

# **Report of Wetland Habitat Restoration in Lake Belle View As of May 2012**

***By Village of Belleville***



**For more information:**

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## **Report of Wetland Habitat Restoration in Lake Belle View**

The Lake Belle View restoration is an ongoing, long-term effort. However, some major restoration activities as outlined below have taken place in 2011 and 2012.

- March 2011 - Placement of sediment around existing floodplain forest island completed.
- March 23 – May 3, 2011 - Habitat fill areas were too wet to do final grading work and restoration. Areas were temporarily seeded with oats and allow native species to self establish.
- June 20, 2011 – Seeding of emergent areas (elev. 857 – 858) while the water levels on the lake were still 1-foot low, to allow for establishment of vegetation on the banks.
- July through October 2011 – Multiple aquatic vegetation transfers, including water lilies and wild celery tubers (in April 2012).
- November - December 2011 - Final grading of habitat islands and dormant seeding of stabilization mix in the habitat fill areas.
- November - January 2012 - Invasive species control started with cutting of cattails at or below water levels and invasive brush cut and treated in the existing habitat areas.

Last year, efforts focused on stabilization of the islands. Seeding work had not yet occurred. The wetland and floodplain forest creation/restoration and enhancement activities had been somewhat delayed due to the fact that the habitat fill areas were too wet to operate equipment for grading and seeding. This resulted in no wetland monitoring activities during 2011. However, the habitat islands were allowed to self-establish some native vegetation. This year, many of the wetland species are just starting to surface. Some anecdotal evidence of voluntary native species diversity has been reported, however, especially in the area on top of the highest “hill” of the habitat fill areas. The wet conditions are supporting some wetland species such as rice cut grass and arrowhead. It is also evident that native species are emerging as well in drier areas that were not necessarily expected, especially since no seeding of native species took place during 2011. The consultants theorize that the native species seed bank is coming from the deeper sandy layers that were dredged last and placed on the top of the habitat fill areas. Species like broadleaf smartweed, blue vervain and marsh milkweed have been observed.

Future activities will include an evaluation of the wetland restoration. Also planned is a meandering survey and a WRAM assessment in July under the 1428-11 contract to assess the condition of the wetland as outlined in the restoration plan. Assessment on the emergent vegetation in the lake water will wait until 2013 to allow a little more time for plants to establish themselves in the lake.

Future maintenance activities include:

- Continuous water level monitoring
- Vertical lake profiles and 4 trophic state index monitoring
- Fish surveys
- Stormwater monitoring
- WRAM wetland functional value assessment
- Wetland meander surveys
- Invasive species control and vegetation management in all areas

Following is a listing of various native plants that have been observed in the field during restoration activities but is not necessarily comprehensive. Consultants are optimistic that this voluntary native species diversity is a promising start for a successful restoration project. A significant patch of Purple Loosestrife has been spotted in the riverbed on the riverside of the berm (outside of the project area). Only one purple loosestrife plants has been observed in the project site to date and was removed promptly. Significant patches of cattails and reed canary grass are also present on riverbed on the riverside of the project site. All of these areas will be flooded next spring with at least 1-foot of water as the dam on the river is closed as planned. Once the water levels in the river are back up again consultants be able to evaluate the risk associated with the invasive species adjacent to the project site.

**Lake Belle View Self Establishing Native Species –**  
*List of native species found in fill areas (12/29/2011).*

- **Rice Cutgrass** – *Leersia oryzoides*
- **Arrowhead** – *Sagittaria latifolia*
- **Softstem bulrush** – *Scirpus validus*
- **Darkgreen bulrush** – *Scirpus atrovirens*
- **Narrow-Leaved Cattail** – *Typha angustifolia* – [Needs confirmation summer 2012]
- **Broadleaf Smartweed** – *Polygonum pensylvanicum*
- **Blue vervain** – *Verbena hastata*
- **Marsh milkweed** – *Asclepias incarnate*





**1 Sediment Placement Completed, 4/1/2011**



**2 Emergent Habitat Areas on North Bank  
5/9/2012**



**3 Cattail removal, winter 2011. Most brush  
work was completed by hand.**



**4 Habitat Islands Viewed from Community  
Park.**



**5 Canoe Loop Looking South.**



**6 Future Turtle Nest Site.**