Boardman River Dam Removal, River Restoration & Cass Bridge - Project Photos

June 2016 - Cass Road Bridge project underway with 135' center beams being set

October 2016 – Cass Road Bridge construction complete & ready for returning river to original location

October 2016 – Standing on Boardman dam earthen embankment/concrete wall looking downstream to Cass Road Bridge, barely discernible behind trees. Standing water is evidence of seeps from original river channel.

April 2017 – Getting ready to return the river to its original streambed; building the channel.

June 2017 – Siphons to drain the impoundment are being tested & auxiliary channel to the right is being built.

April 2017 – Looking upstream at earthen embankment/concrete wall of Boardman Dam as it is starting to be removed & a river channel created. The 78 acre impoundment is behind this wall.

June 2017 – Looking upstream at dam; siphons are in full operation draining the impoundment & auxiliary channel being constructed. Once the gravity fed siphons have drained the pond as far as they can go, the rest of the impoundment will be drained by the auxiliary channel while the siphons are removed & the river channel is finished being built in their place.

May 2017 – Siphons are comprised of 30’ diameter pipes fused together to make 300’ lengths.

June 2017 – Siphons were primed and gravity fed; 14 siphons were individually operated 24 hours a day at varying capacity and amounts according to stream flow and rain events so that the impoundment was drawn down between 6”-12” per day.

July 2017 – Siphons dropped the impoundment 21’.

August 2015 – Boardman Pond used to be 104 acres until MDEQ required it be drawn down 16' due to structural insufficiency of the spillway. Then the pond became 78 acres.

July 2017 – Drawdown efforts uncover the accumulated sand, muck & tree stumps that were concealed by the former impoundment.

July 2017 – What once was an underwater "desert" is now a rather challenging worksite, but will be a river again.

September 2016 – Downstream of the new Cass Road Bridge, this ponded area is a result of beavers damming the natural seeps from the original riverbed that have continued to flow in spite of both Boardman and Sabin Dams.

April 2017 – Getting ready to return the river; an access road is built on the left bank.

May 2017 – In the thick of it, earthwork to return what once was. A sediment trap & the Sabin Dam impoundment downstream will catch mobilized sediment.

July 2017 – River channel returned and water will flow "cloudy" until the drawdown of the impoundment is complete.

July 2017 – Looking upstream at the powerhouse and water control structure. This "intake" channel is now dry & no longer a maintenance headache to keep clear of fallen trees, branches and debris.

June 2017 – What's a dam made of? Sand, clay, concrete & lots of rebar. This dam was 650' long & "detached" from the powerhouse located 400' to the east. The concrete wall was 15" thick & 33' high.

June 2017 – Happy workers installing "toe wood." Healthy rivers have log jams; excellent places for fish, otter, mink, turtles, frogs and aquatic insects to live and hide.

June 2017 – Building wood structures can resemble a game of "pick up sticks."

June 2017 – Burying rootwads in streambanks & anchoring with more wood.

July 2017 – Completed "wood work." Anchored wood looks natural & what critter wouldn't want to live there? Note how the most rapid river flow is directed towards the middle of the channel & there is sufficient floodplain on either side, providing room for "extra" water to flow during heavy rain & snowmelt events.

June 2017 – Rivers move a lot of things including sediment. Dams disrupt that natural movement & sediment builds up, creating underwater shelves of muck & sand over time. One day, equipment got stuck in 13' of muck.

June 2017 – Fish rescue efforts as the river is relocated to its original location at the upstream end of the project area. An estimated 1.8 miles of river is being "daylighted" or returned.

April 2017 – "Before" shot of the first river bend to be returned. A shell game of moving sediment & water. An estimated 285,000 cubic yards of sediment is being managed during this dam removal.

July 2017 – Looking good at the same river bend, with more to come…

July 2017 – Auxiliary channel functioning with 8’ of dam height left to be removed. Note excavator hauling sections of the siphons back across the water to be removed from the project site.

July 2017 - Auxiliary channel is 40’ wide, 70’ long & comprised of drainage stone covered with mesh geotextile, overlaid with articulated concrete block mats grouted in between to ensure water doesn’t undermine the channel.

July 2017 - Cutting apart the sheet pile that was underneath part of the concrete wall in the dam embankment.

October 2016 – Aerial of Boardman Dam impoundment. Photo provided by Jim Anderson Aerial Photography

July 2017 – Boardman pond being drawn down with water flowing through siphons & not through the powerhouse.

July 21, 2017 – The big day. Breaking apart more of the dam to allow water into the auxiliary spillway (on the left) where the remaining pond water will drain while the siphon tubes (on the right) are removed & the final river channel is excavated in their place. This overall endeavor will return the river to its historic channel.

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July 2017 - Water flowing through the "sediment wedge" in the former pond takes the path of least resistance in an area once forested, with tree stumps & trunks as evidence. Large, heavy white "sand" bags slow down the movement of water & sediment giving excavators time to recreate the river channel & floodplain upstream.

May 2017 – Project team partnering session. A dedicated, patient & strong network of partners continues to drive the Boardman River restoration effort.

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