



MACTEC, Inc.
MACTEC Engineering and Consulting
MACTEC Development

MEMORANDUM

DATE:	July 15, 2011
FROM:	Steve Stumne
SUBJECT:	Wetland Reconnaissance – Boardman River
TO:	MACTEC Project File Number: 3310110004

Title: Boardman River Wetland Reconnaissance—June 22 and 23, 2011

Purpose:

A reconnaissance level field investigation of wetlands within the vicinity of Brown Bridge and Sabin Ponds (Figures 1 and 2, respectively) was conducted to provide additional insights to wetland characteristics (vegetation, hydrology, soils) of the project area. Key elements of the reconnaissance effort were focused on evaluating wetlands in the immediate vicinity of the ponds and potential mechanisms for environmental impact (losses and gains) associated with dam removal and ecosystem restoration initiatives and in understanding the accuracy and sufficiency of the prior mapping effort done as part of the Feasibility Study (FS) prepared by Environmental Consulting & Technology, Inc. (ECT) which included a wetland determination which are referenced below as wetlands A, B, etc. Incidental observations of wildlife and invasive species were also made at each site to supplement characterizations of the local environmental conditions as part of the National Environmental Policy Act (NEPA) process.

Results:

1) Brown Bridge Pond

- a) Site reconnaissance at Brown Bridge Pond performed on June 22, 2011. Those in attendance included Steve Stumne, Bill Elzinga, and Jim Veenstra of MACTEC and Frank Dituri and Brett Fessell of the Grand Traverse Band (GTB) of Ottawa and Chippewa Indians.
- b) Launched canoes from Scheck’s Campground.
- c) A total of five transects were walked (generally oriented north-south) at locations identified Figure 3. Global Positioning System (GPS) points were recorded at locations along the transects indicating where the plant community appeared to change from wetland to upland and vice versa. Transects were walked from the river bank to the toe of the valley walls.
- d) Wetlands that exist in the valley above the influence of Brown Bridge Pond appear to have a hydroperiod that is primarily groundwater-fed.
- e) Transect 4 was a “disjunct” transect located through a portion of ECT Wetland A. This effort confirmed that the current boundary of Wetland A is incorrect. The wetland does not extend up the valley slope and the draw or ravine on top of the slope is an upland community. Uncertainty exists about the location of the boundary in this area.
- f) Transect 5 was located through the middle of ECT Wetland B. A narrow strip of upland separates emergent from forested wetland communities. Most of this transect was located in a wetland. However, uncertainty exists about the location of the boundary of this wetland.
- g) The area below Brown Bridge Dam was investigated on Thursday, June 23, 2011 by Steve Stumne, Bill Elzinga, and Frank Dituri. A large wetland complex below the dam appears to be supported primarily by seepage through the dam and will likely be

impacted during dam removal. Groundwater seepage from the north valley wall was not evident during field reconnaissance. Wetlands in this area had not previously been mapped or delineated. Consequently the boundaries should be determined to fully assess potential effects of dam removal.

- h) Wetland plant communities are demonstrated to be diverse and well developed with a range of plant species characteristic of forested, scrub shrub and emergent wetlands. Common wetland plants included *Phalaris arundinacea*, *Carex stricta*, *Glyceria striata*, *Onoclea sensibilis*, *Thalictrum dioicum*, *Alnus rugosa*, *Impatiens capensis*, *Thelypteris palustris*, *Schoenoplectus acutus*, *Scirpus validus*, *Thuja occidentalis*, and *Typha latifolia*.
- i) Several invasive plant species were observed over the course of the field reconnaissance effort. Species observed in the vicinity of Brown Bridge Pond included the following:
 - bull thistle (*Cirsium vulgare*) - common, exposed banks
 - Russian olive (*Eleagnus angustifolia*) - occasional, river banks
 - reed canary grass (*Phalaris arundinacea*) - common, river banks
 - common reed (*Phragmites australis*) - common in Wetland B
 - glossy buckthorn (*Frangula alnus*) - occasional, bottomlands
 - common buckthorn (*Rhamnus cathartica*) - occasional, bottomlands
 - spotted knapweed (*Centaurea stoebe*) - common, dam area

2) Sabin Pond

- a) Site reconnaissance performed on June 23, 2011. Those in attendance included Steve Stumne, Bill Elzinga, and Frank Dituri.
- b) Investigated portions of wetlands on the north side and south side of Sabin Pond. Wetlands previously identified in the vicinity of the “beaver pond” were observed and recent pool level reduction was evident by exposed mudflats in the upper reaches of Sabin Pond. Hydrology in the “beaver pond” area appeared to be perched and not dependent on the recent pool lowering. Wetlands on the east side of Sabin Pond were observed to be perpetuated by groundwater discharged emanating from the valley wall to the east.
- c) Common wetland plants included *Phalaris arundinacea*, *Carex stricta*, *Alnus rugosa*, *Typha latifolia*, *Equisetum arvense*, *Pilea pumila*, and *Salix nigra*.
- d) Based on a review of the wetland determination report prepared by ECT and observations made in the field, the area below Sabin Dam should be delineated because wetlands may be supported by hydrology from Sabin Pond and would thus be impacted during dam removal. This area has never been delineated. Several invasive plant species were observed over the course of the field reconnaissance effort. Species observed in the vicinity of Sabin Pond included the following:
 - Russian olive (*Eleagnus angustifolia*) - occasional, bottomlands
 - reed canary grass (*Phalaris arundinacea*) - occasional, bottomlands
 - glossy buckthorn (*Frangula alnus*) - occasional, bottomlands
 - common buckthorn (*Rhamnus cathartica*) - occasional, bottomlands
 - narrow-leaved cattail (*Typha angustifolia*) - occasional, bottomlands





