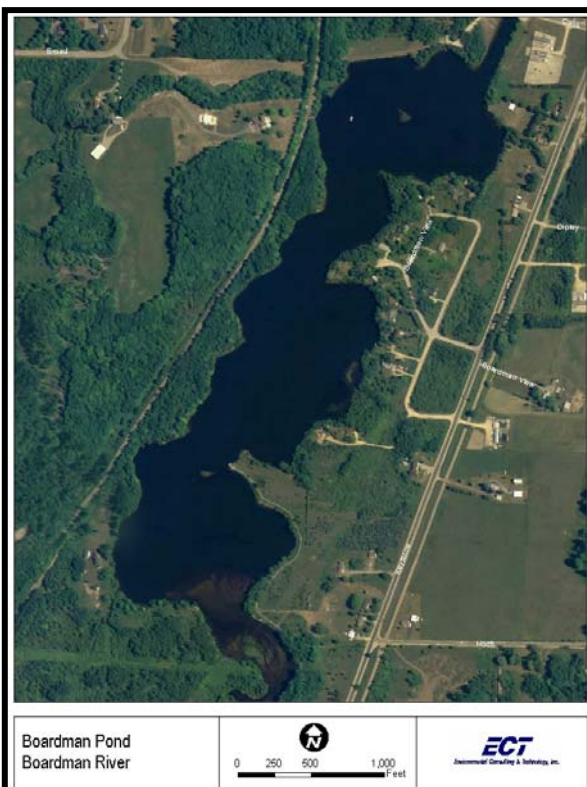
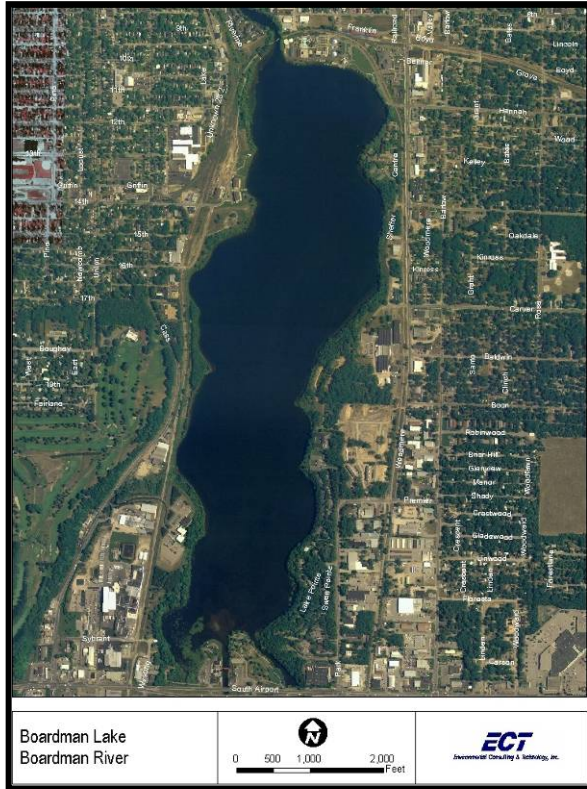


DRAFT - BOARDMAN RIVER FEASIBILITY STUDY

Alternative 1 - Retain and Repair all Dams
September 10, 2008



Alternative 1 - Retain and Repair All Dams

Introduction

This fact sheet is a summary of a detailed analysis of the alternative described below. The alternative was selected by the Boardman River Dams Committee for detailed analysis along with five (5) other alternatives. The following information is provided as a summary of the analysis of the alternative. Information on the existing conditions and impacts of this alternative can be obtained by reviewing the complete report on the website. You may notice that the description of the analysis of the alternative sometimes includes at the end of certain sentences an alphanumeric code in parentheses. This code refers to the list of questions that was included in the Request for Proposals.

Description

This option will consist of retaining all of the dams as they currently exist. Water levels and impoundment size will not be changed. Repairs will be made to the dams and associated structures, but the spillway at Boardman Pond will not be modified. The dams will not be modified to allow increased fish passage. The Brown Bridge Dam will not be modified to reduce adverse impact of warm water discharge. The fish ladder at Union Street will be maintained and the fish weir operated by the MDNR will be maintained.

IMPACTS OF RETAINING AND REPAIRING ALL DAM

ENVIRONMENTAL:

Fish and Wildlife Populations

- Fish and wildlife, including but not limited to eagles, swans, nesting ducks, shorebirds, insects, ruffed grouse, hex hatches, cold and warm water fish, fur bearing mammals and deer will not be significantly impacted. (A2)
- Migratory fish passage will be blocked at the weir and Union Street dam. (A13, A16 and D15)
- The adverse environmental impact to cold-water fisheries of the Brown Bridge Dam will not be mitigated.
- The cold water fishery of the remaining portion of the Boardman River will not be significantly impacted. (A18 and C20)
- Control of invasive aquatic species will be maintained by the weir and dam at Union St. and not be significantly impacted. (A10)

Threatened and Endangered Species

- Existing use of the impoundments by threatened and endangered species will not be significantly impacted. Opportunities for threatened and endangered species that rely on cold water habitat and wetlands to colonize restored habitat will not be realized. (A1)

Plant communities and habitat

<u>Habitat Type</u>	<u>Acres</u>
New River Channel	0
Existing River Channel	113
Impoundments	673
Riparian Habitat	56
Wetlands	112
River Channel, Upstream from Brown Bridge	<u>288</u>
Total	<u>1,242</u>

- Plant community changes will not be significant. Wetland vegetation will continue to develop on the delta formed at the head of each impoundment. (A3, A14)
- The flow and depth of water upstream of the Brown Bridge Dam will not be significantly impacted in the short term, but over time the impoundment will continue to fill with sediment. (A24)

Hydrology and Hydraulics

- Boardman Dam will remain out of compliance for an inadequate spillway and the water level will need to be maintained at a lower level.
- The flow of water will not be impacted by retaining the dams.
- The flow of water above Brown Bridge Pond will not change and depth of water in Brown Bridge Pond will not be changed. (A24)
- The size and extent of floodplain and flood control will not be altered.

Stream Channel

- The stream channel of the Boardman River will not be impacted.
- Channel erosion will continue at the current rates and will not be impacted.
- Tributaries to the Boardman River will not be impacted.

Sediment

- Contaminated sediments that exist in the impoundments will remain in the impoundments.
- Contaminated sediment will not be mobilized.
- Base load sediment levels in the river channel will not be restored.

Water Quality

- Water quality will not be significantly altered and the warm water impact of the Brown Bridge Dam will continue to have a significant adverse impact on cold water fish populations in that section of the Boardman River downstream from the Brown Bridge Dam. (A9)
- The regional wastewater treatment plant will not be impacted.

Groundwater

- There will be no significant impact on water supplies and septic systems of properties adjacent to the impoundments. (B10, A15)
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SOCIETAL:

- The property boundaries of private properties adjacent to Boardman Lake and Boardman Pond will not be significantly impacted.
- The property adjacent to Brown Bridge Pond and Sabin Pond is primarily in public ownership. (D1)
- There will be no significant change in the risk to property owners due to storm events and flooding. (D2)

Recreation

- Recreational uses will not be significantly impacted. (A19 D5)
- A whitewater park may be feasible downstream of the Union Street dam. (B14)
- There will be no significant change to the recreational use patterns of users of the Boardman River.
- The safety concerns associated with an impoundment will continue to exist. (D13)
- There will be no significant impact to the County's Natural Education Reserve. (D17)

Community

- The potential economic benefits of restoring high quality trout habitat will not occur. (C12)
- The taxpayers in the County and City will be responsible for paying to maintain the dams. (C26)

Historic Value

- The dams and powerhouses are not eligible for designation as historic structures; therefore, the repairs to the dams will not have an impact on historic properties.

ECONOMIC:

Cost

- The cost to retain and repair the dams is estimated to be between \$1,600,000 and \$2,500,000 including annual cost to maintain the dams.

Economic Benefit

- Visitors to the Boardman River are estimated to contribute annually \$4 million dollars to the local economy. There will be no significant impact to this benefit due to this alternative.

Property Value

- There are approximately 4,000 parcels of land with an assessed value of \$331 million with ½ mile of the Boardman River. There will be no significant impact on property values by this alternative. (C1)
- The current property boundaries will not be affected by this alternative. (C3)

Funding

- The repair and maintenance of the dams is the responsibility of the owners of the dams. (C6,C7)

Energy

- This alternative allows hydroelectric energy to be produced if modifications are made to the dams in accordance with FERC requirements. (C28, D4)

Jobs

- This alternative will have no significant impact on job growth in various economic sectors. (C18, C22)

ENGINEERING:

Infrastructure

- This alternative will have no significant impact on transportation or other infrastructure. (A17)
- There will be no significant impact on structure crossings within and downstream of the project area to the termination in Grand Traverse Bay. (B11)
- The risks/liabilities with this option remain as before. The City and County are responsible for maintenance of the dams and assume the risks and liabilities of the ownership of the dams. (D20)