

Menominee River AOC Fish Reference Site Monitoring

2014 Interim Report

EPA Grant Funding Source: WDNR GLRI Capacity Grant **GL-00E00712-1 CAP_1_2013**

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Review of Deliverables Completed

In 2012, a project team of fisheries experts from Michigan Department of Natural Resources (MDNR), Wisconsin Department of Natural Resources (WDNR), and the U.S. Fish and Wildlife Service were assembled to review existing fisheries data for the Lower Menominee River Area of Concern (AOC) and establish restoration targets (recruitment targets) for select fish species. This effort was coined the “Fisheries Data Roundup.” The AOC was broken into two sections: the Lower Scott Flowage (Menominee River upstream of the Menominee Dam) and the lower river (Menominee River below the Menominee Dam). After reviewing available data, the team determined that yellow perch had achieved their restoration target for the lower river, but recommended collecting additional fisheries data for the Lower Scott Flowage, lower river, and reference sites before assessing other species. Recommended data collection was completed in 2013 and 2014 by fisheries staff from the WDNR and MDNR with funding from the Great Lakes Restoration Initiative. This report details the results of 2013 and 2014 data collection efforts and the conclusions reached from those data.

A scope of work and quality assurance project plan were developed in 2013 and uploaded to the WDNR Surface Water Integrated Monitoring System (SWIMS) database. The WDNR completed electrofishing surveys on the Lower Scott Flowage, lower river, and Peshtigo River reference site. The MDNR completed survey work on the Escanaba River reference site. Data from surveys conducted in Wisconsin waters have been uploaded to the fisheries management database. Photocopies of 2014 field data sheets and photographs of field work in progress are included as appendices A and B of this report.

The project team met twice in 2013 to discuss results from the Lower Scott Flowage. Their recommendations are included in the “Conclusions” section of this report. More details and meeting minutes can be found in the 2013 Interim Report (WDNR, 2014). Additional data is still required before the project team can make recommendations for the lower river.

An unanticipated budget surplus will allow for data collection efforts to continue in 2015 without requesting additional funding. Work will be consistent with the 2013 quality assurance project plan and scope of work, although data will not be collected from the Lower Scott Flowage. Quarterly and interim reports will continue to be submitted to the WDNR SWIMS database.

Summary of Challenges Encountered

Field crews did not experience notable difficulties or challenges while conducting their work.

Results**LOWER SCOTT FLOWAGE**

Survey Date	4/25/2011	5/24/2011	5/22/2012	5/20/2013	Average CPE (2011- 2013)	Restoration Goal Percentile	2011-2013 Calculated Percentile
Species Catch Totals							
Bluegill		3	4	5	3.4	25th	4.6
Largemouth Bass	1	0	0	0	0.1	-	20.3
Northern Pike	14	8	1	0	1.7	-	30.5
Rock Bass		28	14	14	14	-	47.8
Smallmouth Bass	7	87	11	41	14.5	-	44.1
Walleye	31	24	0	7	4.7	-	50.9

Table 1. Spring electrofishing catch totals and average catch-per-effort (CPE) in the Lower Scott Flowage. Average CPE and calculated percentile are derived from information found in the Lower Menominee River AOC Fisheries Data Roundup Final Report (2013).

Survey Date	9/16/1987	10/4/1989	7/31/2003	8/4/2003	10/3/2011	10/1/2012	Average CPE (1987- 2012)	Restoration Goal Percentile	1987-2012 Calculated Percentile
Species Catch Totals									
Bluegill	7	16	0			5	2.8	25th	24.3
Largemouth Bass	5	0	0	0	2	4	0.9	-	53.4
Northern Pike	1	11	0	3	7	0	2.0	-	3.6
Rock Bass	53	80	21			38	18.3	-	94.5
Smallmouth Bass	26	8	0	29	50	22	12.0	-	81.2
Walleye	16	22	18	0	7	12	4.1	-	16.8

Table 2. Fall electrofishing catch totals and species specific average CPE in the Lower Scott Flowage. Average CPE and calculated percentile are derived from information found in the Lower Menominee River AOC Fisheries Data Roundup Final Report (2013).

LOWER (MENOMINEE) RIVER

Survey Date	10/23/2012	9/23/2013	09/30/2014	2015	Average CPE (2012-2014)
Species Catch Totals					
Muskellunge	2	0	0		0.44
Largemouth Bass	5	4	0		2.00
Northern Pike	1	1	1		0.67
Smallmouth Bass	1	0	2		0.67
Walleye	12	0	23		7.78

Table 3. Fall electrofishing catch totals and species specific average CPE in the lower river. Average CPE is based on catch totals and 1.5 mile survey effort.

PESHTIGO RIVER

Survey Date	10/1/2013	09/29/2014	2015	Average CPE (2012-2013)
Species Catch Totals				
Muskellunge	0	0		0.00
Largemouth Bass	0	0		0.00
Northern Pike	4	0		0.89
Smallmouth Bass	5	18		5.11
Walleye	0	0		0.00

Table 4. Fall electrofishing catch totals and species specific average CPE in the Peshtigo River. Average CPE is based on catch totals and 2.25 mile survey effort.

ESCANABA RIVER

Survey Date	10/7/2013	10/08/2014	2015	Average CPE (2013-2014)
Species Catch Totals				
Muskellunge	0	0		0.00
Largemouth Bass	0	0		0.00
Northern Pike	18	55		15.02
Smallmouth Bass	16	5		4.32
Walleye	9	8		3.50

Table 5. Fall electrofishing catch totals and species specific average CPE in the Escanaba River. Average CPE is based on catch totals and 2.43 mile survey effort.

Conclusions

The project team met twice in 2013 to discuss results from the Lower Scott Flowage. More details and meeting minutes can be found in the 2013 Interim Report (WDNR, 2014). It was the conclusion of the 2013 Interim Report that Lower Scott Flowage target species populations were currently meeting their restoration targets, but that the target would not be considered achieved until results of the Lower Scott Flowage sediment characterization work had been obtained. If

sediment remediation was required in the 11th Avenue Pool area, then post-remedial habitat restoration would be required before this target would be considered achieved.

Results of the sediment characterization in the Lower Scott Flowage became available in 2014, and they showed that remediation will not be needed there (CH2MHill, 2014). Thus, we can consider the target met for the Lower Scott Flowage.

No conclusions were reached regarding lower river target species during this reporting period. (Tables 3-5). One year of additional data collection is required prior to making any assessments. The WDNR and MDNR are planning to continue data collection in 2015.

References

CH2MHill, 2014. *Final Site Characterization Report: Assessment of Contaminated Sediments in the Lower Scott Flowage in Menominee River Area of Concern*. CH2MHILL for USEPA. U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, IL 60604.

Wisconsin Department of Natural Resources (WDNR), 2013. *Lower Menominee River AOC Fisheries Data Roundup Final Report*. WDNR, 2984 Shawano Ave, Green Bay, WI 54313.

Wisconsin Department of Natural Resources (WDNR), 2014. *Menominee River AOC Fish Reference Site Monitoring 2013 Interim Report*. WDNR, 2984 Shawano Ave, Green Bay, WI 54313.

Appendix A Photocopies of 2014 field data sheets

Lake Lower Menominee River MWB Code: _____ Date: 09/30/14 County: Marquette Collector: Tammie Paoli, Steve Hogler
Red Lange
 Target Fish: Walleye Survey Type: Walleye Index/AOC Mark Given: - H₂O Temp: 61° F Time 19 : 20
 Adverse Conditions: No H₂O Conduct: - Station: Interstate Bridge to Ogden street
 Volts: 300 Amps: 12 Current Type (AC/DC/Pulsed DC) Pulse Rate: 50 Duty Cycle: 25%
 Gear Type: Maxi - Boomshocker Start Time: 18:40 End Time: 19:20 Distance Shocked: 1.5 miles
 # of Dippers: (1)(2) Entire Shoreline Shocked: (Y/N) Dip net mesh size: .25 Delta H₂O Clarity: (Clear) Turbid/Very Turbid
* observed

Walleye Lengths in mm	Northern Pike	Smallmouth Bass	Bluegill	Emerald shiner	Bowfin	Black Crappie	Chinook Salmon	Steelhead	Yellow Perch
172 mm	432 mm	372 mm							
143		340							
243	(1)	(2)	(2)	(6)	(1)	(2)	(5)*	(1)*	(16)
531									
140									
170									
190									
163									
369	Logperch	Rock Bass	Golden Redhorse	White Sucker					
479									
381	(1)	(2)	(6)	(1)					
359									
147									
282									
506									
146									
235									
269									
250									
153									
183									
169									
152									
Total	(23)								

Other fish: (Can include rarely caught species and fish greater than 30 inches.)

Appendix B Photographs of 2014 field work conducted (more available upon request)



Escanaba River survey, October 8th, 2014.