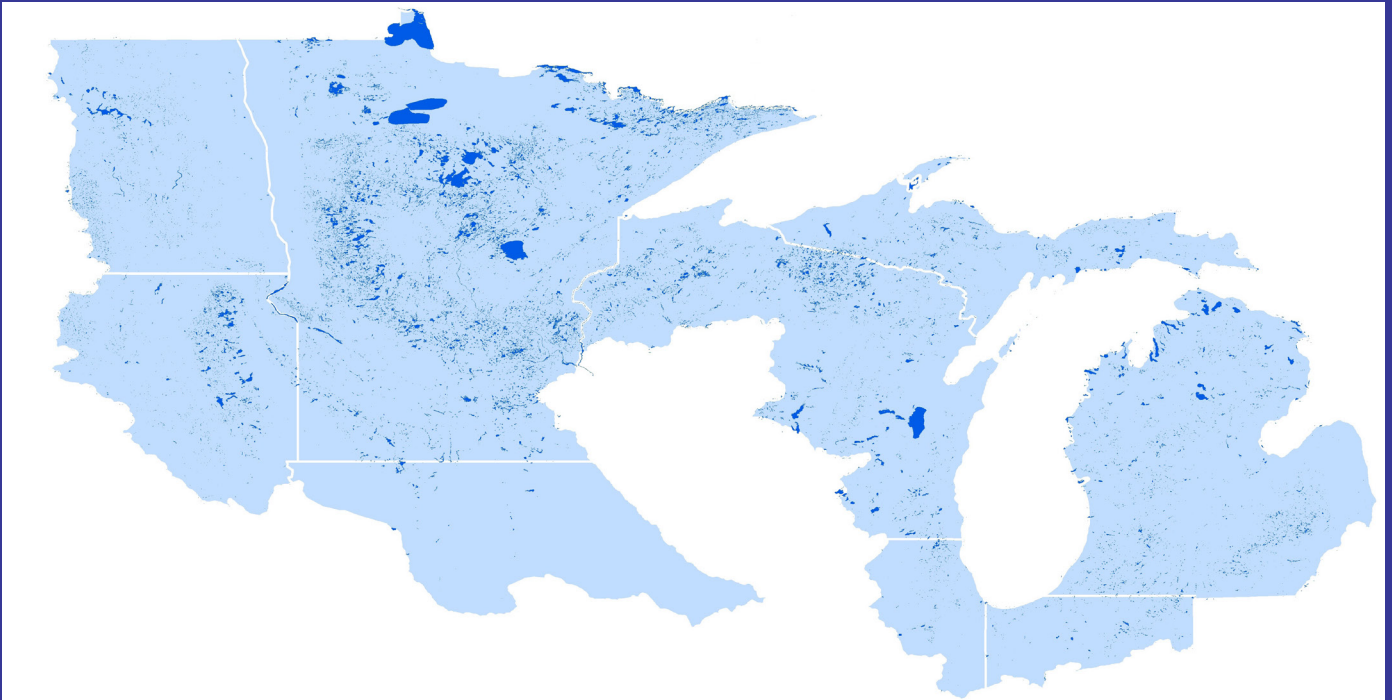
The MGLP supports conservation projects that work toward meeting the goals and objectives set forth in this plan to benefit glacial lake fish habitats, which include addressing the chemical, physical, and biological components of the habitats that fishes found in glacial lakes use throughout their lives.

The MGLP Lake Conservation Grant supports the implementation of a subset of the objectives listed in this plan and directs funding toward a wide range of aquatic conservation projects that benefit imperiled, endangered, and recreational fish species and their habitats. Examples of projects sought by the grant include projects that implement new techniques or methods; projects that serve as demonstration projects; watershed-level projects; water quality and erosion control measures; native vegetation or wetland rehabilitation; natural riparian or in-lake habitat restoration and protection; barrier removal for improved native fish passage; population or watershed assessments needed for project evaluation; prioritization and planning for future habitat projects; evaluating habitat conditions or lake water levels; projects addressing climate change adaptation or mitigation through fish habitat; projects training biologists and managers on inland lake fish habitat management tools and approaches, and community outreach and education on the importance of and how to better protect fish habitat. In addition to conducting independent outreach and/or education, successful applicants will be expected to work with the MGLP to coordinate media and public outreach to raise the profile of MGLP-funded projects.

The MGLP prioritizes projects that address the causes of past, current, and future habitat decline as identified by a lake management plan or the MGLP Conservation Guidelines for the lake. The MGLP Lake Conservation Grant will solicit and select projects that meet MGLP objectives in this plan as interpreted and determined by the MGLP Steering Committee.

Partnership Lakes

The MGLP boundary is defined by the extent of glaciation and the boundaries of states participating in the partnership. Within this area, lakes that were formed by glacial processes and whose extent and bathymetry are still significantly defined by those origins are considered partnership lakes. This definition includes, for example, glacially formed lakes with water level control structures or small dams, but does not include water bodies that are best characterized as reservoirs or gravel pits. While public access is important for providing fishing and recreational opportunities and is strongly preferred for the MGLP Lakes Conservation Grant, it is not required for a lake to be considered part of the partnership.



Revisions

This Strategic Plan is effective January 1, 2020 and will be revised as necessary or by January 1, 2025.

Definitions

Aquatic habitat: Any area on which an aquatic organism depends, directly or indirectly, to carry out its life processes, including an area used by the organism for spawning, incubation, nursery, rearing, growth to maturity, food supply, or migration . Aquatic habitat includes physical, chemical, and biological characteristics .

Intact watersheds: Watersheds that have connectivity, water quality values, and habitat conditions within the expected, natural range for the region.

Conservation: Activities that protect, sustain, and, where appropriate, restore, and enhance populations of fish, wildlife, or plant life or a habitat required to sustain fish, wildlife, or plant life or its productivity.

Ecosystem processes described by NFHP include connectivity; hydrology; geomorphology; water quality; material recruitment and transport; and energy flow

Protection: Preservation of intact ecosystem processes within their range for similar, natural ecosystems in the region. Examples of protection include conservation easements, implementation of best management practices, application or regulations, or other mechanisms to ensure natural ecosystem processes.

MGLP Priority Species

American Brook Lamprey	Cypress Darter	Pallid Sturgeon
American Eel	Deepwater Sculpin	Pirate Perch
Banded Killifish	Eastern Sand Darter	Pugnose Shiner
Banded Pygmy Sunfish	Flathead Catfish	Pygmy Whitefish
Bantam Sunfish	Gilt Darter	Quillback
Bigmouth Shiner	Golden Redhorse	Rainbow Trout
Black Buffalo	Golden Shiner	River Redhorse
Black Bullhead	Goldeye	Sauger
Black Crappie	Grass Pickerel	Shortjaw Cisco
Black Redhorse	Greater Redhorse	Skipjack Herring
Blackchin Shiner	Iowa Darter	Slimy Sculpin
Blacknose Shiner	Lake Chubsucker	Smallmouth Bass
Bloater	Lake Sturgeon	Spottail Shiner
Blue Sucker	Lake Trout	Tippecanoe Darter
Bluegill	Lake Whitefish	Starhead Topminnow
Bluntnose Darter	Largemouth Bass	Topeka Shiner
Brindled Madtom	Least Darter	Trout Perch
Brown Bullhead	Longnose Gar	Walleye
Brown Trout	Muskellunge	Warmouth
Central Mudminnow	Nipigon Cisco	White Crappie
Channel Catfish	Northern Brook Lamprey	White Sucker
Chestnut Lamprey	Northern Pike	Yellow Bullhead
Cisco	Paddlefish	Yellow Perch