Summary

The Upper Nemahbin Lake Management District (UNLMD) was founded in 1992, in accordance with Chapter 33, *Wisconsin Statutes*, in response to a July 1989 illegal release of pollutants into the Bark River and Lake with the objectives to improve the usability and prevent further deterioration of its natural assets and recreational potential. The District intends to establish a dialogue with the Wisconsin Department of Natural Resources, consistent with these long-range goals, to restore the environmental quality of the Bark River and Upper Nemahbin Lake to the pre-1989 conditions.

Time Table



Three key areas of concern include:

- The execution of the removal of the Roller Mill Dam in accordance with all of the best management practices required to prevent additional downstream environmental damage to the waters of the UNLMD.
- 2. WDNR support and guidance to assist the UNMD electors to remove the muck transferred downstream from their shorelines.
- 3. WDNR assistance in obtaining the financial resources required resolving the above concerns.

Objective 1:

The removal of the Roller Mill Dam without additional transfer of muck and further environmental downstream degradation.

An ill-legal discharge by the owner of the Roller Mill Dam in 1989 instigated the build up and accumulation of decomposed organic material (muck) from the dam impoundment in area at the confluence of the Bark River and Upper Nemahbin Lake. *See Appendix 1.*

Additional muck was deposited and accumulated downstream as a result of the WDNR order to remove all the dam stop logs after June 20008 record rainfalls.

With the stop logs removed each subsequent rain event, since June 2008, has continued to transfer and deposit muck to an ever expanding, weed infested area in Upper Nemahbin Lake.

Scope:

The removal of the Roller Mill Dam in accordance with the full Inter-fluve Plan including the excavation of muck and the relocation of the Bark River to its pre-1840's location.

Execute the best management practices and techniques to remove or stabilize existing sediment deposits and control transportation of material (muck) to the maximum extent practicable.

Follow construction site erosion control technical standards and best management practices.

WDNR staff to provide on-site monitoring plans for invasive species, control of sediments (muck) and any other physical or biological conditions that would damage downstream areas.

The UNLMD be included in pre-construction, dam removal and post-construction sequencing as well as final plans.

Desired State:

Removal of the Roller Mill Dam in an environmentally responsible manner that would prevent the additional accumulation of muck to downstream areas in the Bark River and Upper Nemahbin Lake.

Benefits:

The electors of the UNLMD would be included in a plan to regain the full recreational use of their shorelines.

Cost of the removal of additional transfer material during dam removal would be avoided.

Objective 2:

The UNLMD to form a working partnership with the WDNR to remove muck that has been deposited by impoundment releases over the years along their shorelines.

Scope:

- 1. Expedite the permitting process to allow dredging of the area of accumulated muck in Upper Nemahbin Lake and restore to pre-1989 conditions.
- 2. Limit the amount of addition dredge material testing to an absolute minimum by accepting and approving the testing and analysis of the impoundment material prior to its transfer and deposit downstream.
- Schedule a follow up WDNR inspection of the growing extent of the profusion of weeds at the confluence of the Bark River with Upper Nemahbin Lake due to the high nutrient value of the muck that has been transferred from the dam impoundment over the years on or about August 1, 2013.

Benefits:

Aquatic life would be revived in the near pre-1989 lake conditions

Public access for fishing, canoeing and kayaking would be restored with uninhibited access to the Bark River and Upper Nemahbin Lake

Fish and other habitat loss, due to the inundation of substrates from the Roller Mill Dam impoundment, including largemouth bass, bluegill, green sunfish darters and minnow's common shiner, spot fin shiner feeding nesting and rearing of juveniles would be restored. *See Appendix 2.*

Current State:

18 to 30 inches of muck can be observed along shoreline properties.

Resident and public fishing and recreational use of Upper Nemahbin Lake has diminished as the weed infested area at the confluence with the Bark River has increased due to the high nutrient value of the deposited muck.

Desired State:

Pre-1989 water quality conditions.

Objective 3:

Obtain the funding necessary to accomplish the above objectives

Scope:

WDNR to obtain the shortfall in funding to complete the entire Inter-fluve Plan.

Assist in identifying and approving UNLMD grant applications to provide funds for the dredging of the muck accumulated in Upper Nemahbin Lake from the Roller Mill Dam impoundment

Current State:

The execution of the removal of the Roller Mill Dam in accordance with the Interfluve Plan is on hold pending the availability of resources to fund the estimated construction costs short fall.

The cost to dredge the growing weed infested area of the lake is beyond the financial ability of UNLMD.

APPENDIX

- 1. Zerwekh's Dam Break Lake County Reporter, July 13, 1989.
- 2. Memorandum Report 176 A Lake Protection Plan For Upper Nemahbin Lake, SEWRPC, December 2009.