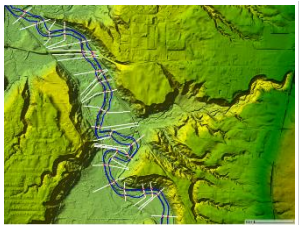
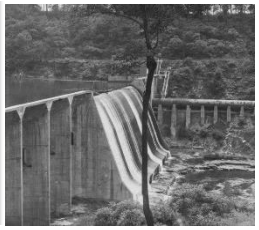
Report of the
Lake Erie Habitat Task Group
2023-2024



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Presented to:

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    b. Identify data needs to better identify and describe functional habitats (e.g. improved bathymetry).
    c. Documentation of key habitat and research projects as related to priority management areas.
    d. Use GIS techniques to refine PMA mapping, coordination, and scale.
2. Support other task groups by compiling metrics of habitat use by fish.

Charge 1: Maintain a list of functional habitats and impediments for species specified by the Lake Erie Committee (LEC) Fish Community Objectives (FCOs)

Charge 1a: Priority management areas (PMA that support Lakewide Action and Management Plans (LaMP), LEC Lake Erie Environmental Objectives (LEEOs) and FCOs

In 2021-22 the Habitat Task Group (HTG) defined a 4-phase process to better capture the progress to-date and communicate future work needed to finish developing a functional, systematic, adaptive, cumulative, and collaborative approach for identifying Priority Management Areas (PMAs; Figure 1). Phase 1 was the initial proof of concept including the initial PMA data collected, management prioritization and scoring. Work completed during Phase 1 was presented in the 2019 HTG report (HTG 2019). Phase 2 was defined as the proof of concept for moving the original flat file PMA dataset (Phase 1) into a GIS framework. This phase included the creation of functional GIS layers and a geospatial data viewer to help data visualization. Phase 2 was completed in 2022-23 and will be updated in more detail under Charge 1d. Phase 3 was the development of a user friendly, backward-facing portal that will allow the underlying PMA data to be easily updated and refined as new information becomes available. This phase also includes development of a forward-facing viewer that will facilitate end-user analysis of the data and broad communication of Lake Erie's Environmental priorities. Phase 3 is ongoing with a pilot viewer developed for LEC use. Finally, Phase 4 is the ongoing phase in which the HTG will operationalize the PMA exercise allowing for updating and refinement of the PMA data, re-prioritize as required, and report out on progress within PMAs. The framework for this final phase is being developed to identify the workflows for the review/analysis of data, research needs, knowledge gaps, and delivery of the PMA and its products. Potential updates to the PMA will have to address the long-term

viability of the data and its accessibility, along with the flexibility to address future research needs and technology changes.

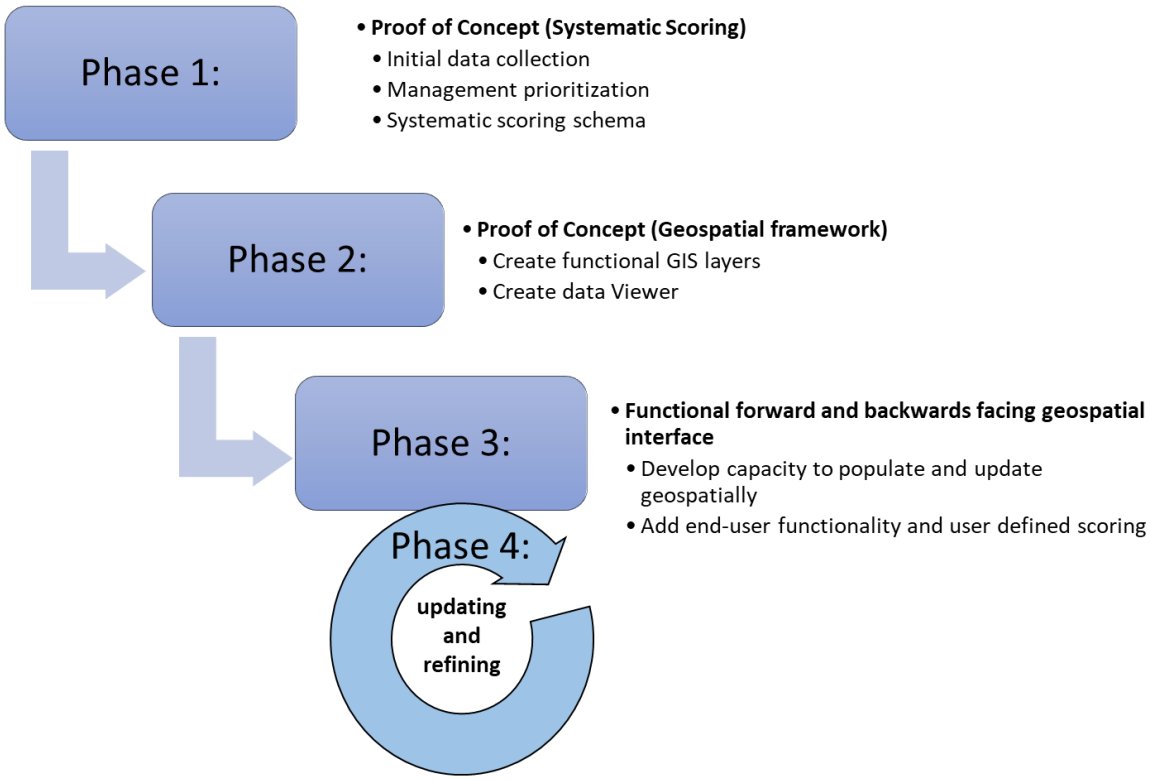

Figure 1. Four phases of PMA development identified by the Habitat Task group.

Charge 1b: Identify data needs to better identify and describe functional habitats.

In 2021, developments made while updating the PMA dataset into a spatial dataset identified numerous data needs required to detect and describe additional functional habitats. With the completion of Phase 2, the HTG has developed a sound list of data needs. Continued work in Phase 3 and process developments for Phase 4 will allow the HTG to identify the process to further address those needs (Figure 1).

Charge 1c: Documentation of key habitat and research projects as related to priority management areas.

Habitat Suitability Index Updates

Habitat suitability index (HSI) models are used to identify and quantify suitable habitat for various fish species by comparing habitat characteristics (e.g., substrate, water depth, and flow) to species' optimal tolerance ranges at various life stages (e.g.,

spawning, and juvenile; USFWS 1981). Based on literature reviews, a species tolerance range is used to convert each habitat characteristic into a rating of “good”, “moderate”, or “poor” which are assigned numerical values such as 1, 0.5, and 0, respectively. For example, juvenile Lake Sturgeon are most successful in habitats containing silt, sand, gravel, and/or cobble substrates therefore areas with these substrates would be rated as “good”. Ratings for all habitat characteristics are then combined to create an HSI map identifying suitable habitat for that species. This information can be used to protect and/or restore suitable habitats of native fish species, as well as identify risks of invasive species. In Lake Erie, there are several initiatives working to develop HSI.

Lake Sturgeon Habitat Suitability in the Cuyahoga River
J. Fischer

PMA linkage			
Functional Habitat:	Central Basin Rivers/Tributaries	Priority:	Medium

The Alpena U.S. Fish and Wildlife Service (USFWS) Conservation Office and partners completed habitat assessments to evaluate the suitability of the Cuyahoga River for age-0 Lake Sturgeon (*Acipenser fulvescens*) and spawning adults in the lower 72 km of the Cuyahoga River from Lake Erie to Ohio Edison Dam in partnership with the Ohio Department of Natural Resources (ODNR), Cuyahoga Valley National Park Service (NPS), and others. Field surveys included mapping substrates and channel bathymetry. Substrates were mapped throughout the study area with side-scan sonar and visual assessments occurred at regularly spaced cross-sections to ground-truth substrate classifications derived from the side-scan sonar. Bathymetry data were collected at regularly spaced cross-sections and locations with rapid elevation change (e.g., rapids). A 1-D flow model was developed from the bathymetry data and existing elevation data within the floodplain to estimate water depths and velocities for discharges typical during the spring and early summer when spawning adults and age-0 Lake Sturgeon are expected to be in the river.

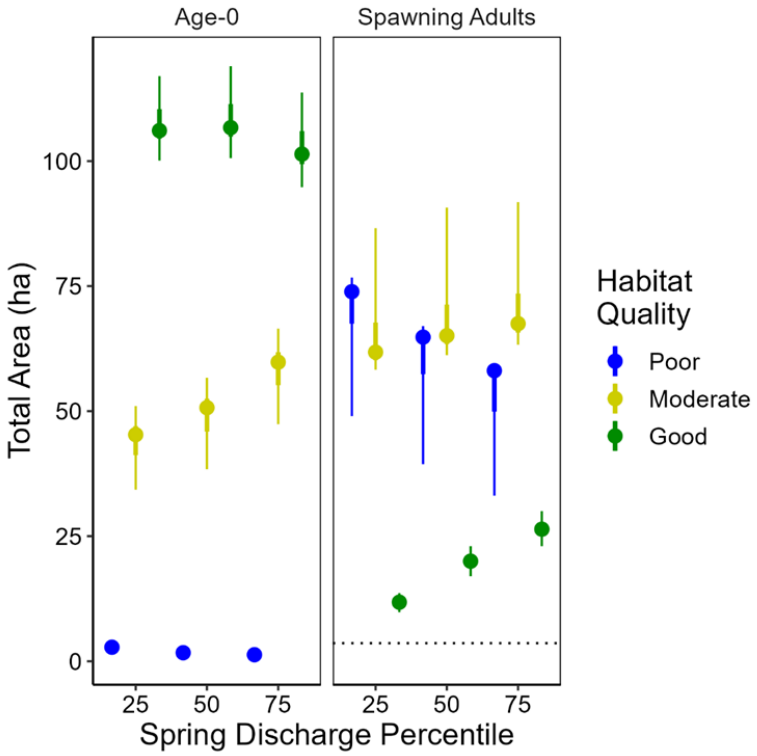

Figure 2. Estimated areas of good, moderate, and poor Lake Sturgeon spawning and age-0 Lake Sturgeon habitat in the Cuyahoga River. Points show the median estimate, thick bars show the interquartile range (25th – 75th percentiles), and thin bars show the 95% CI.

Habitat suitability indices were then used to quantify the amount of suitable habitat available for Lake Sturgeon spawning and for age-0 fish.

At median spring discharge, a total of 20.0 ha (13% of the study area) was classified as good spawning habitat, which includes areas with moderate water velocities (~0.5-1.5 m/s), a range of depths (~0.3-2.25 m), and coarse substrates (gravel, pebble, cobble; Figure 2). Good spawning habitat was identified throughout the river and there is enough good spawning habitat to support self-sustaining spawning stock (>1500 individuals). Over 106 ha of the river (63%) was classified as good age-0 habitat at median spring discharge, which included areas with slower water velocities (~0-0.5 m/s), a range of depths (~0.2-8 m), and fine to coarse substrates (silt, sand, gravel, pebble, cobble). Good age-0 habitat was identified throughout the river, with the largest patches occurring in the lower 20 river kilometers, where there were more fine sediments and the channel tended to be wider. Spring, summer, and fall water temperatures over the last 12 years remained below the upper limits for reduced growth and survival (28° C; Lyons and Stewart 2014). During the expected spawning window (April-June), water temperatures were within the optimal temperature range for larval development (12-16° C; Wang et al. 1985) for at least some part of the spring each year. Based on the preliminary results from the habitat mapping, there is enough suitable spawning and age-0 habitat to support a self-sustaining spawning stock of Lake Sturgeon.

Native Species Habitat Suitability in Southern Ontario Tributaries (MNRF)

T.Gehrke[1] and S. Marklevitz

PMA linkage

Functional Habitat: Rivers/Tributaries Priority: Low to High

In 2023, Ontario Ministry of Natural Resources and Forests (MNRF) continued development of Habitat Suitability Indices for native species in Southern Ontario Tributaries. Sidescan surveys were completed in the four target rivers (Grand, Thames and Sydenham rivers and Big Otter Creek), totaling over 393 river kms (Table 1, Figure 3). Side scanning on Big Creek will not be complete due to logistical and navigability issues on the river.

Temperature-sensing arrays were deployed in all rivers. Temperature data will be used as an environmental variable add-on within the Hydrologic Engineering Center - River Analysis System (HEC-RAS) program to model current and project future temperature regimes throughout the rivers. Great Lakes Acoustic Telemetry

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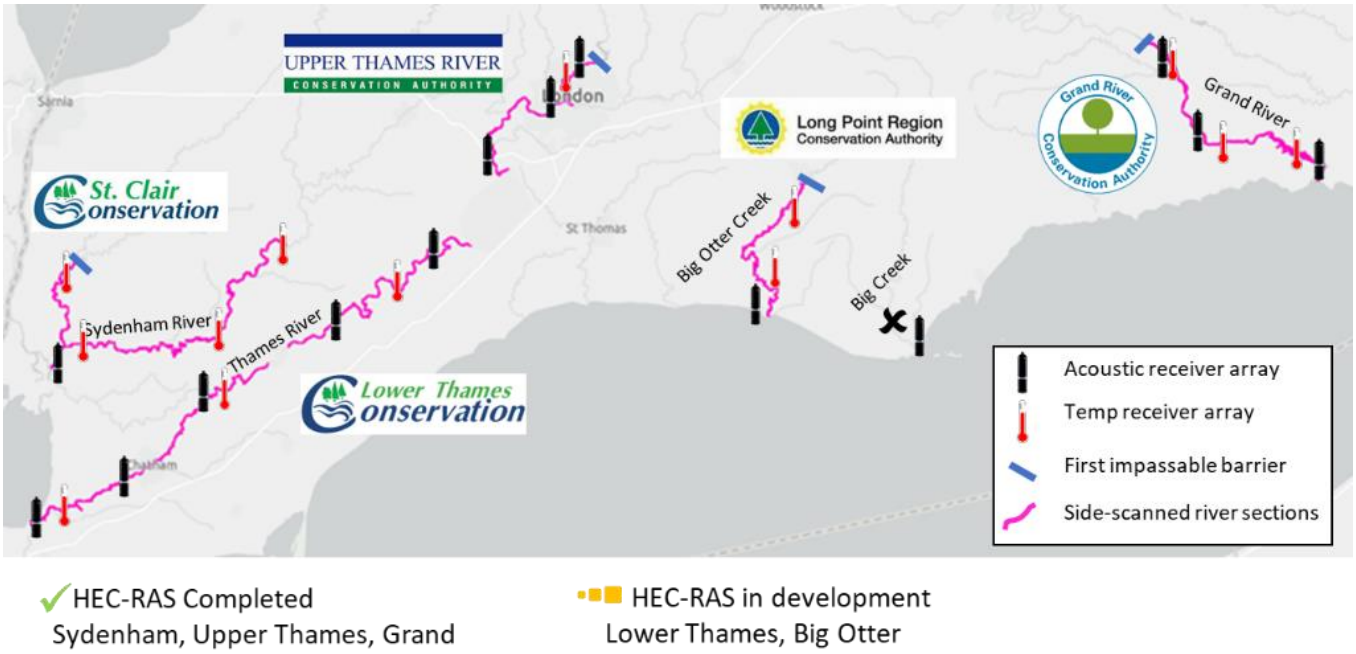

Figure 3. Infographic of ongoing activities in the Native Species Habitat Suitability in Southern Ontario Tributaries Project.

Observation System (GLATOS) acoustic receiver arrays were also deployed to identify potential movements of acoustically tagged fish into the tributaries. For this we leverage ongoing projects in the Thames and Grand rivers (River Arrays) but deploy gate style arrays at the river mouths (mouth gate) of the other rivers. The river "mouth gate" arrays consist of at least 3 receivers which in sequent could identify movement of a tagged fish into the rivers, and upstream movement, if present. Finally, this year the MNRF worked with Long Point Region Conservation Authority to complete a HEC-RAS model on Big Otter Creek from Calton line upstream to Tillsonburg, which completes the flow model for the entire river.

In 2024, MNRF plans to finish analyzing the side scan data to create substrate maps, continue deployment of temperature and acoustic arrays and work with Lower Thames Valley Conservation Authority to complete the HEC-RAS model on the Thames River.

Table 1. Summary of HSI activities by river, including the river kms sidescanned to create substrate HSI layers, the number of temperature loggers and GLATOS receivers deployed in each rive, and array type.

Tributary	Side scanned (kms)	Temp Loggers (n)	Receivers(n - type)
Grand River	50	17	16 - river array
Big Otter	41	6	3 - mouth gate
Big Creek	22	6	3 - mouth gate
Thames River	196	10	17 - river array
Sydenham River	84	7	5 - mouth gate
Totals	393	46	44

Sauger Habitat Suitability in the Sandusky River

B. Schmidt[2]

PMA linkage			
Functional Habitat:	Western Basin Rivers/Tributaries	Priority:	Very High

The Ohio DNR-DOW is working with a Master's student, Elizabeth Anderson, at the University of Toledo to create a Sauger *Stizostedion canadensis* spawning HSI for the Sandusky and Maumee rivers to determine if stocking could feasibly result in self-sustaining populations. Sauger were a historically important commercial and recreational fishery in Lake Erie until a complete population collapse in the 1950s (Trautman 1957). In addition to overfishing, habitat degradation and construction of dams on tributary rivers were seen as contributing to their decline.

Following the removal of the Ballville Dam in the Sandusky River in 2018, a walleye spawning HSI determined that an additional 35 river kilometers of spawning habitat was opened to access — potentially doubling the amount of suitable spawning habitat for walleye within the river. Given the highly migratory nature of sauger, this model will be re-evaluated with additional data and ground truthing to determine if the newly available habitat would be sufficient to expect successful spawning of stocked Sauger. Pending results of the HSI, genetic analysis indicated that the Ohio River population most closely matched the extirpated Lake Erie population and would be used as a source population (Hartman et al. 2019).

Identifying and Characterizing Lake Whitefish Spawning Habitat in Lake Erie

J. Fischer, E. Roseman, D. Gorsky, P. Kohn

PMA linkage			
Functional Habitat:	Open water - reef/shoal	Priority:	Low to Very High

In 2023, the USFWS, United State Geologic Survey (USGS), The Nature Conservatory, ODNR, MNRF, University of Toledo, and New York State Department of Environmental Conservation continued a joint project to assess Lake Whitefish (*Coregonus clupeaformis*) spawning activity and spawning habitat in Lake Erie. The project seeks to: 1) Describe the contemporary spawning habitat used by Lake Whitefish at known spawning locations in the western basin of Lake Erie; 2) Verify and describe suspected spawning sites used by Lake Whitefish in the central and eastern basins of Lake Erie; 3) Describe the factors (e.g., substrate composition, bottom slope, water temperature) influencing spawning of Lake Whitefish in the central and eastern basins; and 4) Evaluate restoration opportunities by describing habitat where future stocking could be successful.

[2] Brian Schmidt, Fisheries Biologist, Ohio Department of Natural Resources, Division of Wildlife; brian.schmidt@dnr.ohio.gov

In fall of 2023, crews completed habitat surveys at sites surveyed for egg deposition. Habitat surveys utilized side-scan sonar surveys and camera drops to characterize substates at egg pumping sites. Crews completed sonar and camera surveys at sites out of Huron, Lorain, Cleveland, and Fairport harbors in Ohio. All video from camera drops was reviewed to classify percent composition of surficial substrates and classify substrates following the Coastal and Marine Ecological Classification Standard. Depth and terrain data were obtained from National Oceanic and Atmospheric Administration (NOAA) bathymetry data and the Lake Erie PMA. The USFWS is currently processing the side-scan sonar data and will use this information to describe site characteristics at locations where Lake Whitefish eggs were detected. More information on the egg depositional surveys conducted through this study is provided in the 2024 Lake Erie Coldwater Task Group Report.

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Gorge Dam Removal on the (Cuyahoga River)
Z. Slagle

PMA linkage			
Functional Habitat:	Central Basin Rivers/Tributaries	Priority:	Medium

The Gorge Dam Removal Project is proceeding according to schedule. In 2023, the land-based, contaminated-dredge-material site was prepared; dredging will proceed from 2024 through 2025. Approximately 669,000 m3 of contaminated sediment must be removed prior to dam demolition, at a cost of around $100 million. Project partners include the Environmental Protection Agency, the Northeast Ohio Regional Sewer District, the City of Akron, FirstEnergy/Ohio Edison Company, and the Ohio EPA . The actual dam removal will take place in 2026. This project will open ~18 rkm to freely flow to Lake Erie and is expected to improve water quality downstream throughout the Cuyahoga River Area of Concern, potentially leading to delisting. Fish population connectivity continues to be examined via acoustic telemetry and genetic techniques, led by Matthew Acre (USGS).

Cedar Point Causeway Wetlands Project (Sandusky Bay)
Z. Slagle

PMA linkage			
Functional Habitat:	West Basin Nearshore	Priority:	High

The Cedar Point Causeway Wetland Creation Project is proceeding according to plan (HTG 2023). In 2021, a retaining structure was built, forming two cells to accept dredge material along the Cedar Point Causeway in eastern Sandusky Bay; in 2022 and 2023, dredge material from the bay channel was pumped into these structures. Dredging is unlikely in 2024 as the managers wish the dredged sediment to settle; planting of macrophytes may commence in the next year. Eventually, the retaining structure will be breached to allow water movement and fish passage between the contained wetland and the bay, adding 13 hectares of new wetland habitat. Partner agencies will continue to monitor changes to water quality and the fish community in future years.

Clark and Delaware/Horseshoe Islands Restoration Projects (Maumee River)
Z. Slagle

PMA linkage			
Functional Habitat:	West Basin Rivers/Tributaries	Priority:	Very High

Clark and Delaware/Horseshoe islands are natural features located ~16 km upstream of the mouth of the Maumee River, Lake Erie's largest watershed; these islands have eroded to around 5% of their size in the 1940s (Figure 4). This restoration project will create new hard structures to calm water and create new wetland habitat for the ~25 ha area, which will absorb nutrients, reduce sedimentation, and add to fish habitat in the river. This is a collaborative project between the Toledo-Lucas County Port Authority, the City of Toledo, with significant input from the Ohio Department of Natural Resources, the Ohio Environmental Protection Agency, and the Maumee Area of Concern Advisory Committee. Funding is provided by the State of Ohio's H2Ohio Program and GLRI. Groundbreaking for the project took place in January 2024 and will be completed by Fall of 2025.

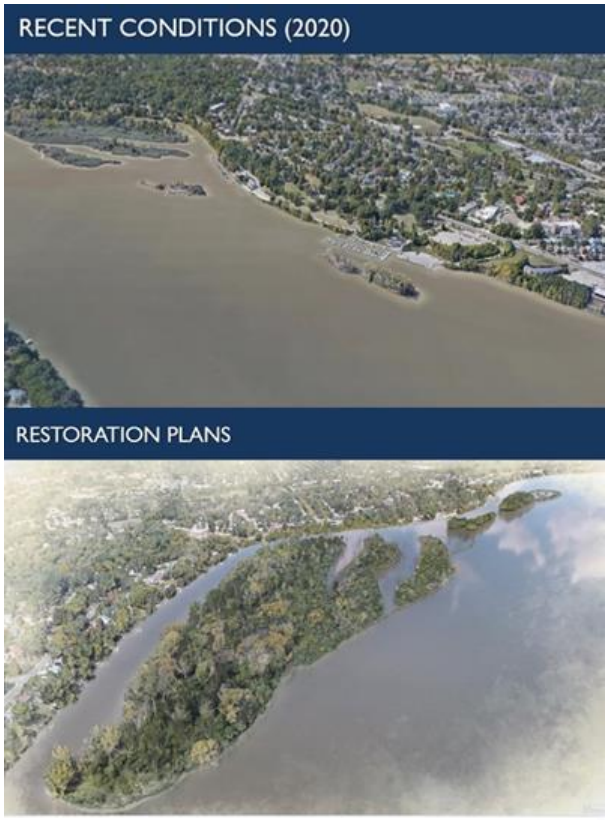

Figure 4. Current state (top) and final rendering (bottom) of the Maumee River island restoration projects.

Lower Lake St. Clair Habitat Restoration
C. Harris

PMA linkage			
Functional Habitat:	Lake St. Clair Nearshore	Priority:	Very High

The U.S. shoreline of Lake St. Clair is highly developed with over 90% of the shoreline being hardened. The Edsel & Eleanor Ford House property presents itself as a unique opportunity for this portion of Lake St. Clair, given that a single entity possesses over 1.6 km of shoreline (Figure 5). The property also contains unique features such as Ford Cove, a small but protected embayment of Lake St. Clair, coastal marsh, and forested wetland.

The Lake St. Clair Habitat Restoration project kicked off with a feasibility study led by OHM Advisors in 2020 that collected a broad spectrum of data that ranged from biological information to public feedback through surveys. Upon completion of the study in 2022, the feasibility of completing coastal marsh and shoreline restoration was identified and Ford House pursued funds to complete engineering and design, followed by implementation of the restoration. After being awarded funds to complete the project, the Ford House convened a project team that with their staff, along with representatives from GEI Consultants, NOAA, MDNR, EGLE, and Macomb County.

The project is currently in the engineering and design phase, with implementation being planned for 2025. The project will enhance or restore Great Lakes connected habitat that amounts to about 2.2 ha of coastal marsh, 3.2 ha of nearshore habitat, 1.6 ha of forested wetland, and 1.6 km of shoreline. There have been multiple years of biological sampling for pre-monitoring completed already and post-monitoring efforts are planned. The nearshore component of this project improves habitat in a very high priority management area while the coastal wetland component improves habitat in a medium priority management area.

Figure 5. Arial image of Ford Cove and the Edsel & Eleanor Ford House property.

The project is being funded through the NOAA Transformational Habitat Restoration and Coastal Resilience Grant and facilitated by the Edsel&

Eleanor Ford House. The habitat and restoration goals of the project are also balanced with the National Historic Landmark goals associated with this property.

Lake Erie Metropark Restoration Project

E. Ellis (GLC), T. Heatlie (NOAA), S. Thomas (MDNR), C. Harris (MDNR)

PMA linkage			
Functional Habitat:	Western Basin Nearshore/Coastal wetland	Priority:	Very High/High

Lake Erie Metropark is located along the shoreline of Lake Erie's western basin. The Metropark property spans 1,607 acres and has 3 miles of Lake Erie shoreline. At one time coastal wetlands covered much of this site that is now impacted by shoreline armoring, erosion, and invasive species. A project was developed to address fish habitat in the coastal wetland and shoreline restoration along the southern shore of the property (Figure 6). The project team includes representatives from NOAA and the Great Lakes Commission (GLC), Huron-Clinton Metroparks, GEI Consultants, Michigan Department of Environment Great Lakes and Energy, and Michigan Department of Natural Resources.

Through the regional partnership with NOAA and the GLC and in collaboration with the Huron-Clinton Metropark Authority, the project was funded and executed with implementation efforts finishing in 2023. One of the major deliverables from the project were the habitat improvements made in the coastal marsh (1.7 acres) to improve fish access to the marsh and nursery habitat within the marsh. A In addition to invasive species control within the marsh, a channel and deeper pool areas were dredged through the marsh to allow for improved fish access. A culvert replacement at the entry point to the marsh allows for unimpeded fish access to the newly enhanced habitat.

The second major deliverable was to restore 1,183 linear feet of hardened shoreline and created low-velocity areas that are protected from direct wave action adjacent to the restored shoreline. This was done by removing the hardened materials lining the shoreline and adjusting the grade to allow for a very shallow slope. This shallow slope naturally reduces wave energy prior to the wave hitting the shoreline and allows emergent and submergent vegetation growth that can fluctuate with the ever-changing Great Lakes water levels.

This project works towards achieving coastal wetland restoration and shoreline softening priority objectives set by the St. Clair-Detroit River System Initiative (www.Scdrs.org). The nearshore component of this project improves habitat in a very high priority management area while the coastal wetland component improves habitat in a high priority management area. This project will benefit a wide variety of fish species (e.g. northern pike and yellow perch) among other herpetofauna and wildlife.

Figure 6. Lake Erie Metropark coastal wetland following dredging and invasive species control.

Public Data on Temperature and Dissolved Oxygen
R. Kraus and C. Hilling

PMA linkage			
Functional Habitat:	Central Basin Open Water	Priority:	Low to Very High

USGS received support from the Great Lakes Restoration Initiative to leverage GLATOS in Lake Erie to measure hypolimnetic temperature and dissolved oxygen throughout the central basin. The objectives were to supplement fish detection data with measurements of water quality during stratification and to supply the NOAA hypoxia forecast model with ground-truth information for retrospective analyses. USGS deployed data loggers (PME, Inc., MiniDOT data loggers) in 2020, 2021, 2022, and 2023 during annual maintenance of GLATOS stations. Data loggers were programmed to measure dissolved oxygen via an optical sensor, as well as temperature and percent oxygen saturation at 10-minute intervals. Specified temperature range was 0 - 35 °C (accuracy ±0.1°) and the dissolved oxygen range was 0 - 150% (accuracy ±5%) saturation. The loggers were equipped with a separate mechanical anti-fouling wiper, along with copper plate surrounding the optical dissolved oxygen sensor to reduce the amount of bio-fouling during deployment. Factory calibration of dissolved oxygen was verified in the laboratory, and instrument drift was assessed in the field immediately after retrieval (i.e., zero-point calibration). The full sampling design was not achieved in 2020 due to restrictions on crossing the international border, but the full design was achieved in 2021, augmented in 2022, and then again in 2023 (Table 2, Figure 7). In collaboration with NOAA Great Lakes Environmental Research Laboratory (NOAA-GLERL)

researchers, this work will continue in 2024. The public data releases are at www.sciencebase.gov, where 2020, 2021, and 2022 data are available and 2023 data are being prepared for public release.

Table 2. MiniDOT data logger deployment information for Lake Erie 2020–2023.

Year	Number of data loggers	Number of GLATOS stations*	First Deployment Date	Last Retrieval Date
2020	31	27	June 8, 2020	October 27, 2020
2021	56	48	May 10, 2021	October 27, 2021
2022	55	55	May 3, 2022	November 3, 2022
2023	69	69	April 17, 2023	November 16, 2023

*Less than the number of loggers due to mid-lake stations with additional suspended loggers.

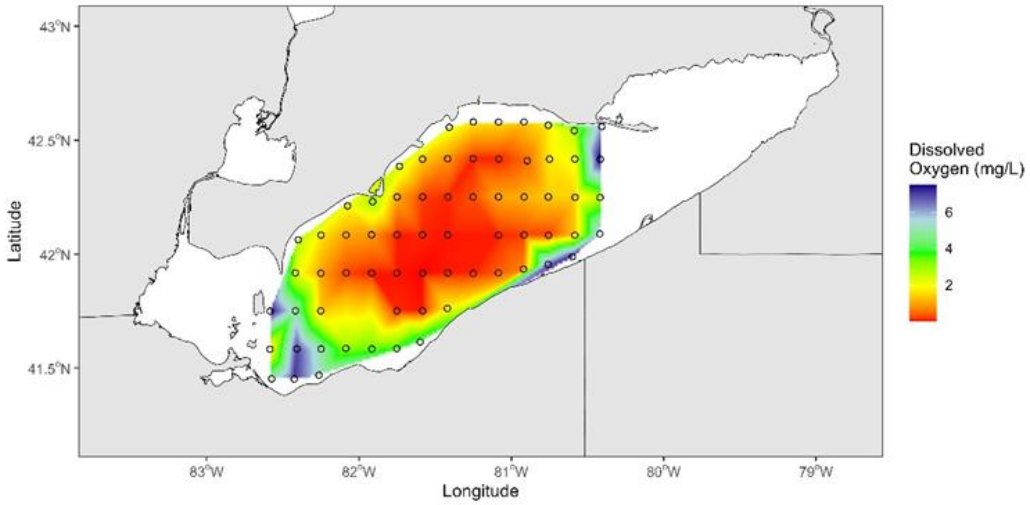

Figure 7. GLATOS stations equipped with data loggers during 2023 (circles). As an example, mean dissolved oxygen distribution (preliminary data) during September is plotted as a heatmap.

Ontario – Rondeau Bay- McLean Coastal Wetland restoration
S. Marklevitz

PMA linkage			
Functional Habitat:	Central Basin Coastal Wetland	Priority:	Medium

The McLean Drain is a slow-moving, mud bottomed waterway flowing into Rondeau Bay and owned by the St. Clair Region Conservation Authority. At the mouth of this drain lies the Mclean property (Figure 8). It is 130.2 ha (321.7 acres) and consisted of mostly agricultural land, with portions containing provincially significant wetland, mowed lawn/garden, forested area, and tall grass prairie habitat. Given Lake Erie's recent high-water levels, wetland restoration plans were developed for the property.

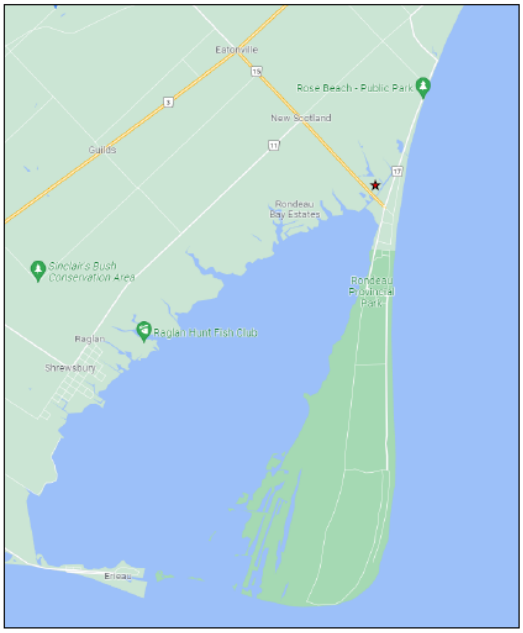

Figure 8. Location of McLean property (red star) on Rondeau Bay relative to Rondeau Provincial Park.

Work at the site has previously been reported in the 2023 HTG report and included: retiring 16.1 ha agriculture land, re-naturalization of 1.6 ha coastal wetland (Coastal Wetland Current), construction of 0.4 Ha retention ponds (Filtration ponds 1 and 2), and planting of 2.7 Ha of native Carolinian tree and shrub species.

Work at the site continued in 2023/24 which included:

1) Re-construction of 500m of berm (Berm), which had been undermined by muskrats and allowed common carp into the newly restored 1.6Ha wetland habitat (Coastal Wetland Current)
2) Further excavation to deepen wetland areas, providing better overwintering habitat for native fish and turtle species (excavation).
3) Removal of the old pumping infrastructure that was previously used to drain the agricultural field.
4) Hydroseeding using a mix of 10% Kentucky Bluegrass, 52% Creeping Red Fescue, 35% Perennial Rye Grass, 3% Red Clover and a pollinator mix to ensure the banks stability and prevent erosion.
5) Installation of a 1.5m diameter culvert into the berm to hydraulically connect the restored wetland to Mclean Drain. The culvert was also equipped with a carp exclusion system to prevent large destructive carp from entering the sensitive wetland during the spawning season.

In 2024 this project moves into the final phase. Work in this final year will focus on creating additional in water habitat features and deploying monitoring equipment across the site to monitor the use of the newly created habitat.

Charge 1d: Use GIS techniques to refine PMA mapping, coordination, and scale.

In 2023 the Habitat Task Group reported on the development of reef layers and river plumes identified as Priority Management Areas. Those layers were further refined and the exercise was used to help develop reef prediction layers for the other Great Lakes. Work will continue with Great Lakes Aquatic Habitat Framework support staff to refine layers and develop workflow processes through PMA phases 3 and 4.

Charge 2: Support other task groups by compiling metrics of habitat use by fish.

There was no new work towards this charge in 2023. There are ongoing efforts targeted at this charge which have been captured in prior reports. One ongoing effort is the Experimental Lake Erie Hypoxia Forecast led by NOAA-GLERL (https://www.glerl.noaa.gov/res/HABs_and_Hypoxia/hypoxiaWarningSystem.html). This system provides a forecast of bottom temperature and dissolved oxygen with the intent to alert users of hypoxic events (including upwelling events) in Lake Erie. The information collected and forecasted through this effort assists fisheries managers as well as a many other stakeholders around Lake Erie. Over the next year, the HTG will continue looking for opportunities to compile habitat metrics which are beneficial for the goals and objectives of the LEC.

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Protocol for Use of Habitat Task Group Data and Reports

- The HTG has used standardized methods, equipment, and protocol in generating and analyzing data; however, the data are based on surveys that have limitations due to gear, depth, time, and weather constraints that vary from year to year. Any results or conclusions must be treated with respect to these limitations. Caution should be exercised by outside researchers not familiar with each agency's collection and analysis methods to avoid misinterpretation.

- All data provided from the PMA exercise is reported with the caveat that it is a working dataset based on the best available information. The intention, as designed, is for the HTG to continuously refine the data as new information becomes available and prioritizations are subject to change. Use of the PMA information should be done with this understanding and consultation with HTG co-chairs to ensure proper interpretation of the most recent dataset is highly advised.

- The HTG strongly encourages outside researchers to contact and involve the HTG in the use of any specific data contained in this report. Coordination with the HTG can only enhance the final output or publication and benefit all parties involved.

- Any data intended for publication should be reviewed by the HTG and written permission received from the agency responsible for the data collection.

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The HTG would like to acknowledge and thank the many contributors to the work presented in this report. As this report is mostly an overview of projects underway in the Lake Erie basin, it is impossible to identify every project and every individual involved. If you are involved in a habitat-related project in the Lake Erie basin and would like your work to be represented in the project table, please contact a member of the Habitat Task Group.