

## Maumee AOC Path to Delisting Summary of MAP/EP Implementation

Updated 11/19/19

### Management Action Projects (MAP) Summary

BUI	BUI Description	Management Action Project (MAP)	MAP* Completed	MAP Status	Funds Received	Funds Needed	MAP Coordination	Possible BUI Removal
1a	Fish Consumption	<del>TARGET</del> <b>Target Achieved</b>	--	--	--	--	--	2018
1b	Wildlife Consumption	See <i>Evaluation Projects Summary (below)</i>						2020/21
3a	Fish Populations	1) MAP list in development by BUI Team 2) Implement approved MAP list	2019-20 2024	in progress not started	n/a TBD	n/a TBD	J. Miller (USGS) TBD	2027
3b	Wildlife Populations	<del>TARGET</del> <b>Target Achieved</b>	--	--	--	--	--	2017
4a	Tumors & Deformities (DELTS)	See <i>Evaluation Projects Summary (below)</i>						UNKNOWN
4b	Tumors & Deformities (Bullhead)	See <i>Evaluation Projects Summary (below)</i>						UNKNOWN
6	Benthos	1) MAP list in development by BUI Team 2) Implement approved MAP list	2019-20 2024	in progress not started	n/a TBD	n/a TBD	J. Miller (USGS) TBD	2027
7	Dredging	See <i>Evaluation Projects Summary (below)</i>						UNKNOWN
8a	Eutrophication (dissolved oxygen)	<del>TARGET</del> <b>Target Achieved</b>	--	--	--	--	--	2014
8b	Eutrophication (persistent growth)	See <i>Evaluation Projects Summary (below)</i>						2021
10a	Beach Closings (beach advisories)	See <i>Evaluation Projects Summary (below)</i>						2021
10b	Beach Closings (Class A-type streams)	<del>TARGET</del> <b>Target Achieved</b>	--	--	--	--	--	2018
10c	Beach Closings (chemical contact)	<del>TARGET</del> <b>Target Achieved</b>						2019
11	Aesthetics	Ohio EPA consultant determined BUI not impaired, except in Otter Creek. BUI should be removable upon completion of planned GLLA project	2021	in progress	n/a	n/a	C. Blair (Ohio EPA) L. Ackerson (Ohio EPA) A. Binion-Zuccaro (ACE)	2021/22
14a	Fish Habitat	1) MAP list in development by BUI Team 2) Implement approved MAP list	2019-20 2024	in progress not started	n/a TBD	n/a TBD	J. Miller (USGS) TBD	2027
14b	Wildlife Habitat	Implement GLNPO accepted MAP list to achieve 3427 ac. of wildlife habitat in AOC	2024	in progress	\$16,372,640	\$6,069,500	C. Blair (Ohio EPA) L. Medley (US EPA)	2025

### Evaluation Projects (EP) Summary

BUI	BUI Description	Evaluation Project	EP* Completed	EP Status	Funds Received	Funds Needed	Project Lead
1b	Wildlife Consumption	Review turtle tissue contaminant data for state advisory and, ultimately, BUI status determination	2019/20	in progress	Ohio EPA capacity	?	Ohio EPA (C. Blair/A. Rush)
4a	Tumors & Deformities (DELTS)	Current data under review, possible sampling for Summer 2020	2020/21	in progress	FWS, USGS	?	Ohio EPA (C. Blair), USGS (J. Miller), FWS (A. Roe/D Millsap)
4b	Tumors & Deformities (Bullhead)	Current data under review, sampling being planned for Summer 2020	2020/21	in progress	FWS, USGS	?	Ohio EPA (C. Blair), USGS (J. Miller), FWS (A. Roe/D Millsap)
7	Dredging	Review Maumee River ship channel sediment data vs new beneficial use rules/permits	2020/21	pending	Ohio EPA capacity	n/a	Ohio EPA (varies), OLEC (L. Garrity)
8b	Eutrophication (persistent growth)	Ohio EPA consultant determined that additional data is need in areas where it does not exist (i.e. Ottawa R). Sampling plan needs to be developed.	2020	in progress	Ohio EPA capacity	n/a	Ohio EPA (varies)
10a	Beach Closings (beach advisories)	USGS conducting a Microbial Source Tracking evaluation to determine E.coli counts and markers at MBSP	2019/20	in progress	USGS	n/a	Ohio EPA (C. Blair), USGS (C. Kephart)
10c	Beach Closings (chemical contact)	<del>Ohio has hired consultant to collect and analyze fish tissue &amp; sediment samples so City of Toledo can evaluate/determine status of advisory at Hecklinger Pond.</del>	2019	COMPLETE	Ohio EPA capacity	n/a	Ohio EPA (C. Blair) Mannik & Smith Grp (M. Pesci) City of Toledo (J. Ball) T/LC Health Dept (D. Welch)

\* "MAP Complete" & "EP Complete" dates are estimated

Note: EPs for BUIs 3a, 4, 6, 14a may need to be conducted upon completion of MAPs to determine if restoration target has been achieved

## Final Management Action Project (MAP) List for Maumee AOC BUI 14b: Loss of Wildlife Habitat

### Complete Management Action Project List for Maumee AOC BUI 14b

Updated 11/19/19

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)					
<b>COMPLETED</b>		<b>Project Acreage</b>	<b>AOC GLRI Funding</b>	<b>Other Funding</b>	<b>Implementer</b>	<b>Funding Source</b>
4-16	Irwin upland site 5 (Griswold property)	20	\$150,000	--	Metroparks	COMPLETE (GLRI via U.S. EPA)
6-16	Habitat Restoration Plans	0	\$400,000	--	Ohio EPA	COMPLETE (GLRI via U.S. EPA)
10-16	Irwin wet prairie site 3a (Neyland property)	10	\$97,300	--	Metroparks	COMPLETE (GLRI via U.S. EPA)
		<b>30.0</b>	<b>\$647,300</b>	<b>\$0</b>		

<b>FUNDED (In Progress)</b>		<b>Project Acreage</b>	<b>AOC GLRI Funding</b>	<b>Other Funding</b>	<b>Implementer</b>	<b>Funding Source</b>
1-16	Magee Marsh State Wildlife Area	1000	\$675,000	--	ODNR-Wildlife	Funded (GLRI via U.S. EPA)
2-16 & 3-16	Toussaint Parcel East and Toussaint Parcel West	203	\$2,297,000	--	DU, U.S. FWS	Funded (GLRI via U.S. FWS)
7-16	Maumee State Forest site 1 (Carter and Rusin-1 property)	25	\$220,000	--	ODNR-Forestry	Funded (GLRI via U.S. EPA)
8-16	Maumee State Forest site 2 (Hight wetland & forest property)	75	\$115,000	--	ODNR-Forestry, TNC	Funded (GLRI via U.S. EPA)
9-16	Maumee State Forest site 3 (Hight upland & flatwoods property)	85	\$95,000	--	ODNR-Forestry, TNC	Funded (GLRI via U.S. EPA)
11-16	Irwin wet prairie site 3b	31.8	\$300,000	--	Metroparks	Funded (GLRI via U.S. EPA)
13-16	Navarre Unit of Ottawa National Wildlife Refuge	732	\$1,300,000	--	US FWS, DU	Funded (GLRI to U.S. FWS)
14-16	Cedar Point National Wildlife Refuge Pool 2	150	\$850,000	--	US FWS, DU	Funded (GLRI to U.S. FWS)
15-16	Oak Savannah Expansion at Secor Metropark	39.3	\$510,000	--	Metroparks	Funded (GLRI via U.S. EPA)
22-17	Fox Property Restoration Project	35	\$43,840	--	Friends of Ottawa National Wildlife Refuge	Funded (GLRI via U.S. EPA passthru to OEPA)
23a-17	Restoring Coastal Wetlands at Toussaint State Wildlife Area Phase I & II	63	\$600,000	\$888,000	ODNR-Wildlife, TNC, DU	Funded (GLRI via NOAA, GLFWRA, SOGL)
23b-17	Restoring Coastal Wetlands at Toussaint State Wildlife Area Phase III	62	\$750,000	--	ODNR-Wildlife, DU	Funded (NOAA Partnership)
27-17	Kitty Todd Expansion	310	\$1,400,000	\$3,545,700	TNC	Funded (GLRI via U.S. EPA passthru OEPA, WRRSP)
29-17	Maumee Bay State Park Coastal Wetland	137	\$500,000	\$2,000,000	ODNR-Wildlife, Parks	Funded (GLRI via U.S. EPA, H2Ohio)
		<b>2948.1</b>	<b>\$9,655,840</b>	<b>\$6,433,700</b>		

<b>NEEDS FUNDNG/FUNDING being PROCESSED</b>		<b>Project Acreage</b>	<b>Funding Needed</b>	<b>Other Funding</b>	<b>Proposed Implementer</b>	<b>Funding Status</b>
24-17	Penn 7 Wetland Restoration	59	\$1,400,000	--	City of Toledo, GLC	NOAA Partnership funding for E&D awarded (\$165k)
25-17	Howard Marsh Phase 2	240	\$3,300,000	--	Metroparks, DU	NOAA Partnership funding for E&D awarded (\$250k)
28-17	Maumee State Forest Expansion	152	\$1,369,500	--	ODNR-Forestry	agreement in progress
		<b>451</b>	<b>\$6,069,500</b>	<b>\$0</b>		

3429.1	= Total Acres of Recommended MAPs
3427	= BUI 14b Target Acreage
-2.1	= Remaining Acres that Need to be Identified*

Estimated <b>Total AOC GLRI Funds</b>	= \$16,372,640	\$6,433,700	= Estimated <b>Total Non-AOC GLRI Funds</b>
Estimated <b>Total Cost</b>	= \$22,806,340		
Estimated <b>Funding Needed</b>	= \$6,069,500		

Estimated <b>Percentage of Non-AOC Funds Leveraged</b>	= 28.2%
Estimated <b>Cost per Acre to Achieve Target**</b>	= \$6,654.90

\* 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

# Maumee AOC Approved Management Action Project (MAP) Locations for BUI 14b: Loss of Wildlife Habitat

