

Crosby Lakes and Hill Ditch

Lake and Stream Restoration Project

Pre-project Fact Sheet

May 2012



Toledo Botanical Garden (TBG) is a 60-acre public garden visited by more than 120,000 people annually. It is located in Toledo, Ohio in the Ottawa River watershed within the Maumee Area of Concern. Hill Ditch is a perennial stream that flows west to east through the center of the TBG.

Crosby Lakes are two manmade lakes within TBG that were created through the installation of two dams in 1988. The initial constructed depths of the upper and lower lakes ranged from 6 to 15 feet. Over the 20 years since their construction, the lakes have trapped an estimated 28,000 cubic yards of sediment. Many of the areas in the upper lake have filled in to become islands where invasive plant species have established themselves. In the lower lake, many areas have filled in and the banks are eroding and slumping into the lake.

In 2009 with a grant from the USDA Natural Resources Conservation Service, TBG had a conceptual design created to address these issues. Dam removal was determined to be essential and a stream restoration plan was prepared.

With the conceptual design developed, TBG was successful in receiving an Ohio EPA 319(h) Nonpoint Source Pollution Control grant in 2011 to implement the Crosby Lakes and Hill Ditch Restoration Project. The objectives are to:

- **Improve** the biological & chemical **water quality**
- **Restore** a natural stream **channel**
- **Expand** and/or enhance **wetlands**
- **Enhance** portions of **Crosby Lake**
- **Create** a sustainable system

All of these would need to be accomplished through a project that would:

- ✓ **Adhere to the TBG Master Plan**
- ✓ **Educate the public** on sustainable natural ecosystems
- ✓ Provide a place where **people can interact** directly with a high-quality natural stream, wetlands, and a rejuvenated Crosby Lake



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Preliminary Restoration Plans

The preliminary restoration plan was developed, proposing construction of a sinuous channel for Hill Ditch by creating a series of berms that partially isolate portions of the lower and upper ponds from the new stream channel. Rock riffles and fish habitat structures were proposed. In order to minimize sediment accumulation in the adjacent wetlands and the remaining lower pond, berms must be constructed high enough so that sediments carried by the stream do not spill over into the pond during high water events.

The restoration plan also proposes reinforcing the berms with features, such as visitor accessible stone pathways, many species of densely planted native vegetation, and Bendway Weirs, which add structure and habitat to the stream and direct the fastest flows towards the middle of the new stream channel. By doing this, erosional forces along the outer bends of the new streambank will be minimized, stabilizing the position of the stream channel. This will help to achieve the overall goal of creating a stream channel that can provide a diversity of habitat for aquatic organisms while remaining stable over a very long period of time with minimal maintenance by TBG.

The preliminary plan also calls for enhancing the adjacent areas in the upper pond by creating a series of high quality floating-leaved, emergent and scrub/shrub wetland systems that contain native plants. In the lower pond, plans include adding a variety of depths for open water and interspersing them with stands of native floating leaved and emergent vegetation.

TBG has enlisted a team of experts to assist them with this complex project. Before this project can be constructed it is necessary for TBG to have studies conducted, detailed plans and specifications drafted, and obtain the necessary permits. Construction of this project is expected from Fall 2012 through Spring 2013.

Public Involvement

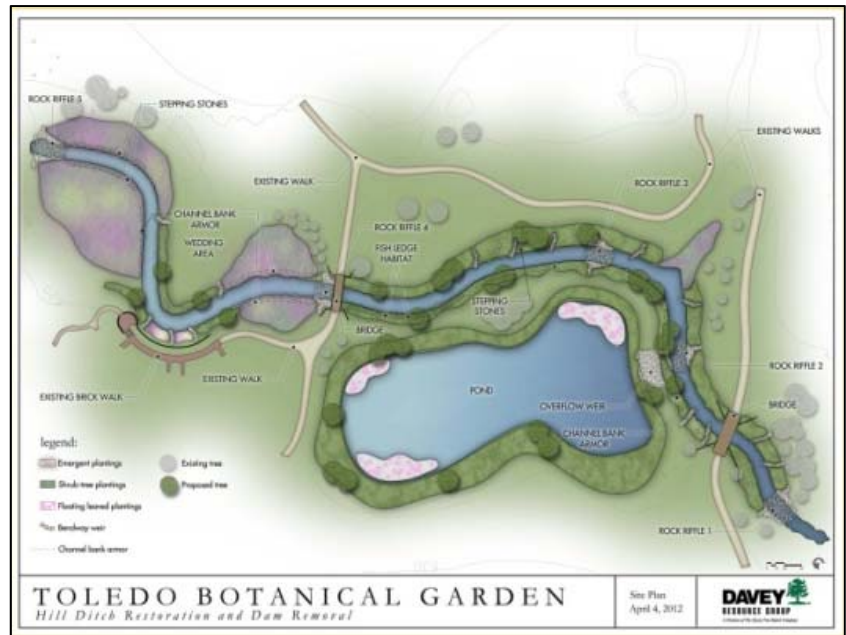
Involvement of TBG members, neighbors, volunteers and staff is highly encouraged as the project moves forward. Public information sessions will be held to update the community on the plans and progress throughout the project.

TBG would like to get people involved in this project whenever possible. This is being accomplished through:

- Harvesting and Planting Plants
- Site Visits and Tours
- Youth/Scout Programs and Camps
- Wetland and Stream Restoration Workshops
- Educational Signage and Brochures

Want to Learn More?

TBG would love to tell you more about this project and/or answer any questions you might have. Contact TBG at 419-536-5566 or visit their website at www.ToledoGarden.org.



Volunteers will be needed to harvest local native plants.