

FISHERY MANAGEMENT PRESCRIPTION

Watershed
Sub-Watershed **Wisconsin River Fisheries
Management Area**

Water **MOON LAKE**
Tribal **TOL1842**

PRESCRIPTION IDENTIFICATION

Unit **Western Lake Superior**
Number **2850**
Date **10/08/2014**

WATER IDENTIFICATION

Primary County
Gogebic

III. EXPECTED RESULTS, BENEFITS, AND LONGEVITY

Proposal:

Yearling brown trout have been stocked annually in Moon Lake since 1986, resulting with periods of good sport angling being produced. Wild Rose strain brown trout for inland lake stocking are reared in northern lower Michigan, and Moon Lake is the only western Upper Peninsula lake that has been receiving annual allocations of these fish. Splake, which are reared at the Marquette State Fish Hatchery, would be able to utilize the yellow perch forage base in Moon Lake to sufficiently produce a sport fishery, therefore it is more cost efficient to transport splake than brown trout for the development of this coldwater fishery. This management prescription will resume the historic annual trout stocking program but will replace brown trout allocations with splake. Annual interaction with the Moon Lake property owners association will allow for an assessment if the splake introductions are working, and a netting survey may be conducted before the end of this 6-year stocking window in 2020.

Background:

Moon Lake is a coldwater, deep lake located at the head of Mississippi River's Wisconsin River watershed. This lake is located inside of the State of Michigan just one mile from the Gogebic County Michigan-Wisconsin border line. There are no inlets or outlets to this lake, and the lake has a maximum depth of just over 40 feet.

Moon Lake is managed as a two-story fishery supporting both a coldwater trout community as well as a nearshore fishery for bluegill, pumpkinseed sunfish, rock bass, smallmouth bass, and yellow perch. Trout management within Moon Lake has been successful since 1940 using various combinations of trout including lake trout, rainbow trout, brook trout, brown trout, and splake.

From the period of 1996-2011, western UP climatological data documented that annual rainfall quantities were less abundant than the long term (1900 - 1996) average. During the same time, water levels across Western Upper Peninsula lakes were greatly reduced to the extent that in many lakes riparian boat launches and docks were disconnected from the primary lake basin. Moon Lake was no exception and because this lake is geographically located at the top of the watershed divide between the Mississippi and Lake Superior Basins (Wisconsin River and Ontonagon River) this lake's elevation is primarily dependent upon the precipitation inputs. Due to the extended drought period, the water level elevation of Moon Lake was very low and in the summer of 2010 this lake was disconnected from the State boat launch site.

A fall 2011 fisheries survey collected eight brown trout between 14" - 19" inches, and no individuals from the spring 4,600 yearling brown trout stocking event were captured. The diminishment of water levels in Moon Lake had reduced the suitable water column preferred for trout occupancy, as compared to the historic average. Despite seventy years of trout management within this lake, in 2010-2011 it did not appear that the annual stocking of yearling brown trout was contributing to the development of a trout sport fishery.

Precipitation levels to the upper Great Lakes region have now rebounded. Rainfall and snowfall influxes in 2013 and 2014 have allowed for head-watershed lakes to return to normal long-term levels. Moon Lake now is back to its historic footprint. During the summer of 2014, members of the Moon Lake property owners association cooperated with Michigan DNR Fisheries to run summer temperature depth profiles to assess water suitability for trout. Temperature assessments using both hand-recording thermometers on July 3, 10, 17, 24, 31, and August 14, consistently showed water temperatures suitable for trout (below 68°F) for depths of 18 feet and below. Similar depth profile recordings using an Onset electronic recording thermistor were deployed on July 10 and 17, both of which also showed similar recordings (see attachment, temp profile graph).

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Number **2850**

Date **10/08/2014**

Prepared By **G. Madison**

T / R / S

44N 39W 32

Valid From **02/05/2015**

Expires **02/04/2021**

Area (Ac)

93.0

Status **Approved**

Replaces No. **2416**

Last Yr. Surveyed

2011

Dated

I. PROBLEM/OPPORTUNITY LIST

1. The regional area surrounding the Moon Lake area has received abundant precipitation (both snowpack and rainfall) whereby water levels that were once depressed have rebounded in Moon Lake and there is now an opportunity to resume trout management here
2. With splake being available at the Marquette hatchery, located much closer to Moon Lake than brown trout which need to be trucked from lower Michigan, there is an opportunity to replace the brown trout fishery in Moon Lake with splake.

II. ACTION LIST AND SCHEDULE

	Begin Date	End Date	EA Excl	GL Issue	Mark/Tag
A. On an annual basis, stock 4,600 yearling splake (49/acre).	01/01/2015	12/31/2020	Y	N	N

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IV. ALTERNATIVE ACTIONS AND REASONS NOT SELECTED

A. Do not stock trout

Reason Not Selected:

Trout provide a diverse fishing opportunity for this geographic region of the Western Upper Peninsula.

V. RESOURCE REQUIREMENTS - Fish Stocking, Capital Outlay, Other

Activity	Cost (All Years)
Capital Outlay	\$0.
Fish Stocking	\$60,564.
Other	\$0.

VI. ENVIRONMENTAL CONSIDERATIONS

1. Threatened/Endangered Species	N	11. Farm and Forest Land	N
2. Designated Wild or Scenic Area	N	12. Federal Land	N
3. Historical	N	13. Habitat Alteration	N
4. Socio-Economic Considerations	N	14. Flood Plain	N
5. Public Opposition or Concern	N	15. Wetland	N
6. Health & Safety	N	16. Bottomland/Shoreland	N
7. Construction or Modification	N	17. Discharge	N
8. Toxicant	N	18. Energy	N
9. Species Introduction	Y	19. Cumulative Impacts	N
10. Land Manager Approval Needed	N	20. State Forest Implication	N

VII. ENVIRONMENTAL ASSESSMENT

Prescription is Categorically Excluded (Y/N?): Y

Public Involved and Supportive (Y/N?): Y

VIII. COORDINATION OR OUTSIDE ASSISTANCE NEEDED (Specify and Describe)

Coordination with the Moon Lake Property Owner's Association will occur on a regular basis to assess if the splake are providing a sport fishery.

IX. ATTACHMENTS

Stocking Request Number	1225
E.A.R. (Y/N)	N
Public Involvement Plan (Y/N)	N
Maps (Y/N)	N
Plans (Y/N)	N
Other (List)	TEMP GRAPH

XI. APPROVALS

Approval Level	Approved By	Approval Date
FMU Approval	Steve Scott	02/05/2015



Michigan Dept. of
Natural Resources

Fish Stocking Request

Produced: February 06, 2015

Request No.: 1225

Resp. FMU: Western Lake Superior

Status: Approved

Prescription: 2850

Created: 10/17/2014 15:33

Purpose: Maintenance

Program: Inland

Tribal: TOL1842

Water	Site	Site No.	T.	R.	S.	Spe (St)	Age	Mark	Handling	Lvl.	2015	2016	2017	2018	2019	2020
Moon Lake	MOON LAKE	27-28-00	44N	39W	33	SPL	YR			1	4,140	4,140	4,140	4,140	4,140	4,140
										2	4,600	4,600	4,600	4,600	4,600	4,600
										3	5,000	5,000	5,000	5,000	5,000	5,000

Fisheries Division - Fish production can be highly variable from year to year, thus stocking efforts may deviate from the fish stocking request in terms of number stocked and/or year stocked based upon availability.