



## Maumee AOC Advisory Committee

February 1, 2024 1:30pm – 3:00pm

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### AGENDA

- **Welcome & Meeting/Call Logistics** (Cherie Blair, Ohio EPA)
- **Vote: MAAC Leadership** (Kris Patterson, Partners for Clean Streams) (5 mins)
- **Vote: Minutes** (Chair) (5 mins)
- **Vote: New Member** (Chair) (5 mins)
- **EJ/DEI goals and activities in the Maumee AOC** (Cherie) (15 mins)
  - Spreadsheet of activities and possibilities
  - Goals for the Maumee AOC vs Goals for the MAAC
  - Subcommittee establishment, leadership, and membership
- **US EPA Task Force Leader Report** (Leah Medley, GLNPO) (5 mins)
  - GLRI Action Plan IV update
  - Funding Update
- **Ohio EPA AOC Coordinator Report** (Cherie) (10 mins)
  - BUI Status Updates
  - MAP Updates
  - Updated AOC Program documents and Biennial Report
- **Facilitating Organization's Report** (Kris Patterson, PCS) (10 mins)
  - Financial update
  - Future activities
    - New grant in April 2024 – review some items
    - Any key activities requested from the MAAC?
    - Any projects holding celebrations or public meetings/open houses?
- **Project Highlight – Delaware, Horseshoe, Clark Islands project** (Jenny Carter-Cornell, Verdantas) (10 min)
- **Partner Updates** (15 mins)
- **Public Comments & Adjourn** (5 mins)
- **Next meetings for 2024** – schedule May 2, September 5, December 5



## Maumee AOC Advisory Committee

February 1, 2024 1:30pm – 3:00pm

Teams Meeting Held

### Minutes

**Attendance:** Cherie Blair, Deanna Bobak, Jason Lewis, Mike Pniewski, Vanessa Steigerwald-Dick, Jenny Carter Cornell, Jim Carter, Kris Patterson, Amanda Kovach, Andrew Timmis, Ryan Allison, Paul Hotz, Ashlee Decker, Beth Sparks-Jackson, Alexis Sakas, Kris Barnswell, Kari Gerwin, Sally Gladwell, Scott Butterworth, Josh Miller, Zuri Carter, Laura Sullivan, Archie Lunsey, Bill Burkett, Leah Medley, Amber Bellamy, Bryan Hinterberger, Lynn Ackerson, Mike Libben, DJ Mears, Edith Kippenham, Adam Balzar, Jenny Keffer, Joe Cappell, Lynn Garrity, Mary Winkle

- Cherie Blair, Ohio EPA, welcomed everyone and explained that since this was the first meeting of the year, Kris Patterson, Partners for Clean Streams, would run the brief election of leadership.
- Kris Patterson, asked the MAAC to vote on leadership. She said the Mike Pniewski and Jenny Carter-Cornell had self-nominated again for Chair and Vice Chair, respectively, but would open up the nominations to anyone interested. No one else volunteered or was nominated. DJ Mears moved for Mike and Jenny as Chair and Vice Chair, Ashlee seconded, and the remaining voting members voted yes. The motion passed.
- Mike, as Chair, called for a vote on the December Minutes. Jenny made the motion to accept as written, Brandon seconded, and the motion passed.
- Mike called for a vote on a New Member application. Shawn Duke has changed jobs and re-applied to the MAAC with support from his new employer. Mike made a motion to accept his 2024-2025 application for voting membership, Ashlee seconded, and the motion passed.
- Cherie talked about proposed EJ/DEI goals and activities in the Maumee AOC. This is a new component that US EPA is asking all states for and emphasizing in the AOCs. It was discussed at a meeting with the Facilitating Organizations and committee leadership earlier and last year the MAAC decided to have a smaller group discuss ideas and now PCS is working to incorporate some of those into the next support grant application. Cherie submitted a spreadsheet of prior activities and possibilities for upcoming activities. There is a general breakdown of goals for the Maumee AOC as a whole versus goals for the MAAC to consider. The smaller group in January indicated support for subcommittee establishment, leadership, and participation. PCS would consider how it can support those objectives that the MAAC decides to undertake. Much of the initiative and direct involvement also needs to come from the MAAC itself. Lynn Garrity added that the activities need to come from the committee and are optional; it isn't meant to be "top down" or a specific metric that has to be met.
- Kris outlined some of the items that PCS could consider actively supporting and explained that there is flexibility built into the capacity support grant to pivot to other initiative or to add tasks/objectives as they evolve over the three years. Committee members asked about PCS's budget and resources related to undertaking these new initiatives and Kris emphasized that it would need to be case-to-case as the overall grant deliverable and budget was evaluated but that at a minimum there could be meeting and subcommittee support, general existing resources gathered (such as online training or articles), and a basic tools and planning for reaching new audiences, community groups, and neighborhood groups engaged, such as presentation resources, email support, invitations to other groups to present to the committee etc.

- Mike Pniewski added that Lucas County has been changing procedures for project selection, contracting, and upfront planning to be more community centered and include education and outreach. Federal dollars are requiring it. Other committee members wanted to see more staffing and/or more budget for increased engagement around these efforts.
- Leah Medley, GLNPO, US EPA Task Force Leader reported that EPA is on a continuing resolution through March 8<sup>th</sup>. EPA's GLRI Action Plan IV went to the states for comments prior to public comment. Most comments centered on clarifying EJ/DEI components now included in the plan. Many comments proposed less quantitative and more qualitative goals around that. It should go out for public comment in a few months. Leah also updated the MAAC that Quarter 2 approvals are underway for project funding. Camp Sabroske will be under NOAA, for design and construction.
- Cherie provided the Ohio EPA AOC Coordinator Report. She distributed it in writing and updated everyone verbally on the highlights. BUI 7 removal package will likely come to the MAAC for concurrence and a letter in May. US FWS will go out to sample Otter Creek this spring to finish up BUI 4 evaluations. The next report for Swan Creek GLLA will probably be available in late summer. A Value Engineering study is being done beforehand. Only 1 remaining WildMAP project needs to be completed. Numerous AquaMAPs are in various phases of completion. The Ohio EPA and Ohio Lake Erie Commission recently updated AOC Program documents and created a Biennial Report. See Cherie's updated MAP tables and written report for more detail, posted on [MaumeeAOC.org](http://MaumeeAOC.org).
- Kris Patterson, PCS, gave the Facilitating Organization's Report. Partners for Clean Streams has spent approximately \$93,000 of the \$138,000 AOC support grant budget. There will be more spent in February and March, including paying invoices from contractors and printing, but the grant will likely be underspent when it closes at the end of March. The prior grant was extended for a quarter and overlapped the beginning of this support grant so there was less charged, and during the early part of this grant, there was less outreach, public programs (such as the boat trip), and no major DMDS upgrades. The website has been updated with all 2024 meeting dates, committee members, and other information. The next newsletter will go out soon and all grant reports and tracking was completed. PCS also worked with Ohio EPA to draft the next Facilitating Organization support grant, including incorporating some of the first steps of EJ/DEI initiatives. If you would like to provide input or see the application, please let Kris know asap. PCS would also like to welcome Mary Winkle to the team and she will be supporting the outreach for the MAAC, including the website, social media, and programs. Please reach out if any of the MAP projects will be holding celebrations, public meetings, open houses, tours, or other activities that Mary can support and promote.
- Jenny Keffer, Verdantas and Joe Cappell, Port Authority gave a detailed project highlight on Delaware, Horseshoe, Clark Islands project, which had a construction groundbreaking in January. The powerpoint is available in the meeting materials posted on [MaumeeAOC.org](http://MaumeeAOC.org).
- Partner Updates: Ducks Unlimited shared that Camp Sabroske is in the process of being transferred to the Refuge and Navarre is almost complete. The City of Toledo shared that Bandore Park will have trees removed soon, and the H&H and other studies are wrapping up. There has been a lot of community engagement on the project.
- Public Comments: None Received.
- **Next meetings for 2024** – schedule May 2, September 5, December 5



**Maumee AOC Coordinator Report  
for the Maumee AOC Advisory Committee  
February 1, 2024**

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- **WildMAPs (BUI 14b: Wildlife Habitat)**
  - ... and then there was 1! There is just one WildMAP left and ODNR is expected to complete that project in 2025.
  - An updated Summary Table of the WildMAPs was provided with this report.
  - A detailed narrative tracking of the WildMAPs is available upon request.
- **AquaMAPs (BUI 3a, 6, 14a: Fish Pops, Benthic Pops, Fish Habitat)**
  - Two projects have been partially completed since we last met. Camp Sabroske has been purchased and the Feasibility Study for Collins Park is complete.
  - Four projects are under construction.
  - Six projects have federal tribal consultation in progress.
  - Two projects are out for bid and two more are expected out this spring.
  - I expect 5-10 projects to be under construction in the fall of this year.
  - The AOC Program has requested \$400,000 for engineering/design for the Lower Ottawa River project that was approved in December.
  - An updated Summary Table of the AquaMAPs was provided with this report.
  - A narrative tracking of the AquaMAPs is available upon request.
- **SedMAPs (BUIs vary by project site, GLLA contaminated sediment)**
  - Ohio continues to work with federal partners to make progress on these sediment projects.
  - The release of the draft *Swan Creek Focused Feasibility Study* has been delayed so that a Value Engineering Study can be conducted. When the Swan FFS is ready for public comment there will be an open house/information session. I will keep you posted.
  - An updated Summary Table of the SedMAPs was provided with this report.
  - A narrative tracking of the SedMAPs is available upon request.
- **Misc. MAPs (BUIs 4, 7, 8, 10)**
  - **BUI 4: Deformities & Tumors** – US FWS will be conducting bullhead sampling for liver tumors in Otter Creek during May. This is the last area that is impaired for liver tumors. Once the data is available, a full status evaluation of this BUI will be done to see if it can be removed.
  - **BUI 7: Dredging** – I hope to have a draft BUI removal document to share at the next MAAC meeting in May, a draft out for comment this summer, and submitted to GLNPO in August/Sept.
  - **BUI 10a: Beach Closings (advisories)** – Project is in progress.
  - **BUI 8b: Eutrophication** – I will update the committee at a future meeting.
- **AOC Program Updates**
  - The Ohio AOC Program released new and/or updated documents in December:
    - [A Framework for Reorganizing and Implementing Ohio's Remediation Action Program](#)
    - [Ohio Delisting Guidance and Restoration Targets Document](#)
    - [Ohio AOC Program 2022-23 Highlights](#)
  - Resource/Material sharing
    - I know several of you are or will be taking down trees before the Bat restriction starts on April 1. If you have extra woody material or will be needing it, please fill-out the Materials Sharing sheet with what you have and/or what you need. If easier, share it with your contractor to complete. You or your contractor can reach out directly to the implementer or contractor listed on the sheet to arrange how you want items harvested, where they could/should be stored, when they are needed/should be moved, etc. I will update and share this sheet once a month, but don't hesitate to send updates at any time or request a current copy if needed.

AOC	State	DEI Goal Identified	Engagement Strategy Type	"Other" Strategy Explained	Years Done or Proposed (FY) (2019 - future)	Strategy Details - how groups are/were identified, key partnerships, type of engagement, etc.
Maumee	OH	Establish Maumee AOC Advisory Committee (MAAC) subcommittee on the issue of DEI.	PAC-run programs		proposed	Establish a MAAC subcommittee to focus of DEI as it relates to the Maumee AOC, its members and projects. Work to build awareness in targeted communities and increase partnerships as the AOC moves toward delisting
Maumee	OH	Improve MAAC member awareness and application of education & engagement	PAC-run programs		proposed	Bring in speakers, show training videos/talks or utilize existing MAAC members with DEI-EJ knowledge at MAAC meetings to teach other advisory committee members about the nuances of outreach & engagement in order to improve our efforts moving forward.
Maumee	OH	Encourage Maumee AOC management action project (MAP) implementers to engage/involve local partners/schools in project(s) of mutual benefit	Other	MAP Networking	2022 and beyond	When conducting MAPs expand outreach to local partners, schools, neighbors to inform them about the AOC, the project, and how they can be involved/engaged with the project, as applicable.
Maumee	OH	Encourage Maumee AOC MAP implementers when hosting events to inform, engage and exchange with local landowners and interested individuals information about the Maumee AOC and goals/activities, as well as their MAP.	Other	Management Action Project Open Houses	2021, 2022, 2023 and beyond	Project implementers with the assistance of project management team (PMT) members and/or their consultant/contractor hold public open houses/information sessions to share for MAPs. Project implementers target nearby neighborhoods through posting outreach flyers, direct mailings, emails, door-to-door notices, public websites and social media.
Maumee	OH	Build on established relationships/ partnerships that MAAC members/orgs have in order to share Maumee AOC information	Other	Partner Networking	2024 and beyond	Encourage MAAC members/partners to make presentations to organizations, business groups, community groups, etc. that they are affiliated with to share the goals and progress of the Maumee AOC and to determine if a joint or complementary projects can be coordinated.
Maumee	OH	Communicate via electronic/digital methods (social media) information about the Maumee AOC program, projects, opportunities and progress with a broad audience	PAC-run programs		2019, 2020, 2021, 2022, 2023, and beyond	This targets everyone that accesses these tools, including in underserved communities, utilizing maumeeaac.org, Facebook, and Twitter/X to share info about the AOC, about the MAAC activities including meetings, and about the projects underway or completed.
Maumee	OH	Communicate via an e-newsletter to keep interested parties apprised of project and program progress.	PAC-run programs		2019, 2020, 2021, 2022, 2023, and beyond	This targets everyone that signs up to receive the the Maumee AOC newsletter, including individuals in underserved communities.
Maumee	OH	Develop a printed brochure about the Maumee AOC. Coordinate with electronic materials/resources.	Targeted print materials		2020	Developed a new brochure that explained the Maumee AOC, its goals, objectives and geographic area and distributed at various public events. Brochures are also available on the website for the general public.
Maumee	OH	Develop print materials highlighting MAPs. Coordinate print materials with electronic materials/resources.	Targeted print materials		2020, 2021, 2022, 2023 and beyond	Developed "rack cards" highlighted MAPs projects and distributed at various public events. Rack cards are also available on the website for the general public.
Maumee	OH	Develop printed annual reports to chronical the Maumee AOC progress toward delisting. Make an electronic version available online resources.	Targeted print materials		2019, 2020, 2021, 2022, 2023, and beyond	Developed an annual report about the MAAC & AOC activities and distributed at various public events. Annual reports are also available on the website for the general public.
Maumee	OH	Host events to showcase Maumee AOC activities/projects, and conditions/status	PAC-run programs		2019, 2021, 2023, and beyond	Include boat trips, bus trips, field trips, etc. that have invited speakers to share information about the Maumee AOC program, projects, opportunities and progress. Note: Maumee AOC partners/lead implementers have done their own too.
Maumee	OH	Create awareness about the Maumee AOC to a diverse array of audiences	Other	Public events/ awareness building	proposed (has not been done since pandemic)	Tabling at an array of public events hosted by a variety of entities; such as Earth Day events, county fairs, neighbor/ethnic festivals.
Maumee	OH	Develop a progress/success video showcasing the accomplishments of the Maumee AOC	Other	Video/progress	2020	Produced a 13-minute video about the Maumee AOC, along with four 1-minute trailers. Held 2 virtual public premiere events on October 7, 2020 (due to COVID pandemic). Available at: <a href="https://youtu.be/nL3EU3aZ5oM?si=XPB6mteMDJDIO6cD">https://youtu.be/nL3EU3aZ5oM?si=XPB6mteMDJDIO6cD</a>
Maumee	OH	Expose students to Maumee AOC issues & progress as well as conservation careers associated with environmental science.	Other	Educational curriculum	proposed	Presentations about the AOC and its activities/goals by AOC members at schools, colleges, or youth groups (i.e., scouts, environmental clubs). Conduct field trip/outdoor learning opportunities with project site surveys, electrofishing demonstration, etc. Consider targeting organizations/programs with similar interests (i.e., TMACOG Student Watershed Watch program)
Maumee	OH	Partner with area academic institutions to embed the Maumee AOC story within their organization's educational efforts.	Other	Educational curriculum	proposed	Encourage area schools and colleges to incorporate AOC Program and related issues into their curriculum materials (i.e., video projects on stream health, research paper on a beneficial use, data collection related to water quality or biological health)
Maumee	OH	Partner with other organizations to embed the Maumee AOC story within their organization's educational efforts.	Other	Educational curriculum	proposed	Encourage area points of interest (i.e., Imagination Station, Toledo Zoo, Museum of the Great Lakes) to incorporate AOC Program and related issues into their exhibits (i.e., videos about cleanup efforts, display about regional/binational AOC progress/activities)
Maumee	OH	Enhance river access at AOC project sites to connect underserved communities with AOC project sites & to provide river access programming and management.	Other	public access	proposed	There are several Maumee AOC MAPs that have direct access to areas of potential recreation use. Adding public access to these sites is encouraged. One site (Penn 7) is seeking GLNPO-EJ AOC funding to activate this restored wildlife habitat area for public recreation (i.e., trails, fishing, birding)
Maumee	OH	Identify target communities, organizations, etc. within the Maumee AOC for information sharing and outreach	PAC-run programs		proposed (2024?)	Determine target areas/orgs by evaluating MAP locations, demographics, other non-MAP locations, interested groups with intersecting priorities/goals (i.e., business, neighborhood groups)
Maumee	OH	Identify public involvement strategies for engaging target communities, organizations, etc. within the Maumee AOC.	PAC-run programs		proposed (2024?)	Conduct Information Exchange sessions to share info about the AOC Program, learn about other organizations, discuss common interests/intersections, and potential future shared efforts (i.e., information sharing, project collaboration)
Maumee	OH	Invite diverse representation to participate in MAAC, its subcommittees, and/or project teams from target communities, organizations, etc.	Invited representation		proposed (2024-25?)	Use MAAC member professional relationships with individuals & organization, Information Exchange sessions, etc. to encourage interested parties to join/get involved with the MAAC.
Maumee	OH	Implement public involvement strategies for engaging target communities, organizations, etc. within the Maumee AOC.	PAC-run programs		proposed (2025?)	Specific activities will be determined under a previous goal. The implementation could be coordinated by the MAAC, but conducted by the MAAC, its partner organizations/individuals, and/or facilitating organization

**Timeline definitions:**

Proposed = unknown as to when this will be conducted  
 "and beyond" = the activity is planned or expected to continue

**Other definitions:**

"Targeted" = geographic areas, communities, demographics, etc. where the AOC has not had representation or involvement and would like to

**Acronyms:**

MAAC = Maumee AOC Advisory Committee  
 MAP = Management Action Project  
 PMT = Project Management Team

# Complete Management Action Project List for Maumee AOC Wildlife Habitat BUI 14b (WildMAPs)

Updated 1/29/24

On 12/14/17 the MAAC approved the projects below for recommendation to Ohio EPA. Ohio EPA endorsed these projects on 1/18/18 and US EPA accepted them on 2/12/18. It is expected that once implemented these projects will achieve the restoration target for BUI 14b: Loss of Wildlife Habitat.

Project ID	Project name (Site name)						
COMPLETED		Project Acreage	AOC GLRI Funding	Other Funding	Implementer	Funding Source	Complete
1-16	Magee Marsh State Wildlife Area	1000	\$1,075,000	--	ODNR-Wildlife	COMPLETE (GLRI via U.S. EPA)	6/22
2-16 & 3-16	Toussaint Parcel East and Toussaint Parcel West	242.4	\$2,297,000	--	DU, U.S. FWS	COMPLETE (GLRI via U.S. FWS)	9/22
4-16	Irwin upland site 5 (Griswold)	20.2	\$150,000	--	Metroparks	COMPLETE (GLRI via U.S. EPA)	9/18
6-16	Habitat Restoration Plans	0	\$400,000	--	Ohio EPA	COMPLETE (GLRI via U.S. EPA)	3/19
7-16	Maumee State Forest site 1 (Carter and Rusin-1)	38	\$261,668	--	ODNR-Forestry	COMPLETE (GLRI via U.S. EPA)	4/21
8-16	Maumee State Forest site 2 (Hight wetland & forest)	69.4	\$99,332	--	ODNR-Forestry, TNC	COMPLETE (GLRI via U.S. EPA)	4/21
9-16	Maumee State Forest site 3 (Hight upland & flatwoods)	92.5	\$95,000	--	ODNR-Forestry, TNC	COMPLETE (GLRI via U.S. EPA)	4/21
10-16	Irwin wet prairie site 3a (Neyland)	9.9	\$97,300	--	Metroparks	COMPLETE (GLRI via U.S. EPA)	3/18
11-16	Irwin wet prairie site 3b	31.8	\$300,000	--	Metroparks	COMPLETE (GLRI via U.S. EPA)	12/20
13-16	Navarre Unit of Ottawa National Wildlife Refuge	779	\$1,300,000	\$1,351,297	US FWS, DU	COMPLETE (GLRI to U.S. FWS, GLFWRA, H2Ohio)	12/23
14-16	Cedar Point National Wildlife Refuge Pool 2 (Gradel)	155	\$850,000	\$96,000	US FWS	COMPLETE (GLRI to U.S. FWS)	7/23
15-16	Oak Savannah Expansion at Secor Metropark	40.6	\$510,000	--	Metroparks	COMPLETE (GLRI via U.S. EPA)	12/22
22-17	Fox Property Restoration Project	38	\$51,340	--	Friends of Ottawa National Wildlife Refuge	COMPLETE (GLRI via U.S. EPA passthru to OEPA)	11/21
23a-17	Restoring Coastal Wetlands at Toussaint State Wildlife Area Phase I & II	63	\$600,000	\$888,000	ODNR-Wildlife, TNC, DU	COMPLETE (GLRI via NOAA, GLFWRA, SOGL)	9/19
23b-17	Restoring Coastal Wetlands at Toussaint State Wildlife Area Phase III	62	\$750,000	--	ODNR-Wildlife, DU	COMPLETE (NOAA/DU Partnership)	9/21
24-17	Penn 7 Wetland Restoration	59	\$2,954,619	--	City of Toledo, GLC	COMPLETE (NOAA/GLC Partnership)	1/23
25-17	Howard Marsh Phase 2	214	\$4,272,000	--	Metroparks, DU	COMPLETE (NOAA Partnership)	6/23
27-17	Kitty Todd Expansion	320.1	\$1,400,000	\$3,545,700	TNC, Metroparks	COMPLETE (GLRI via U.S. EPA passthru OEPA, WRRSP)	2/22
29-17	Maumee Bay State Park Coastal Wetland	137	\$500,000	\$2,200,000	ODNR-Wildlife, Parks	COMPLETE (GLRI via U.S. EPA, H2Ohio)	12/22
		<b>3371.9</b>	<b>\$17,963,259</b>	<b>\$8,080,997</b>			

FUNDED (In Progress)		Project Acreage	AOC GLRI Funding	Other Funding	Implementer	Funding Source	Estimated Complete
28-17	Maumee State Forest Expansion	152	\$1,369,500	--	ODNR-Forestry	Funded (GLRI via U.S. EPA)	5/25
		<b>152.0</b>	<b>\$32,520,718</b>	<b>\$16,161,994</b>			

NEEDS FUNDNG/FUNDING being PROCESSED		Project Acreage	Funding Needed	Other Funding	Proposed Implementer	Funding Status	
ALL Projects Funded		<b>0</b>	<b>\$0</b>	<b>\$0</b>			

3523.9	= Total Acres of Recommended MAPs
3427.0	= BUI 14b Target Acreage
-96.9	= Remaining Acres that Need to be Identified*

Estimated <b>Total AOC GLRI Funds</b>	=	\$50,483,977	\$24,242,991	= Estimated <b>Total Non-AOC GLRI Funds</b>
Estimated <b>Total Cost</b>	=	\$74,726,968		
Estimated <b>Funding Needed</b>	=	\$0		

Estimated <b>Percentage of Non-AOC Funds Leveraged</b>	=	32.4%
Estimated <b>Cost per Acre to Achieve Target**</b>	=	\$21,805.36

\* Based on past experience, it is expected that the actual acreage of projects will change slightly as they are implemented. Any remaining acreage needed to achieve the BUI 14b restoration target is expected to be realized through project(s) that have similar objectives to this BUI target, but are funded by non-AOC GLRI sources.

\*\* In NW Ohio in-lieu mitigation costs average \$48,000 per acre and mitigation bank costs average \$35,000 per acre in 2016

**Complete Management Action Project List for Maumee AOC Aquatic BUIs 3a, 6, and 14a (AquaMAPs)**

On 4/30/20 the MAAC approved these projects for recommendation to Ohio EPA. Ohio endorsed these projects on 5/7/20 and US EPA accepted them on 7/29/20. BUI 3b is not impaired. BUI 14b has all mgmt. actions being implemented. Once this list of projects is implemented the Restoration Targets for BUI 3: Degradation of Fish & Wildlife Populations, BUI 6: Degradation of Benthos, and BUI 14: Loss of Fish & Wildlife Habitat is expected to be achieved.

Project ID	Project name (Site name)	Target BUI(s)	AOC GLRI Funding	Other Funding	Implementer	Funding Source	Project Status	Date Complete
PD-5.0	Prairie Ditch Restoration at Secor Park: North of Visitor's Center	14a, 6	\$150,000	--	Metroparks Toledo	GLRI via U.S. EPA	COMPLETE (started 4/21)	1/23
PD-6.0	Prairie Ditch Two-Stage and Floodplain Planting: Secor Park Expansion, Phase II	14a, 6	\$160,000	--	Metroparks Toledo	GLRI via U.S. EPA	COMPLETE (started 4/21)	1/23
MR-14.2	Delaware Islands Complex Restoration (Part 1-E&D)*	3a, 14a, 6	\$320,000	--	TLCPA	GLRI via U.S. EPA	COMPLETE (started 8/22)	6/23
LTC-13.0	Connected Wetland and Fish Passage at Camp Sabroske^ (Part 1-Acquisition)	3a, 6, 14a	\$450,000	--	U.S. FWS	IA GLRI to U.S. FWS	COMPLETE (started 5/21)	10/23
OC-5.0	Collins Park Municipal Golf Course Stream Restoration (Part 1-FS)	14a, 3a, 6	\$175,500	--	City of Toledo (Parks)	IA to NOAA/GLC Partnership	COMPLETE (started 9/21)	12/23
			<b>\$1,255,500</b>	<b>\$0</b>				

FUNDED (In Progress)/FUNDING being PROCESSED		Target BUI(s)	AOC GLRI Funding	Other Funding	Implementer	Funding Source	Project Status	Estimated Complete
TuC-17.0	Wetland Enhancement in the Riverine of Turtle Creek (Sharlow) ^	14a, 3a, 6	\$302,325	\$9,160	Ottawa SWCD	GLRI via U.S. EPA & LEPF	Funded (8/21)	9/24
HTC-2.0	Headwaters Tenmile Creek Stream & Riparian Restoration <sup>F*</sup>	6, 14a, 3a	\$560,523	--	Lucas SWCD	GLRI via U.S. EPA	Funded (8/21)	6/24
AOC-2.0	Fish and Benthos Improvements with Urban Chloride Reductions (Phase 1)	6, 3a	\$311,000	--	Univ. of Toledo	GLRI via U.S. EPA passthru OEPA	Funded (9/21)	6/25
SIC-3.0	Restoration of the Ottawa River within Jermain Park*	3a, 6, 14a	\$769,802	--	City of Toledo (TES)	IA to NOAA/GLC Partnership	Funded (9/21)	1/27
CeC-6.0	Dry Creek Ecological Stream and Riparian Project	14a, 6, 3a	\$580,000	--	Wood Co. Engineers	GLRI via U.S. EPA	Funded (9/21)	11/24
PC-2.0	Packer Creek Stream Restoration near Genoa-State Route 163*	14a	\$3,444,000	--	Ottawa SWCD	GLRI via U.S. EPA	Funded (9/21)	12/24
BD-2.0	Stream Restoration at Oregon Recreational Complex*	14a, 6	\$1,344,000	\$85,000	City of Oregon	GLRI via U.S. EPA	Funded (7/21)	12/24
HDOR-9.0	Hill Ditch Restoration at Toledo Natural Science Technology Center*	6, 14a	\$250,000	\$100,000	Toledo Public Schools	GLRI via U.S. EPA	Funded (9/21)	7/24
HDOR-13.0	Hill Ditch Restoration at Paisley Park (Bandore)	6	\$130,000	\$679,610	City of Toledo (TES)	GLRI via U.S. EPA	Funded (10/21)	6/25
TuC-18.0	Oxbow Channel Addition & Wetland Enhancement/ Reconnection in the Lacustrary of Turtle Creek (Minier & Kontz)^	14a, 3a, 6	\$3,300,000	\$82,500	U.S. FWS	IA GLRI to USFWS & H2Ohio	Funding Transferred	TBD
PC-6.0	Packer Creek Stream and Riparian Restoration (Gargas) ^	14a	\$278,500	--	Ottawa SWCD	GLRI via U.S. EPA	Funded (9/22)	12/24
HTC-12.2	Stream Restoration at Lathrop Park*	14a, 6	\$450,000	--	Partners for Clean Streams	GLRI via U.S. EPA passthru OEPA	Funded (9/22)	3/26
CeC-1.0	Nature Trails Park Riparian Restoration and Wetland Creation*	14a, 6, 3a	\$337,000	--	City of Northwood	GLRI via U.S. EPA	Funded (9/22)	6/25
DC-2.0	Delaware Creek Park Restoration: Phase II	6, 14a	\$500,000	\$33,784	City of Toledo (TES)	GLRI via U.S. EPA	Funded (9/22)	12/25
UBC-13.0	Maumee State Forest Blue Creek Stream Restoration (Hight) *	14a	\$668,000	--	The Nature Conservancy	GLRI via U.S. EPA passthru ODNR(Fst)	Funded (7/22)	9/25
LTC-1.0	Schiller Stream and Riparian Improvements*	14a, 3a, 6	\$678,000	--	U.S. FWS	IA GLRI to U.S. FWS	Funding Transferred	TBD
OC-3.2	Berlin Avenue Floodplain and Stream Improvements^	14a, 6, 3a	\$699,510	--	City of Oregon	GLRI via U.S. EPA	Funded (8/22)	12/25
OC-3.3	Taylor Rd. and Yarrow St. Floodplain and Stream Improvements^*	14a, 6, 3a	\$690,000	--	City of Oregon	GLRI via U.S. EPA	Funded (8/22)	12/25
LBC-17.1	Blue Creek Restoration at Blue Creek Metropark*	14a	\$550,000	--	Metroparks Toledo	GLRI via U.S. EPA	Funded (9/22)	9/25
AC-3.0	Neis Ditch Stream Restoration^3	14a, 6, 3a	\$400,000	--	Metroparks Toledo	GLRI via U.S. EPA	Funded (9/22)	9/25
CeC-4.0	Dry Creek Aquatic and Riparian Restoration (WM)^4*	14a, 6, 3a	\$500,000	--	City of Northwood	GLRI via U.S. EPA	Funded (9/23)	9/26
MR-14.1	Audubon State Nature Preserve Islands Restoration*	3a, 14a, 6	\$3,600,000	--	Metroparks Toledo	GLRI via U.S. EPA	Funded (4/22)	9/25
DD-7.0	Detwiler Park Stream Restoration*	6, 3a, 14a	\$1,000,000	--	City of Toledo (TES)	GLRI via U.S. EPA	Funded (9/22)	4/25
CrC-5.0	Crane Creek Lacustrary Wetland Restoration	14a, 3a, 6	\$1,500,000	--	U.S. FWS	IA GLRI to U.S. FWS	Funding Transferred	TBD
OC-5.0	Collins Park Municipal Golf Course Stream Restoration (Part 2-E&D)	14a, 3a, 6	\$209,000	--	City of Toledo (TES)	IA to NOAA/GLC Partnership	Funded (9/22)	TBD
HDSC-4.0	UTMC Swan Creek Restoration*	6, 14a	\$570,000	--	University of Toledo	IA to NOAA/GLC Partnership	Funded (9/22)	TBD
MR-14.2	Delaware Islands Complex Restoration (Part 2-Implementation)	3a, 14a, 6	\$5,080,000	--	TLCPA	GLRI via U.S. EPA	Funded (8/23)	4/26
LTC-13.0	Connected Wetland and Fish Passage at Camp Sabroske* (Part 2-E&D)	3a, 6, 14a	\$1,775,000	--	DU	IA to NOAA/DU Ptnrshp	Funding Transferred	TBD
			<b>\$30,476,660</b>	<b>\$990,054</b>				

NEEDS FUNDING		Target BUI(s)	Funding Needed	Other Funding	Proposed Implementer	Proposed Funding Source	Funding Status	Funding Priority
<i>Pending FFY24</i>								
LTC-13.0	Connected Wetland and Fish Passage at Camp Sabroske* (Part 3-Implementation)	3a, 6, 14a	\$1,149,015	--	U.S. FWS, DU	IA to NOAA/DU Ptnrshp	Awaiting Allocation	1
OC-5.0	Collins Park Municipal Golf Course Stream Restoration (Part 3-Implementation)	14a, 3a, 6	\$315,500	--	City of Toledo (TES)	IA to NOAA/GLC Partnership	Awaiting Allocation	1
SIC-13.1	Improvements to Nearshore Aquatic Habitat in the Lower Ottawa River (Part 1-E&D)	3a, 6, 14a	\$400,000	--	City of Toledo (TES)	GLRI via U.S. EPA	Awaiting Allocation	1
SIC-13.1	Improvements to Nearshore Aquatic Habitat in the Lower Ottawa River (Part 2-Implementation)	3a, 6, 14a	\$2,600,000	--	City of Toledo (TES)	GLRI via U.S. EPA	Awaiting Allocation	2
			<b>\$4,464,515</b>	<b>\$0</b>				

NO GLRI-AOC (FA1) FUNDING REQUIRED, ALREADY FUNDED		Target BUI(s)	AOC GLRI Funding	Other Funding	Implementer	Funding Source	Complete	Funded
varies	20 already funded Aquatic Biological MAPs	3, 6, 14a	--	\$12,022,186	varies	varies	17 of 20	all
			<b>\$0</b>	<b>\$12,022,186</b>				

^ = acquisition  
 ^4 = acquisition or easement  
 \* = concept plan

Estimated <b>Total AOC GLRI Funds</b> =	\$36,196,675	\$13,012,240	= Estimated <b>Total Non-AOC GLRI Funds</b>
Estimated <b>Total Cost</b> =	\$49,208,915		
Estimated <b>Funding Needed</b> =	\$4,464,515		
Estimated <b>Percentage of Non-AOC Funds Leveraged</b> =	26.4%		

**Complete Maumee AOC Management Action Project List for Contaminated Sediments (SedMAPs)**

Updated 1/31/24

On 6/11/20 the MAAC approved these projects for recommendation to Ohio EPA. Ohio endorsed these projects on 6/29/20 and US EPA accepted them on 7/29/2020. These projects will address a variety of BUIs as listed with each project. These projects will lead to the direct removal of some BUIs, but other BUIs will require additional management actions as defined in those BUI-specific management action lists. Below is an explanation of the BUI numbering.

**Sediment Projects**

BUI	Project Site	Lead Agency	Task/Description	Funding Status	AOC GLLA Funding	Non-Federal Funding	Estimated Total Cost	Anticipated FFY Funding
1,3,4,6,14	Ottawa River <i>(Reaches 1 - 4 area)</i>	US ACE (for GLNPO) ORD (for GLNPO)	Remedy Confirmation Study - Reach 1	Complete (2019)	\$446,723	-	\$446,723	19
			Remedy Effectiveness Study - Reach 2-4	In Progress	\$1,100,000	-	\$1,100,000	20
			Area 4y Sampling for Extent of PCBs	Complete (1/23)	-	\$100,000	\$100,000	22
			Area 4y Preliminary Design Investigation	In Progress	-	\$150,000	\$150,000	24
			Area 4y Remedial Design/Action	Pending	-	\$2,300,000	\$2,300,000	24-25
			Reach 1-4 Data Synthesis/Next Steps	In Progress	-	-	-	24
			Decision document	In Progress	-	-	-	24
3,6,14	Halfway, Silver, Shantee Creeks	Ohio EPA	Field verification of conditions	Complete (11/20)	-	-	-	20
			Decision document	Complete (7/21)	-	-	-	21
6,14	Swan Creek (RM 4-0) <i>(Phase 1 &amp; 2 area)</i>	GLNPO	SLERA	Complete (2019)	-	-	-	19
			Data Gap Investigation	Complete (8/22)	\$600,000	-	\$600,000	20
			Feasibility Study	In Progress	\$195,000	\$105,000	\$300,000	24
			Value Engineering Study	In Progress	tbd	-	tbd	24
			Preliminary Design Investigation	In Progress	\$195,000	\$105,000	\$300,000	24
			Remedial Design	Needs Funding	\$325,000	\$175,000	\$500,000	24-25
			Remedial Action/Construction	Needs Funding	\$12,025,000	\$6,475,000	\$18,500,000	26
			Remedy Effectiveness Study	Needs Funding	tbd	tbd	tbd	32
3,6,14	Maumee River - Upstream <i>(Phase 1 area)</i>	US ACE (for GLNPO)	SLERA	Complete (2019)	-	-	-	20
			Decision document	Complete (10/21)	-	-	-	20
3,6,7,14	Maumee River - Sway Bridge <i>(within Phase 2 area)</i>	US ACE (for GLNPO)	SLERA	Complete (2019)	-	-	-	20
			Data Gap Investigation	Complete (8/22)	\$725,300	-	\$725,300	21
			Feasibility Study	Complete (10/23)	\$195,000	\$105,000	\$300,000	23
			Preliminary Design Investigation	In Progress	\$195,000	\$105,000	\$300,000	24
			Remedial Design	Pending	\$2,400,000	-	\$2,400,000	24
			Remedial Action/Construction	Needs Funding	\$19,250,000	-	\$19,250,000	26
3,6,14	Maumee River - WWTP <i>(within Phase 2 area)</i>	US ACE (for GLNPO)	SLERA	Complete (2019)	-	-	-	20
			Data Gap Investigation	Complete (8/22)	\$725,300	-	\$725,300	21
			Feasibility Study	Complete (10/23)	\$195,000	\$105,000	\$300,000	23
			Preliminary Design Investigation	In Progress	\$195,000	\$105,000	\$300,000	24
			Remedial Design	Pending	\$2,400,000	-	\$2,400,000	24
			Remedial Action/Construction	Needs Funding	\$33,250,000	-	\$33,250,000	26
			Remedy Effectiveness Study	Needs Funding	tbd	tbd	tbd	32
			3,4,6,11,14	Otter Creek	US ACE (for GLNPO)	Remedial Design	Complete (2020)	\$1,300,000
Remedy/Restoration Baseline Study	Complete (2020)	tbd				tbd	tbd	20
Remedial Action/Construction	Complete (2021)	\$6,500,000				\$3,500,000	\$10,000,000	21
Remedy Effectiveness Study	In Progress	tbd				tbd	tbd	26
Restoration Effectiveness Study	In Progress	tbd				tbd	tbd	26
Decision document (NFA)	Complete (2019)	-				-	-	19
3,4,6,14	Duck Creek	GLNPO	SLERA	Complete (2018)	-	-	-	19
			Decision document (NFA)	Complete (2019)	-	-	-	19

note: Italicized funding are rough estimates

\$82,217,323 \$14,030,000 \$96,247,323

Completed Tasks = \$15,197,323 In Progress/Funded Tasks = \$2,450,000 Needs Funding/Pending Tasks = \$78,600,000

**Cost Share Projects**

Project ID	Project name (Site name)	Lead Implementer/ Partner	Funding Source	Funding Status	AOC GLLA Funding	Non-Federal Funding	Added to PA	Estimated Complete
CS-01	Cullen Park Flow Through Wetland (MB-2.0)	Toledo-Lucas Co Port Authority	H2Ohio (SFY20-Phase 1)	Complete (2021)	-	\$203,429	Oct. 2020	June 2021
CS-02	Grassy Island Flow Through Wetland	Toledo/Lucas Co Port Authority	H2Ohio (SFY20-Phase 1)	Complete (2021)	-	\$531,629	Oct. 2020	June 2021
CS-03	Maumee Bay State Park (29-17)	TNC	H2Ohio (SFY20-Phase 1)	Complete (2022)	-	\$2,200,000	Oct. 2020	Dec 2022
CS-4A	Ottawa NWR Nearshore Habitat Restoration (CR-4.0)	Ottawa SWCD	H2Ohio (SFY20-Phase 1)	In Progress	-	\$650,000	Oct. 2020	TBD
CS-4B	Turtle Creek Bay (Magee Marsh) Reconnection (TuC-20.0)	Erie SWCD	H2Ohio (SFY20-Phase 1)	Complete (2022)	-	\$600,000	Oct. 2020	June 2022
CS-13	Oak Openings Preserve Metropark Wetland Expansion	Metroparks Toledo	H2Ohio (SFY20-Phase 1)	Complete (2022)	-	\$867,000	Oct. 2020	May 2022
CS-25	VanOrder Woodland and Wetland Restoration	ODNR - Forestry	H2Ohio (SFY20-Phase 1)	Complete (2022)	-	\$363,476	Oct. 2020	Spring 2022
CS-26	Navarre Marsh Wetland Restoration & Reconnection	Ducks Unlimited	H2Ohio (SFY20-Phase 1)	In Progress	-	\$950,000	Oct. 2020	Late 2023
CS-12	Mallard Club Wildlife Area Wetland Connection	Ducks Unlimited	H2Ohio (SFY20-Phase 2)	In Progress	-	\$767,071	June 2021	June 2024
CSM-15	Maumee River Shoreline Acquisition	Metroparks Toledo	Metroparks Toledo General Fund	Complete (2021)	-	\$1,833,350	June 2021	Sept 2021
CSM-16	Oak Openings Preserve Metropark Wetland Expansion (PART 2 of CS-13)	Metroparks Toledo	Clean Ohio Fund District 12 (SFY20)	Complete (2022)	-	\$483,625	June 2021	June 2022
CSM-17	Oak Openings Corridor Swamp Forest Protection (Reed)	Metroparks Toledo	Clean Ohio Fund District 12 (SFY21)	In Progress	-	\$584,000	June 2021	Late 2023
CSM-18	Ravine Park Acquisition and Restoration (Garfield Greenway)	Metroparks Toledo	Clean Ohio Fund District 12 (SFY21)	In Progress	-	\$271,368	June 2021	Late 2023
CSM-19	Swan Creek Preserve Expansion	Metroparks Toledo	Clean Ohio Fund District 12 (SFY21)	In Progress	-	\$162,005	June 2021	June 2023
CS-34	Clark Island Habitat Restoration Project (E&D only)	Toledo/Lucas Co Port Authority	H2Ohio (SFY21-Phase 3)	In Progress	-	\$620,000	June 2021	June 2023
CS-36	Duck Creek Wetland and Stream Restoration	Toledo/Lucas Co Port Authority	H2Ohio (SFY21-Phase 3)	In Progress	-	\$1,800,000	June 2021	Dec 2023
CS-4C	Toussaint Shooting Club Reconnections	Ottawa SWCD	H2Ohio (SFY21-Phase 3)	In Progress	-	\$2,418,000	June 2021	June 2023
CS-55	Ford Ditch Two-Stage Ditch Restoration	Lucas Co Engineers Office	H2Ohio (SFY21-Phase 5)	In Progress	-	\$636,345	Oct. 2022	Dec 2023
CS-86	Univ of Toledo Foundation CADE Wetland and Stream Restoration	UT Foundation	H2Ohio (SFY21-Phase 5)	In Progress	-	\$2,229,188	Oct. 2022	Oct 2023
CS-91	Ottawa NWR Expansion - Lickert Tract	TNC	H2Ohio (SFY21-Phase 5)	In Progress	-	\$1,364,000	Oct. 2022	May 2024



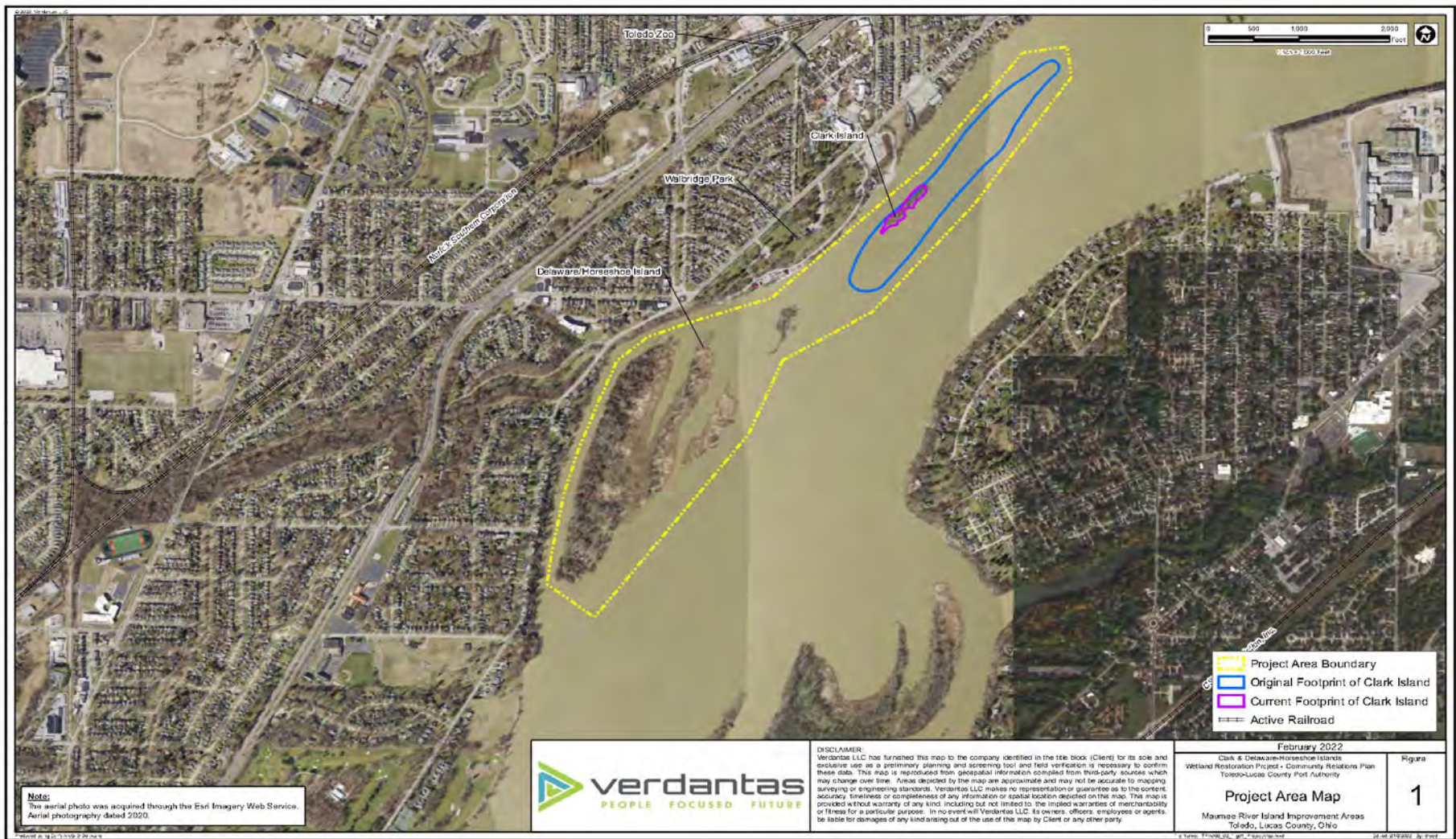


# CLARK & DELAWARE/HORSESHOE ISLANDS WATER QUALITY & HABITAT IMPROVEMENT PLANS

*Maumee AOC Advisory Committee Update*

*February 1, 2024*

# PROJECT AREA



# DEDICATION OF STATE & FEDERAL FUNDING

The dedication of \$13.5 million from state and federal funds to improve and restore this set of islands is the largest known habitat restoration investment in the Maumee River

- ODNR dedicated \$8.146 million to design and construct this project through the H2Ohio Program
- U.S. EPA awarded \$5.4 million in design and construction funding through the Great Lakes Restoration Initiative
- GLRI funds were recommended by the MAAC as a Management Action Project

The logo for H2Ohio features the text "H2Ohio" in a blue, sans-serif font. The "2" is a smaller size than the "H" and "O". Below the text are three blue wavy lines representing water.The logo for Great Lakes RESTORATION features the text "Great Lakes RESTORATION" in a blue, sans-serif font. To the right of the text is a blue silhouette map of the Great Lakes region.

# PROJECT TEAM



# Clark Island and Delaware/Horseshoe Island Complex 1940



# Clark Island and Delaware/Horseshoe Island Complex



# RECENT CONDITIONS – CLARK ISLAND



# RECENT CONDITIONS – DELAWARE/HORSESHOE ISLANDS





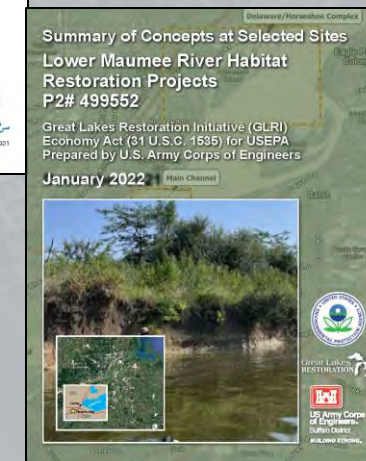
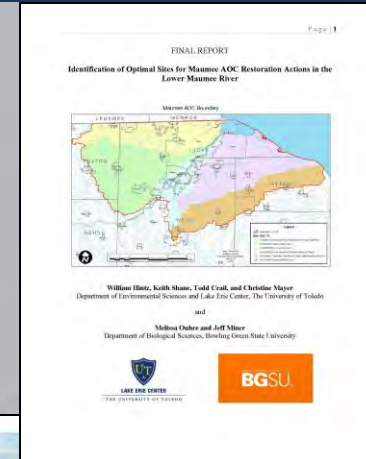
# CURRENT CONDITIONS

- The Maumee River, from the Maumee-Perrysburg Bridge to its mouth, is impaired for fish habitat, fish communities, and benthic communities
  - This section of the river does not meet the minimum standards by Ohio EPA based on real surveys and assessments of fish habitat, fish communities, and benthic communities



# RECENT EVALUATIONS

- 2019-2020 Maumee Mainstem Biological Baseline and Reference Conditions Assessments (University of Toledo & Bowling Green State University)
- 2020-2021 Restoration Design Concepts (University of Toledo, Bowling Green State University, & Hull/Verdantas)
- 2021-2022 Feasibility Study for Delaware/Horseshoe Island Complex, Marengo Island, Audubon/Ewing Island Complex (USACE, USGS, Ohio EPA, ODNR, Partners for Clean Streams, & University of Toledo) [+Hull/Verdantas assisted with public outreach]
- 2022 H2Ohio Evaluations/Planning for Clark Island



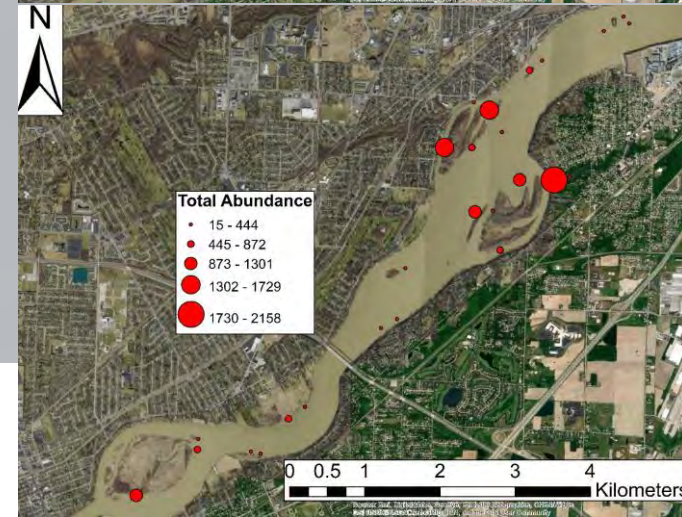
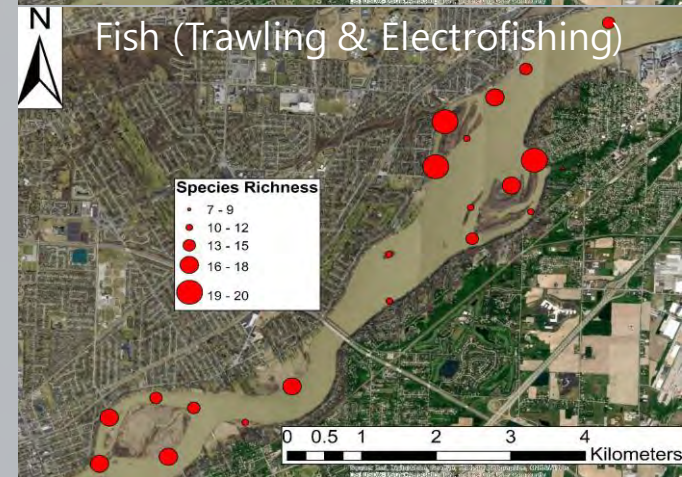
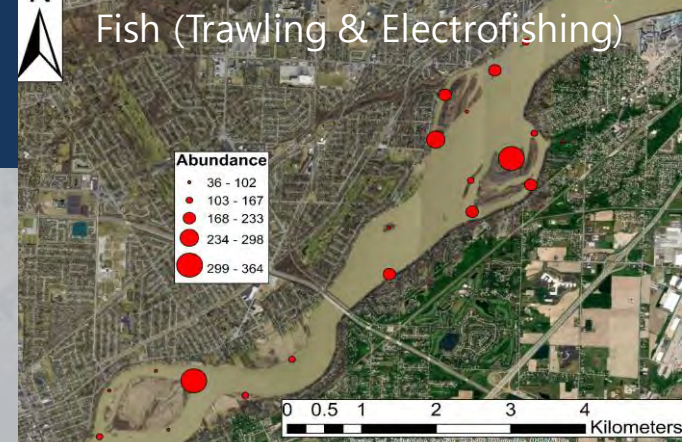
# UT/BGSU BIOLOGICAL EVALUATIONS

“River island complexes provide a variety of different habitat types and increase habitat heterogeneity of the system and have been shown to have a significant positive effect on both the density and diversity of benthic invertebrates and fish species”

- Identification of Optimal Sites for Maumee AOC Restoration Actions in the Lower Maumee River, p. 37

In other words....

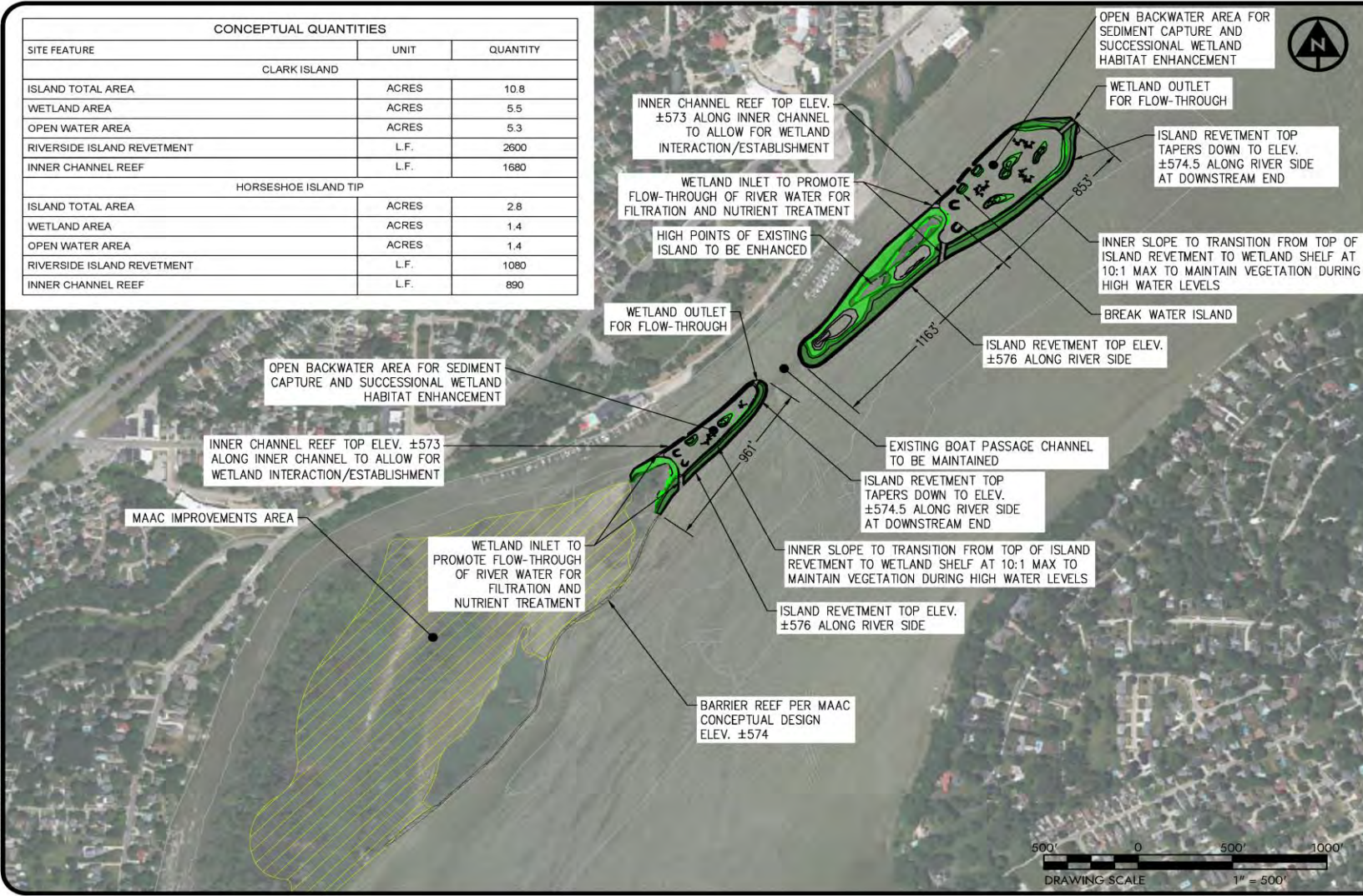
## Maumee River islands provide ideal habitat



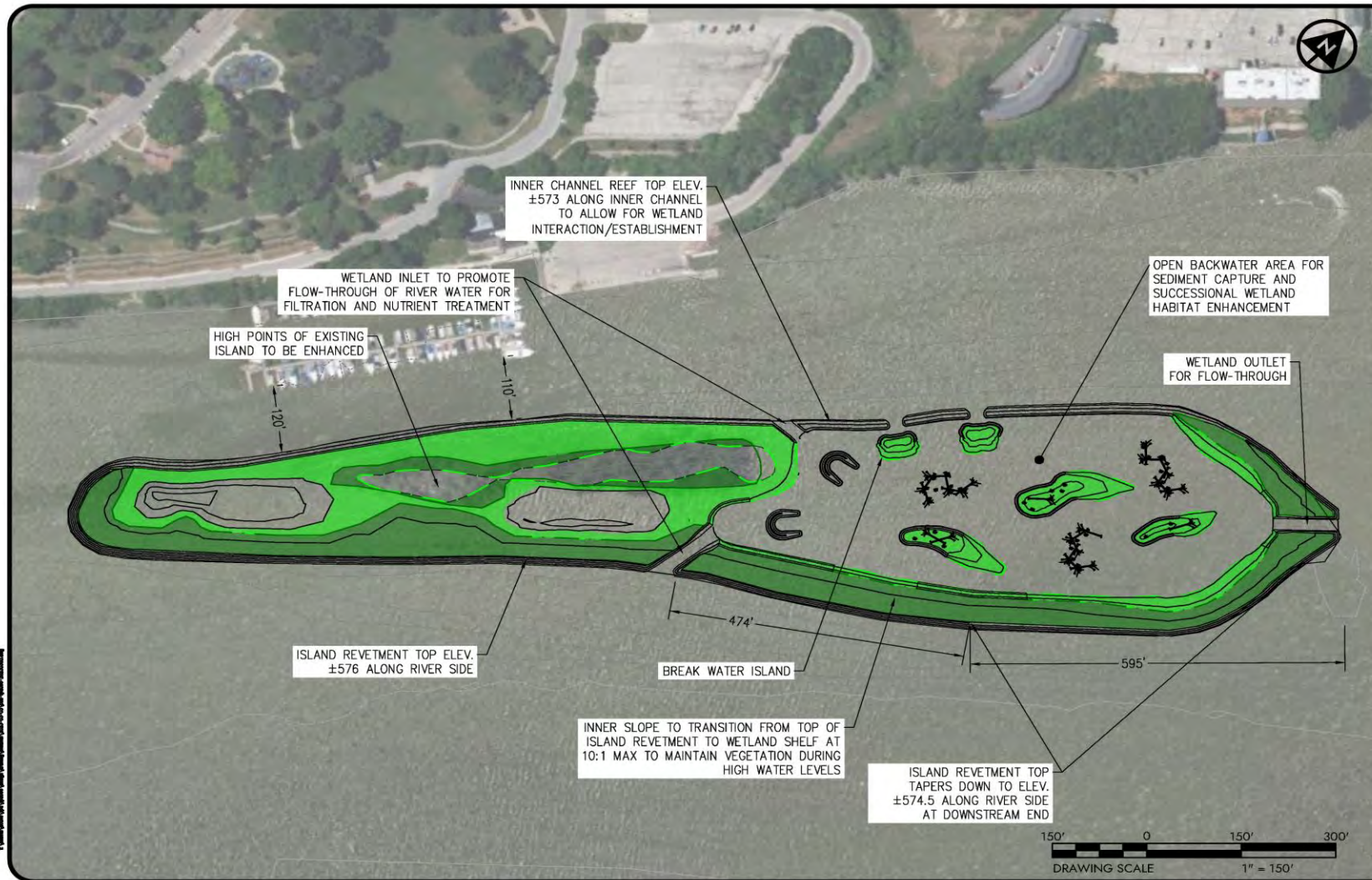


# H2OHIO RESTORATION PLANS

CONCEPTUAL QUANTITIES			
SITE FEATURE	UNIT	QUANTITY	
CLARK ISLAND			
ISLAND TOTAL AREA	ACRES	10.8	
WETLAND AREA	ACRES	5.5	
OPEN WATER AREA	ACRES	5.3	
RIVERSIDE ISLAND REVETMENT	L.F.	2600	
INNER CHANNEL REEF	L.F.	1680	
HORSESHOE ISLAND TIP			
ISLAND TOTAL AREA	ACRES	2.8	
WETLAND AREA	ACRES	1.4	
OPEN WATER AREA	ACRES	1.4	
RIVERSIDE ISLAND REVETMENT	L.F.	1080	
INNER CHANNEL REEF	L.F.	890	



# H2OHIO RESTORATION PLANS



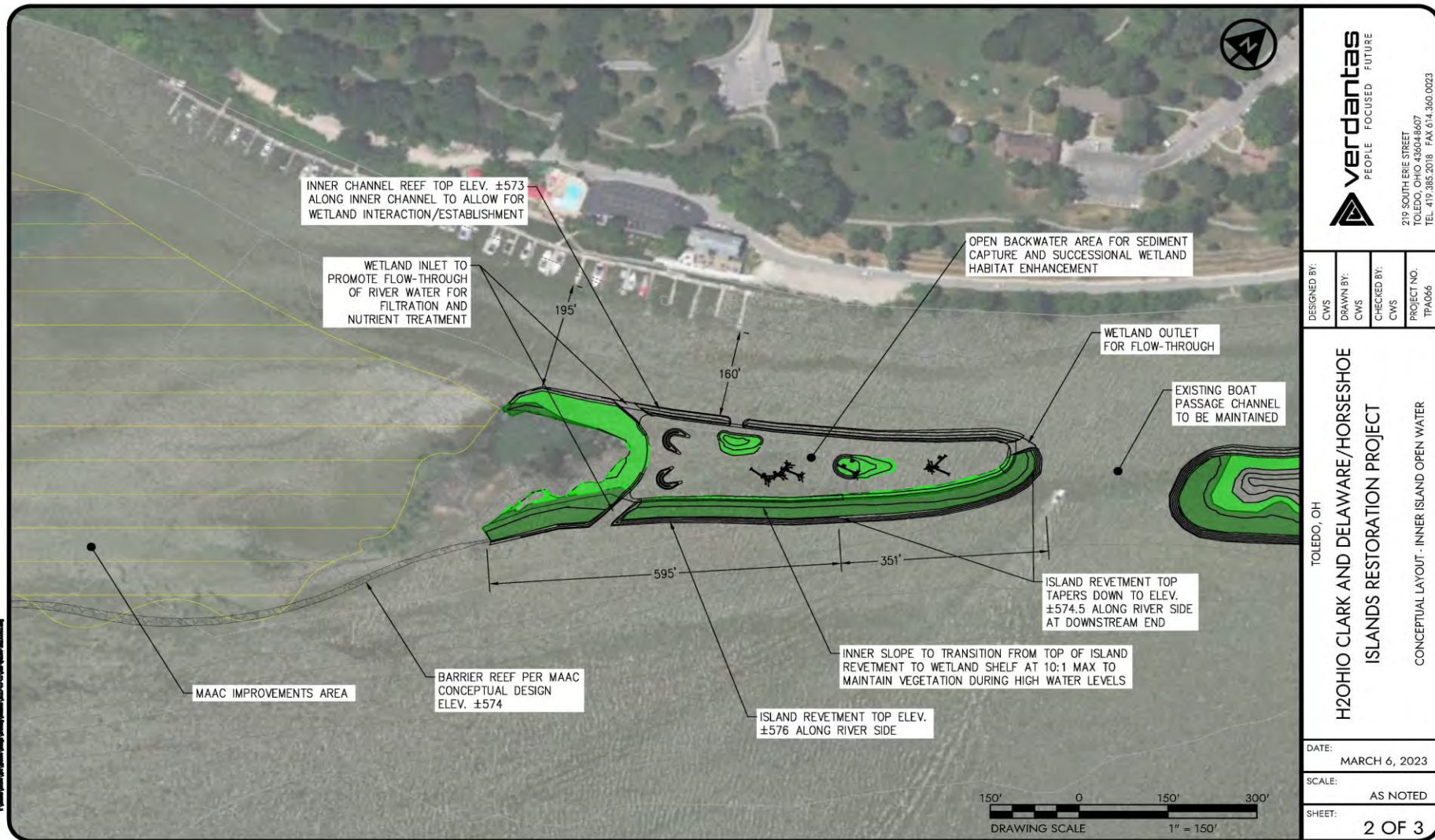
219 SOUTH EIRE STREET  
 TOLEDO, OH 43604-6407  
 TEL: 419.365.2018 FAX: 414.360.0023

DESIGNED BY: CWS  
 DRAWN BY: CWS  
 CHECKED BY: CWS  
 PROJECT NO: TPA066

TOLEDO, OH  
**H2OHIO CLARK AND DELAWARE/HORSESHOE ISLANDS RESTORATION PROJECT**  
 CONCEPTUAL LAYOUT - INNER ISLAND OPEN WATER

DATE: MARCH 6, 2023  
 SCALE: AS NOTED  
 SHEET: 3 OF 3

# H2OHIO RESTORATION PLANS



219 SOUTH ERIC STREET  
TOLEDO, OH 43604-8607  
TEL: 419-385-2018 FAX: 614-360-0023

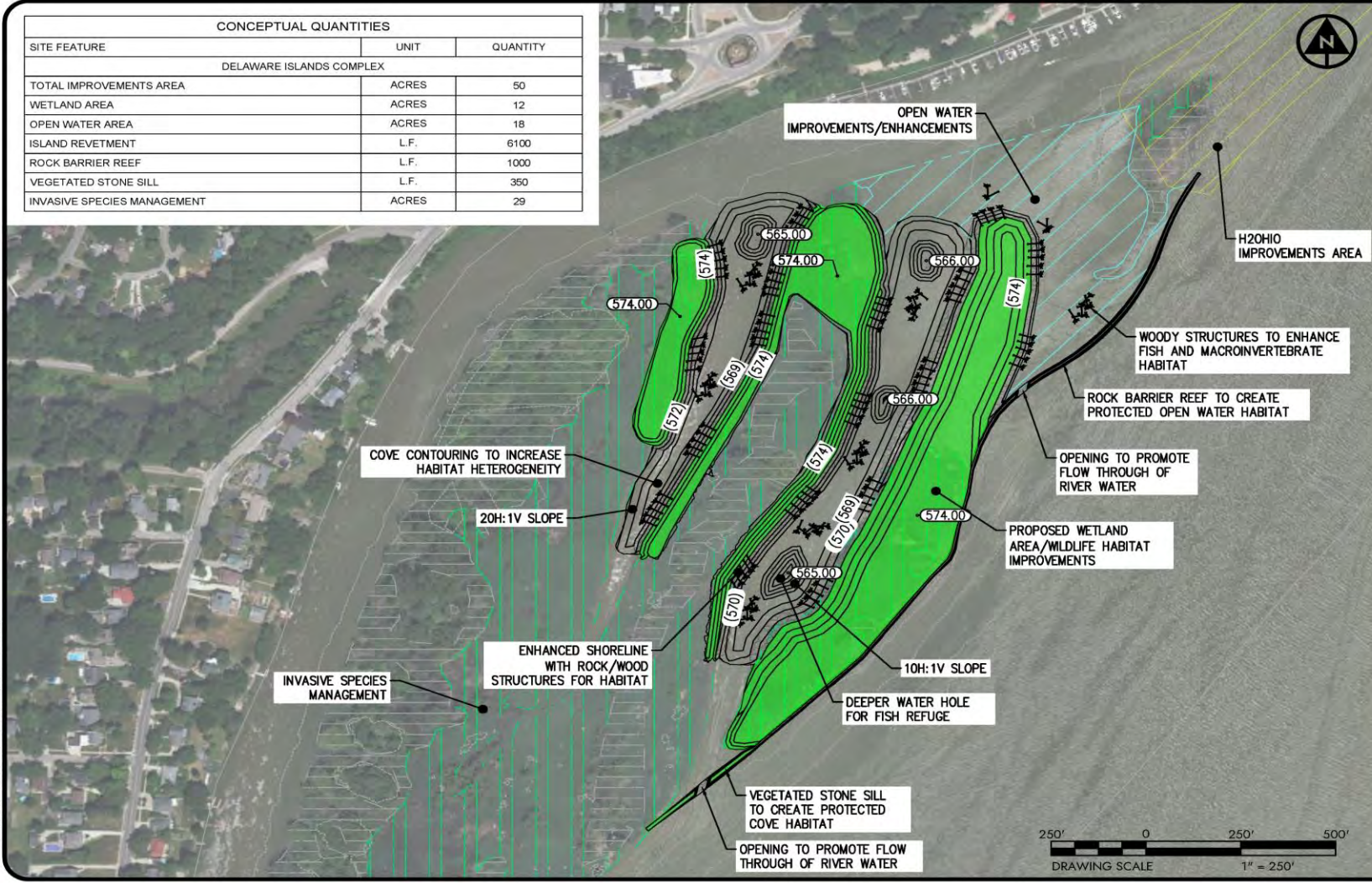
DESIGNED BY: CWS  
DRAWN BY: CWS  
CHECKED BY: CWS  
PROJECT NO: TPA066

TOLEDO, OH  
H2OHIO CLARK AND DELAWARE/HORSESHOE ISLANDS RESTORATION PROJECT  
CONCEPTUAL LAYOUT - INNER ISLAND OPEN WATER

DATE: MARCH 6, 2023  
SCALE: AS NOTED  
SHEET: 2 OF 3

# GLRI - MAUMEE AOC RESTORATION PLANS

CONCEPTUAL QUANTITIES		
SITE FEATURE	UNIT	QUANTITY
DELAWARE ISLANDS COMPLEX		
TOTAL IMPROVEMENTS AREA	ACRES	50
WETLAND AREA	ACRES	12
OPEN WATER AREA	ACRES	18
ISLAND REVETMENT	L.F.	6100
ROCK BARRIER REEF	L.F.	1000
VEGETATED STONE SILL	L.F.	350
INVASIVE SPECIES MANAGEMENT	ACRES	29

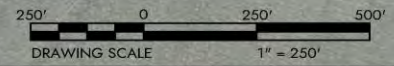


219 SOUTH ERIE STREET  
TOLEDO, OH 43604-6407  
TEL: 419.385.2018 FAX: 419.340.0023

DESIGNED BY:	JMK
DRAWN BY:	JMK
CHECKED BY:	PAH
PROJECT NO.:	TPA666

TOLEDO, OH  
**DELAWARE ISLANDS COMPLEX  
RESTORATION IN THE MAUMEE AOC**  
CONCEPTUAL LAYOUT

DATE:	MARCH 18, 2023
SCALE:	AS NOTED
SHEET:	1 OF 1





# RECENT CONDITIONS (2020)



# RESTORATION PLANS



Near-Term

BENICK

# RESTORATION PLANS



Mature

©ENICK

# RESTORATION PLANS



Near-Term

© 2014

# RESTORATION PLANS



Mature

©2014

# RESTORATION PLANS



Near-Term

CENICK

# RESTORATION PLANS



Mature

BENICK

# RESTORATION PLANS



Near-Term



# RESTORATION PLANS



Mature

BENICK

# PROJECT BENEFITS

- Improved habitat for fish, invertebrates, other species
- Reduced sedimentation and nutrient loading in Maumee River and Lake Erie and resulting water quality improvements
- Protected and enhanced island and shoreline habitat
  - Reducing further island erosion
  - Creating resilience in ecological systems to withstand higher and more variable river flows
  - Protecting existing park and recreational boating infrastructure



# CONSTRUCTION SCHEDULE\*

<b>Causeway Construction</b>	January 2024
<b>Delaware/Horseshoe Islands Revetments</b> (initial rock placement)	Winter – Summer 2024
<b>Clark Island Revetment</b> (initial rock placement)	Winter – Summer 2024
<b>Delaware/Horseshoe Islands Improvements</b> (dredging, wetlands-island creation, bank protection, habitat structures, seeding/planting)	Spring/Summer 2024 – Spring 2025
<b>Clark Island Improvements</b> (dredging, wetlands-island creation, bank protection, habitat structures, seeding/planting)	Summer/Fall 2024 – Spring 2025
<b>Causeway Removal/Construction Completion</b>	Summer 2025
<b>Project Closeout</b>	Fall 2025

*\*Schedule subject to change based on site conditions and other variables*

# CONSTRUCTION



# GROUNDBREAKING EVENT



# GROUNDBREAKING EVENT



# PROJECT TEAM CONTACT

Joseph Cappel  
Toledo-Lucas County Port Authority  
Vice President of Business Development  
One Maritime Plaza, Suite 701  
Toledo, Ohio 43610  
(419) 243-8251  
[jcappel@toledoportauthority.org](mailto:jcappel@toledoportauthority.org)

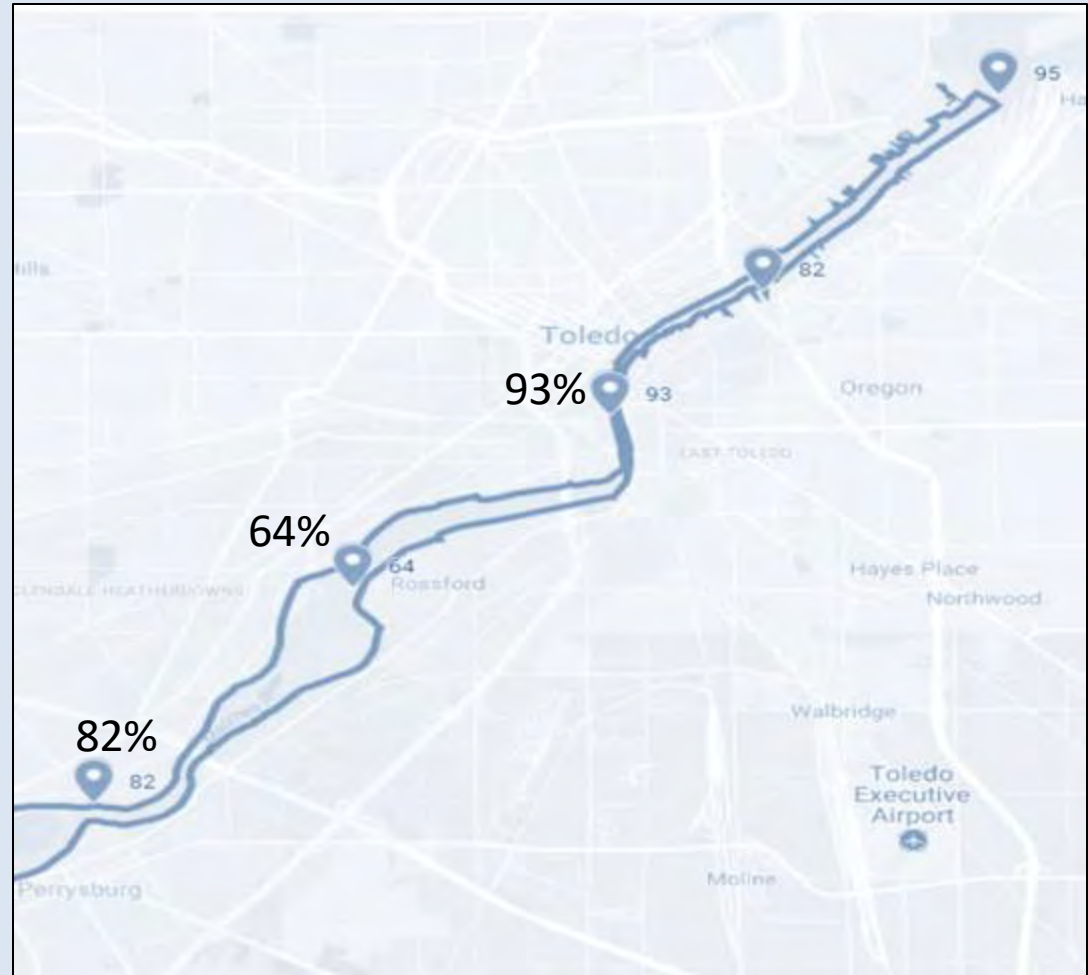
# SUPPLEMENTAL INFORMATION TO SUPPORT DISCUSSIONS



# FISH HABITAT

## IMPAIRED FOR FISH HABITAT

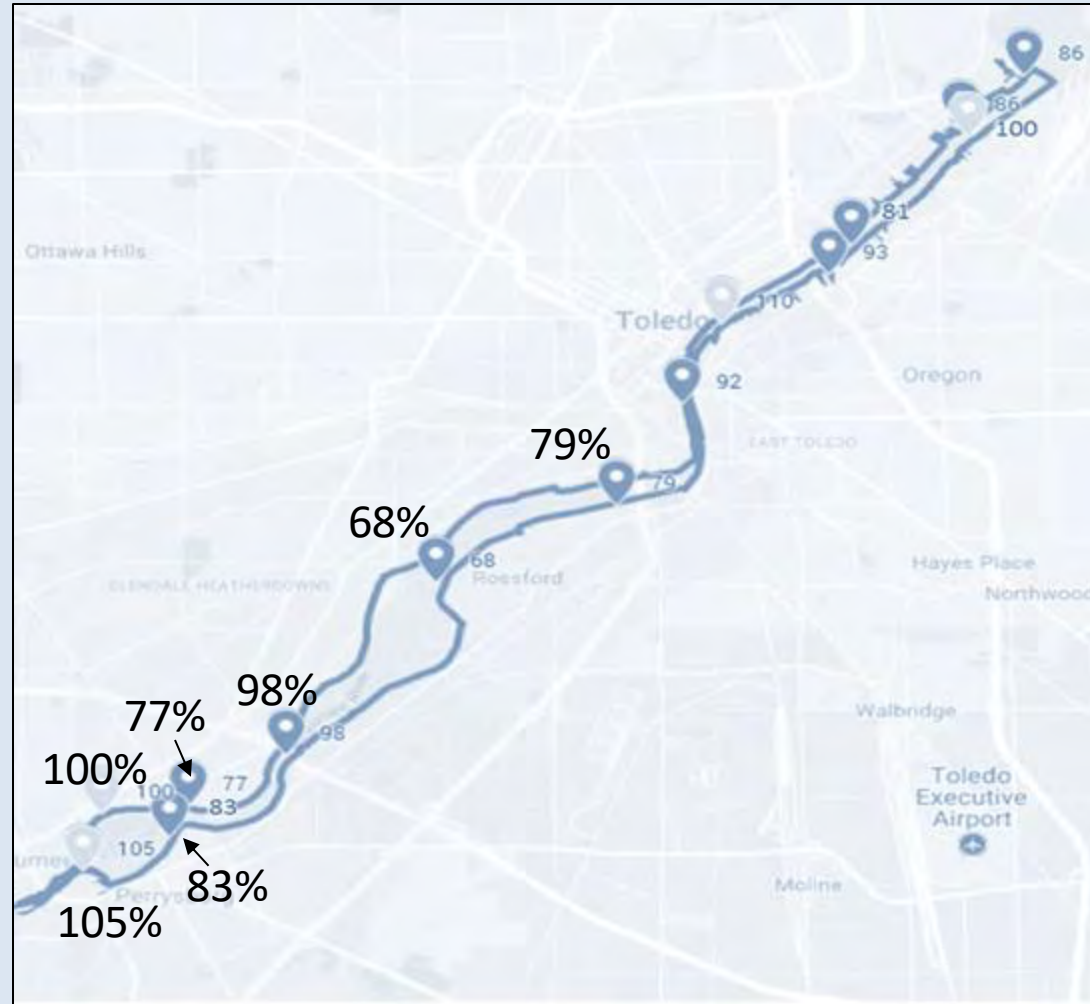
- Achieves 83% of target (range: 64%-95%)



# FISH COMMUNITY

## IMPAIRED FOR FISH COMMUNITY

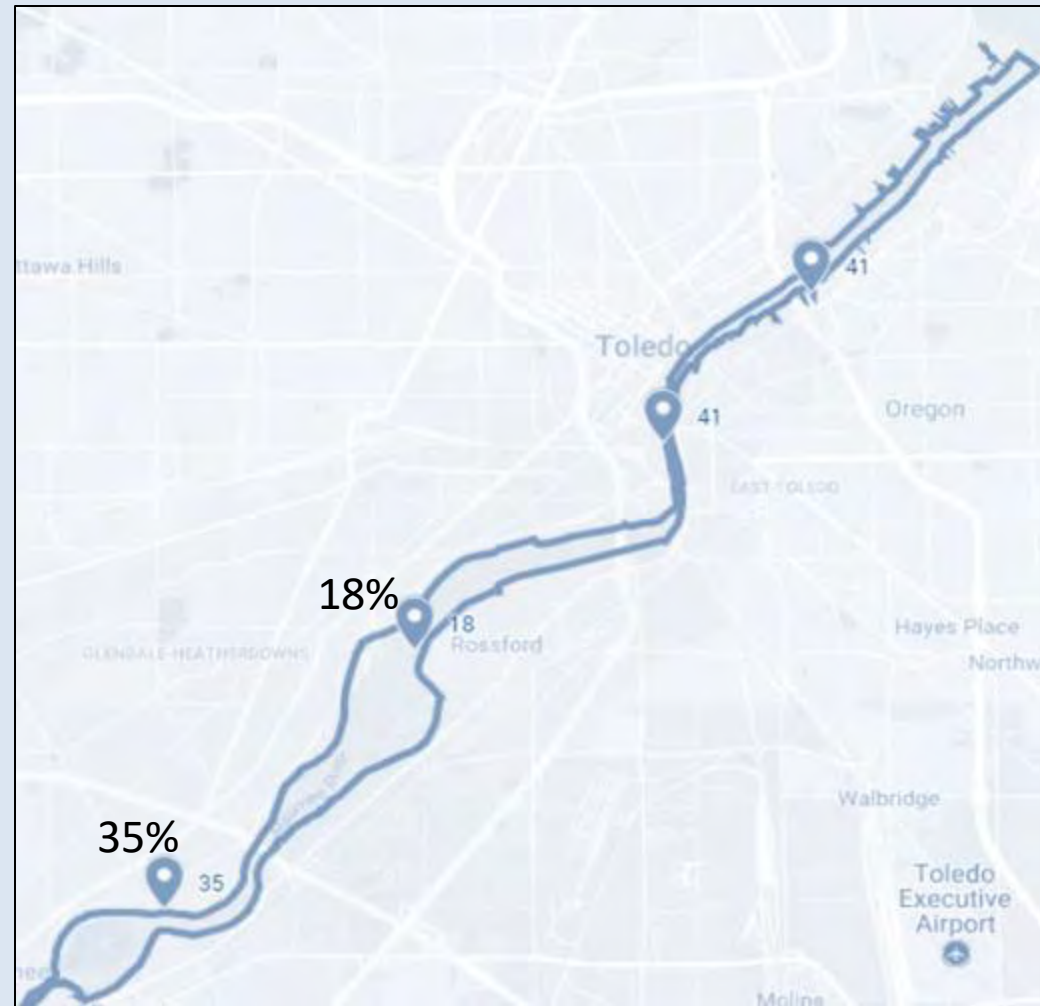
- Achieves 90% of target (range: 68%-110%)



# BENTHIC COMMUNITY

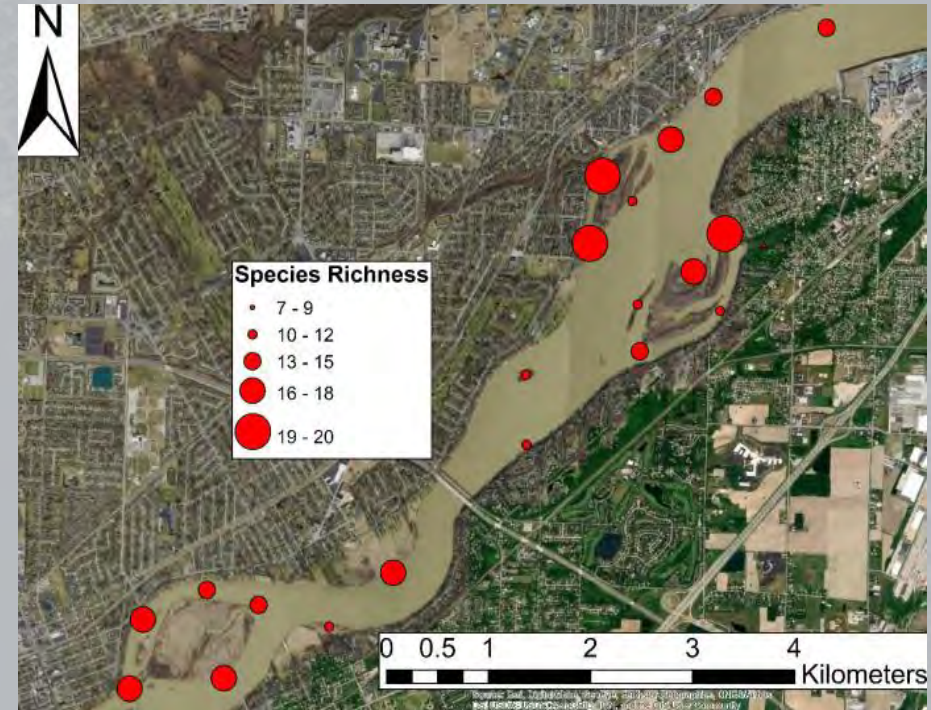
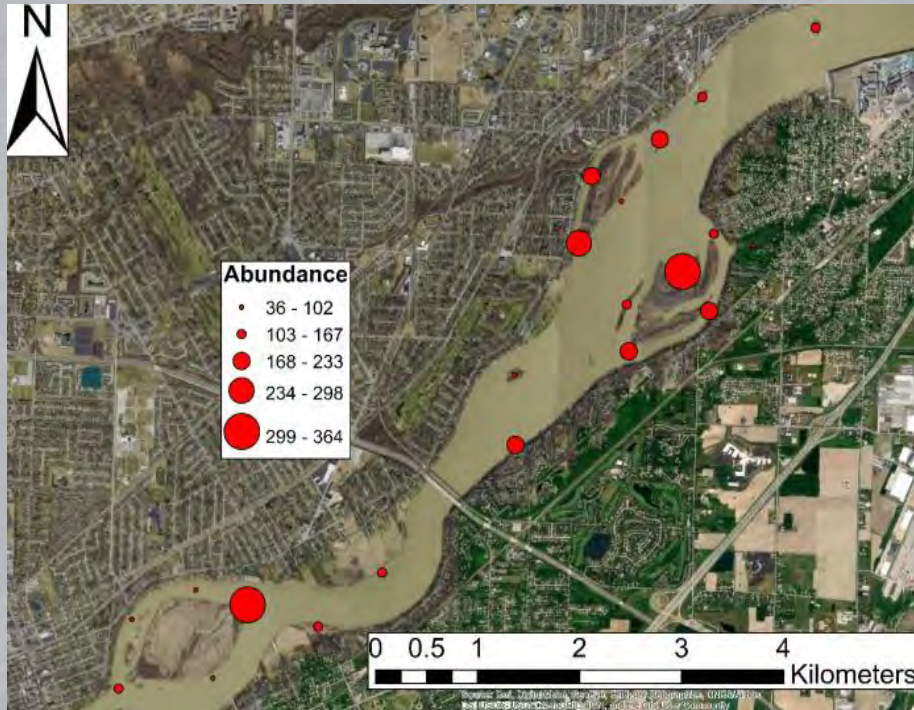
## IMPAIRED FOR INVERTEBRATES COMMUNITY

- This 15-mile stretch includes 4 sites and averages 34% of target (range: 17%-41%)
- 50% of target must be remedied directly for state AOC program



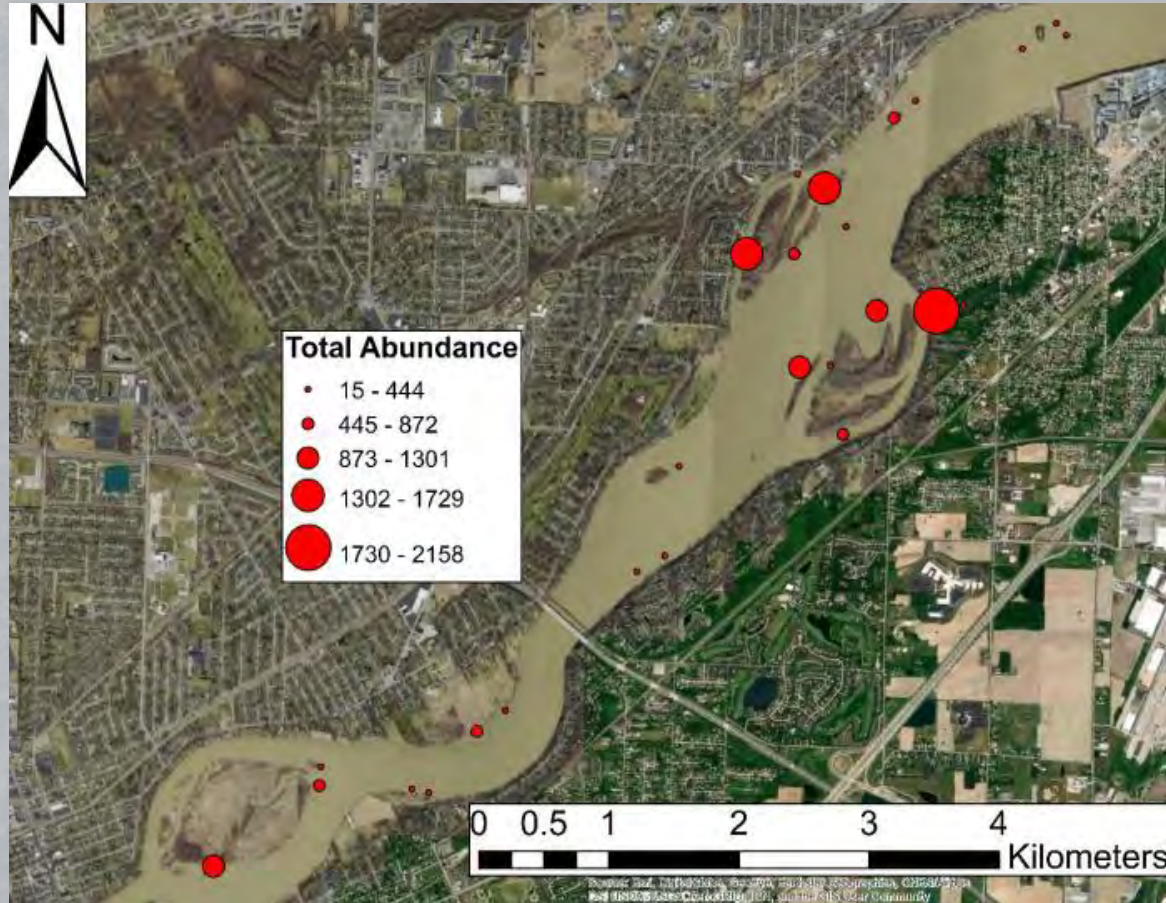
# UT/BGSU BIOLOGICAL EVALUATIONS

## Fish (Trawling & Electrofishing)



# UT/BGSU BIOLOGICAL EVALUATIONS

## Benthic Invertebrates



# H2OHIO PROJECT BENEFITS

- Restoration
  - Island
  - Wetland
  - Submerged Habitat
- Water Quality
  - Nutrient Reduction
  - Sediment Deposition
- Habitat Creation/Enhancement
  - Fish/Macro
  - Wildlife
  - Vegetation (aquatic, emergent, and submerged)



# MAAC PROJECT BENEFITS

- Shoreline Creation
  - Nature-based
  - Hardened
- Enhanced Shoreline
  - Stabilization
  - Gradual/longer slopes
  - Resiliency to changing water levels
- Habitat Features
  - Rock Barrier Reef
  - Vegetated Stone Sill
  - Woody Habitat Structures
  - Bank Protection
  - Planting
- Invasive Species Management

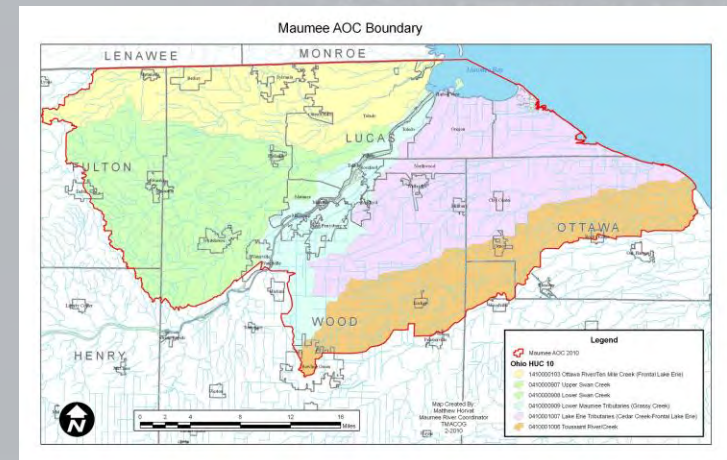


# MAUMEE AOC ADVISORY COMMITTEE

- ❑ This portion of the Maumee River is within the Maumee Area of Concern (AOC)
  - AOCs were designated throughout the Great Lakes to correct and remove biological or chemical issues, also known as beneficial use impairments (BUIs)
  - A local group, the Maumee AOC Advisory Committee, is working to restore fishable and swimmable waters
  - Ohio EPA coordinates work and teams with federal, state and local partners
  - Partners for Clean Streams is the local facilitating organization



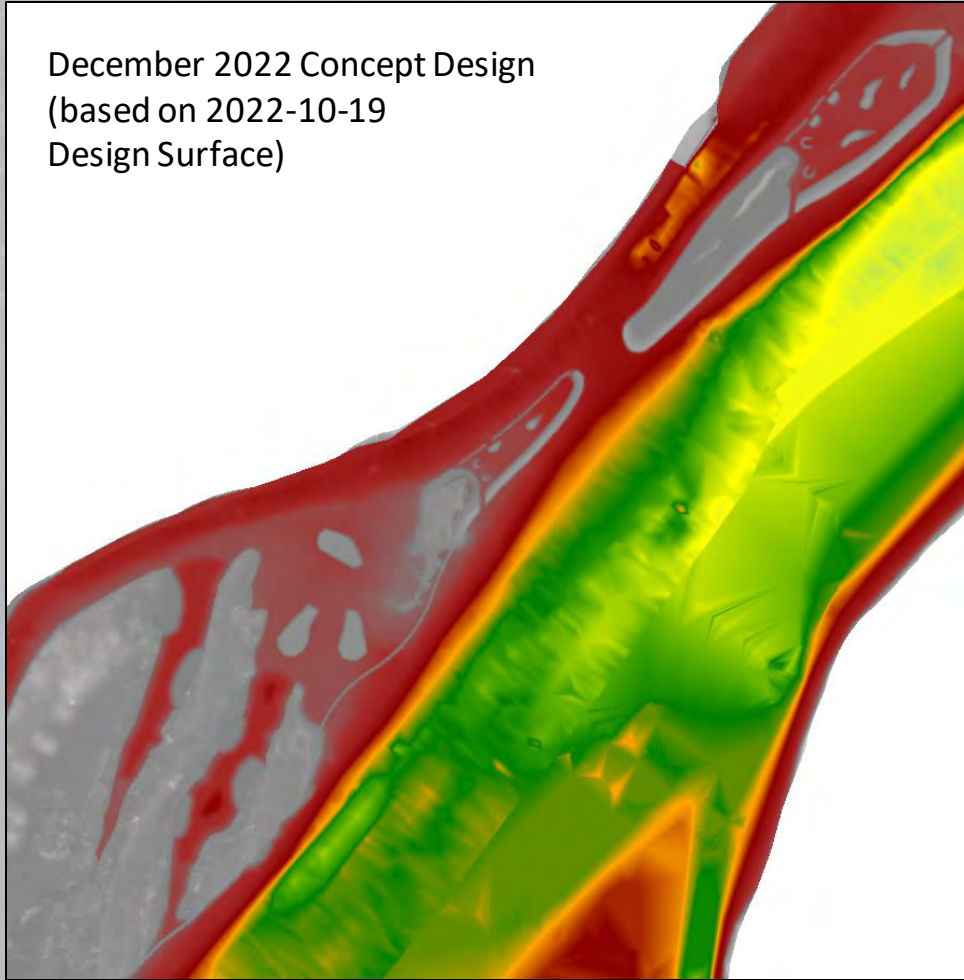
[www.maumeeaoc.org](http://www.maumeeaoc.org)





# INITIAL H&H MODELING

Model Geometries  
tested in the  
hydrodynamic model



# INITIAL H&H MODELING

