



BROWN BRIDGE DAM STATUS UPDATE NOVEMBER 7, 2012

THE BOARDMAN RIVER DAMS PROJECT

The Boardman River Dams Implementation Team (IT) is coordinating The Boardman River Dams Project (BRDP), a dam removal and river restoration initiative in the Boardman River watershed. Through the removal of Brown Bridge, Boardman, and Sabin Dams, and modification of Union Street Dam, the Boardman River will be restored to a more natural flowing, coldwater stream.

The IT is comprised of primary representatives from Grand Traverse Band of Ottawa and Chippewa Indians (GTB), MI Hydro Relicensing Coalition, the US Fish and Wildlife Service, Grand Traverse County, the City of Traverse City (City), Traverse City Light & Power, Michigan Department of Environmental Quality (DEQ), and Michigan Department of Natural Resources (DNR). The IT also includes the following ex-officio members: Conservation Resource Alliance, Watershed Center Grand Traverse Bay, Grand Traverse Conservation District (GTCD), Rotary Camps & Services, Garfield Township, and Grand Traverse County Road Commission (GTRC).

BROWN BRIDGE DAM REMOVAL

The first stage of this restoration project involves the removal of Brown Bridge Dam, which is owned by the City. The IT has contracted with AMEC Environment and Infrastructure Inc. (AMEC) to provide construction services for the Brown Bridge Dam removal project. The project team includes AMEC, Molon Excavating, Inc. (Molon), and other technical and construction experts. After a thorough review of design and engineering plans, and an environmental assessment, DEQ approved a permit for the removal of the dam. Work at the project site commenced in July 2012.

The dam removal process necessitates a final drawdown of Brown Bridge Pond to a level that would allow for deconstruction of the dam. This drawdown was planned and approved at a maximum rate of 12-inches per day, through a device that is known as a Temporary Dewatering Structure (TDS). At the time final drawdown was initiated, the Brown Bridge Pond water level was approximately 20 feet higher than the water level of the Boardman River downstream of the dam. Final drawdown was planned to reduce the pond water level to approximately 2 feet higher than the Boardman River water level over the course of 18-20 days.

OCTOBER 6 INCIDENT

At approximately 10:00 a.m. on October 6, an abrupt release of water occurred in the area of the TDS. This abrupt release of water caused varying damage to approximately 50 riverfront properties. The project team immediately worked with property owners to assist with damage mitigation.

AMEC has provided financial assistance to the downstream impacted property owners by paying contractors to perform preliminary cleanup and restoration. AMEC, through its insurance company, has sent adjusters to prepare damage assessments. AMEC also

provided hotel accommodations to property owners who were unable to stay in their homes. AMEC's project team and insurance adjusters visited over 130 residences door-to-door and assisted over 80 residents who notified the hotline established by the Emergency Management Coordinator. AMEC's insurance company is maintaining a database system to track and record the list of impacted properties and monitor restoration activities.

INCIDENT INVESTIGATION

An engineering investigation to understand the cause of the October 6 release of water is being conducted by MDEQ's Dam Safety unit. It is anticipated that the investigation will be completed when the powerhouse is removed and the river channel is constructed in the location of the former powerhouse. The powerhouse is expected to be removed by November 10 and the investigation could be completed within six weeks following powerhouse removal.

Currently, the project team is inspecting the portions of the TDS that can be observed at grade level. The investigation will continue as the project progresses. The cause of the release cannot be determined until the investigation is complete.

STATUS OF BROWN BRIDGE DAM REMOVAL

A few days following the October 6 incident, work resumed in the upper end of the former pond area – cleaning out sand traps, excavating the floodplain, and shaping spoil areas according to the original work plan. At the dam, the project team received work plan approval from the DEQ to divert the river flow into the TDS and continue demolition of the remaining lower concrete structure of the dam. This work began the week of October 29 and is expected to take approximately two weeks to complete. The project team expects to complete the dam removal by its original target date of mid-late December of 2012. As originally planned, certain follow up grading and vegetation work will follow in the spring of 2013.

DOWNSTREAM ASSESSMENT

Biological

Biologists from the MDNR, GTB, CRA, and GTCD along with Adams Chapter of Trout Unlimited volunteers recently conducted a "Presence/Absence" fish survey in the river at two locations below Brown Bridge Dam where the MDNR had previous population data. A population estimate wasn't possible at this time because of the turbid (cloudy) water. The first survey took place approximately 150' downstream of Brown Bridge Road in an area that received the brunt of the release of water. Seventy-three fish representing 13 different species were captured and released in a 500-foot stretch. This included 11 brown trout and one brook trout. The second survey took place downstream at Beitner Landing just upstream from Beitner Road. Biologists surveyed a 250-foot section along the east bank where they captured and released 37 fish in less than 15 minutes of surveying. They collected three brook trout and 28 brown trout. One brown trout was 20 inches long. Monitoring of fish health by several agencies will continue.

Environmental

DEQ recently conducted sampling for arsenic, pH, dissolved oxygen, and water temperature at public road crossing downstream of Brown Bridge Dam. Arsenic levels at all sampling locations downstream of Brown Bridge dam were within acceptable ranges; pH, dissolved oxygen, and water temperatures were all within acceptable ranges.

for a cold water trout stream; but total suspended solids (water cloudiness) was elevated from Brown Bridge Dam to the Beitner Road crossing.

Sediment

Sediment, primarily sand, that collected immediately downstream of the dam will be removed this week. Turbidity caused by the loss of soil from the dam embankment continues to be observed, and the project team continues to monitor turbidity. Fine material in the water was expected as a result of construction work in the river channel, and it is expected that the river will begin to clear up once construction is completed in the river channel. During planned channel dredging and floodplain work upstream of the dam prior to October 6, approximately 140,000 cubic yards of sediment were removed and placed to prevent its movement downstream after dam removal. Thanks to this work, vast amounts of sediment were prevented from moving downstream during the event.

FUTURE RISK OF FLOODING

No one can predict Mother Nature, and flooding is always a possibility near a river. However, it is important to understand that neither removal of the dams on the Boardman River nor the October 6 incident has increased the risk of flooding in the future.

COMMUNICATION

Experts are collecting and analyzing information on this incident and its impacts, and the project team remains diligent in collating and disseminating information as it becomes available. Updated information can be found at **theboardman.org**, and the project team will provide regular updates and press releases to the public. Questions and comments can be directed to info@theboardman.org.

DAMAGE CLAIMS

AMEC remains committed to assisting property owners with damage claims. If you have questions or a concern regarding property damage caused by the October 6 flooding, please call. Contact Crawford & Company at **855-243-8636** and reference Claim **#9240084847** to report all property damage and set up an appointment for a representative to visit the property and assess damage. Crawford has reported already meeting with a number of homeowners and completing inspections. Should you be one of those homeowners and have any questions regarding the status of your claim, please contact your Crawford adjuster or call the 855 number above.