

LITTLE TRAVERSE BAY Watershed Protection Plan

Accomplishments 2007-2012



Stormwater Management

Tip of the Mitt Watershed Council monitored water quality of urban runoff at three stormwater outlets in Petoskey. The Watershed Council is working with the City of Petoskey to further assess stormwater pollution in order to develop a stormwater management plan.

Bay Harbor Cleanup

In 2012, the final agreement was signed between CMS Land Co. and the State of Michigan governing long term remedies for the cement kiln dust contamination at Bay Harbor and East Park. Little Traverse Bay Bands of Odawa Indians are studying mercury bioaccumulation in fish living in the Bay (2012-2015).

Gaps Analysis

In 2011, an analysis of Charlevoix County ordinances affecting water quality was completed. Emmet County regulations were reviewed in 2012 and results will be published and distributed in 2013. The analysis includes specific recommendations for model ordinances to help local governments clarify and improve water protection such as zoning, construction, and stormwater management.

Clean Marinas

By 2010, all five marinas on Little Traverse Bay were certified by the Michigan Clean Marina Program: Irish Boat Shop, Walstrom Marine, Harbor Springs Municipal Marina, Petoskey City Marina, and Bay Harbor Lake Marina.

Invasive Phragmites

Surveys in 2009 and 2010 revealed over 300 stands of invasive (non-native) *Phragmites* in Emmet County. The Emmet County Board of Commissioners, Emmet County Lakeshore Association, Little Traverse Bay Watershed Advisory Committee, and the Watershed Council developed a treatment and follow-up plan that has been very successful controlling the spread of *Phragmites* along Little Traverse Bay.

Shoreline and Streambank Surveys

During 2010 and 2011, the Watershed Council, Little Traverse Bay Bands of Odawa Indians, and Walloon Lake Association partnered to survey all properties on Walloon Lake and the main stem of the Bear River. These surveys documented nutrient pollution, erosion, hardened shorelines (e.g., seawalls and riprap), greenbelts conditions, and invasive plants. In addition to follow-up outreach and education efforts, partners are now working directly with riparian property owners to address problems and protect Walloon Lake and the Bear River, which comprise the largest source of water to Little Traverse Bay.



Little Traverse Bay has been a focal point of human activity in Northern Michigan for hundreds of years. The rich waters and land that comprise the Little Traverse Bay Watershed have provided sustenance, timber, mineral resources, fish, transportation, electricity...and are now the backbone of a thriving resort and tourism economy. The purpose of the Little Traverse Bay Watershed Protection Plan is to ensure that the Watershed will be protected, enhanced, and restored for generations to come.

Land and Wetland Protection

Little Traverse Conservancy and Walloon Lake Trust and Conservancy protect land in the Little Traverse Bay Watershed, both as public preserves and as private easements. The conservancies have permanently protected a combined 2,370 acres in preserves, 1,847 acres in easements, and an additional 485 acres in assist projects. This includes approximately 6,700' on Lake Michigan, 3,900' on Walloon Lake, and over 10 miles of rivers and streams.

Avian Botulism Monitoring

Watershed Council volunteers have documented dozens of dead loons and other waterfowl along the shore of Little Traverse Bay. Changes in the nutrient cycle and food chain of the Lake Michigan ecosystem caused by invasive quagga and zebra mussels are suspected in the recent avian botulism outbreaks. Low lake levels and warmer weather seem to exacerbate the problem.

Bay View Association Rain Garden Initiative

The Bay View Association is working with Tip of the Mitt Watershed Council to develop 25 rain gardens between 2012-2014 to help control stormwater runoff. Three were installed in 2012.

Education

Tip of the Mitt Watershed Council, Little Traverse Bay Bands of Odawa Indians, and several other partner organizations held workshops and classes to promote greenbelts, native plants, appropriate fertilizer use, septic maintenance, rain barrels, and waterwise practices. *Petoskey News Review* published many articles to help keep the public abreast of important watershed protection opportunities and issues.

Nutrient Pollution Prevention

In 2012, the State of Michigan banned phosphorus in lawn and garden fertilizers. Surveys, outreach, and education by advisory committee partners continue to focus on nutrient pollution prevention and control.

Tannery Creek Restoration

An undersized culvert will be replaced with a channel-spanning bridge for the Little Traverse Wheelway in 2013. University of Michigan graduate students and Tip of the Mitt Watershed Council, along with the participation of local businesses, are developing a Tannery Creek Watershed Plan under the umbrella of the Little Traverse Bay Watershed Protection Plan.

North Central Michigan College Stormwater Wetland

In the fall of 2012, construction began to replace a failing stormwater pond adjacent to the campus with a stormwater wetland that provides habitat and stormwater management.

Rain Barrels and Native Plants

To encourage water conservation and promote the use of native plants in landscaping projects, rain barrels and native plants were sold to the public at discounted prices to encourage their use.

Road/Stream Crossings

In 2012, the Watershed Council began updating the Bear River Watershed road/stream crossings inventory. Both the previous inventory, completed in 2000, and the current inventory assess road/stream crossing conditions and prioritize sites with the greatest need for culvert upgrades or clear-span bridges. Multiple culverts were replaced with a clear-span bridge at the Click Road/Bear River crossing in 2012. An undersized culvert will be replaced with a larger culvert at the Holms Road crossing over Hay Marsh Creek, a tributary to the Bear River, in 2013.

Pharmaceuticals in Our Waters

Between 2008 and 2012, nearly 5,000 lbs. of pharmaceuticals were collected within a four county area. Within those four years, Prescription and Over-the-counter Drug (POD) Drop-off collection events held at the Emmet County Drop-off Center and McLaren Northern Michigan Hospital collected over 1,700 lbs. of pharmaceuticals that otherwise could have been improperly disposed of, contaminating our waters. For added disposal convenience, permanent POD collection boxes were placed in Emmet and Charlevoix Counties in 2011 and 2012. For a complete list of POD collection events and POD box drop-off locations, visit www.watershedcouncil.org.

Bear River Improvements

Since 2000, the "Healing the Bear" Bear River Cleanup has been held biennially to remove trash from the river. The Bear River Recreation Valley was completed in 2011 by the City of Petoskey and included treatment of invasive plants within the river corridor.

Tributary Monitoring

Tip of the Mitt Watershed Council, Little Traverse Bay Bands of Odawa Indians, and Michigan Department of Environmental Quality continue to monitor water quality along the Bear River and its tributaries, as well as Tannery Creek. Most results show excellent water quality, with the exception of a few sites in more urbanized areas. These sites will be the focus of future projects.



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Legend	
	Little Traverse Bay Watershed
	Lakes
	Streams
	Wetlands
	US Highway
	Michigan Roads
	Major Roads
	Urban Areas
	Counties
	Townships
	Nature Preserves
Projects	
	Road/Stream Crossing Improvement
	Lower Tannery Creek Restoration
	Stormwater Management
	Phragmites Survey
	Bear River Watershed Restoration
	POD Program Pharmaceutical Collection Box
	Certified Clean Marina
	Walloon Wetlands & Tributaries Study
	Tannery Creek Watershed Management Plan