

## **Boardman River Townships Project**

# **EAST BAY TOWNSHIP**

## **WATER QUALITY ACTION PLAN**

Fall 2009

### *Partners:*

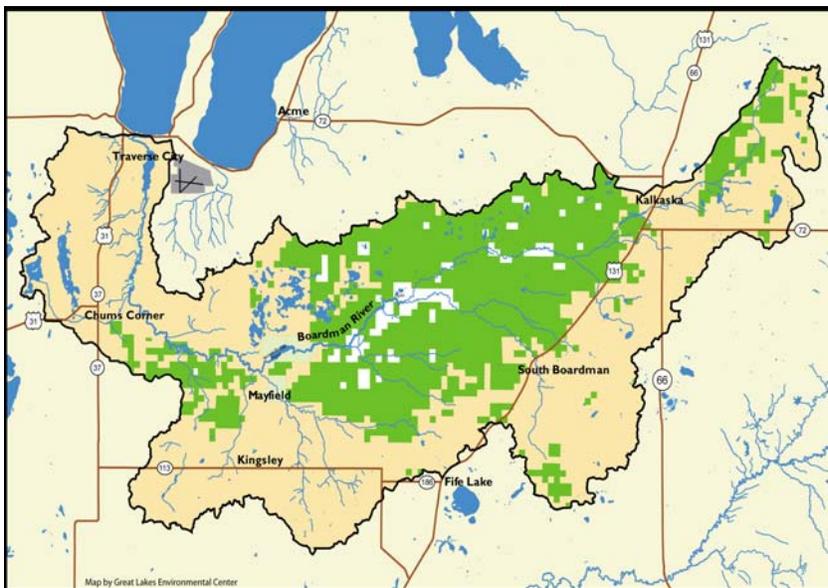
The Watershed Center Grand Traverse Bay

Northwestern Michigan College - Great Lakes Water Studies Institute

Grand Traverse Conservation District

*Funded by:* Michigan Department of Environmental Quality

### **Boardman River Watershed**



### **Purpose**

The Boardman River watershed spans 295 square miles and drains approximately 182,800 acres of land through 175 miles of river and stream tributaries. It is the largest tributary to the West Arm of Grand Traverse Bay and provides about 30 percent of the surface flow to Grand Traverse Bay. In addition, the Boardman River is considered one of the top ten trout streams in Michigan and is one of the particularly outstanding natural features of the Grand Traverse Bay region. It is a Natural River, a designation from the Michigan Department of Natural Resources that comes with associate management measures. Protecting this resource is important to the quality of life of the residents and the economic viability of the region.

The soils throughout this region are dominated by Kalkaska Sand that drains well and filters water very effectively. It is largely responsible for the remarkable water quality of lakes and rivers located in areas of the state where these soils are abundant such as northern lower Michigan. However, it is also highly erodible and low in nutrients; once disturbed, it easily erodes into our surface water. In addition, excessive levels of nutrients and other pollutants are easily passed through to the near-surface groundwater that feeds our lakes and streams. In some cases, this excessive pollution passes into our groundwater aquifers, contaminating our drinking water.

Sediment – including sand – is the number one surface water pollutant in the Grand Traverse Bay watershed, as set out in the Grand Traverse Bay Watershed Protection Plan. Sediment and sand smothers the habitat that aquatic organisms need to survive and reproduce. Sediment and sand enter our surface waters through stormwater that washes from roads, parking lots, and driveways carrying with it nutrients and many other forms of pollution such as salt, oil, anti-freeze.

As a result, one of the best ways for local governments in the Boardman River watershed to address water quality protection is to consider how they are managing stormwater in their communities. In this context, protecting water quality is directly related to reducing impervious surfaces and protecting natural areas and natural vegetation.

Through a grant from the Michigan Department of Environmental Quality, the partners to the project – the Watershed Center Grand Traverse Bay, Northwest Michigan College Water Studies Institute (WSI), and Grand Traverse Conservation District (GTCD) – developed a process to assist townships and villages with a review of how they are doing with stormwater management and therefore their ability to protect their water resources.

## **Water Resources in East Bay Township**

The north part of East Bay Township touches the shores of beautiful East Bay of Grand Traverse Bay. The south part of the township lies in the heart of the Boardman River watershed and is featured by the Forest Lakes area and several miles of the Boardman River including Brown Bridge Pond. Above Brown Bridge Dam, the Boardman is designated by the state as “Wild & Scenic,” while below Brown Bridge Dam, the River is classified as “Country Scenic.” Each classification has different zoning elements. The Boardman River, as well as all the Forest Lakes, including Arbutus, Bass, Chandler, High, Rennie, Spider, and Spring lakes and Lake George, are groundwater fed. Mitchell Creek and Baker Creek flow directly into the bay. Two significant wetland complexes are associated with the Boardman River and Mitchell Creek.

## **Process**

During the summer of 2009, East Bay Township officials met with representatives from WSI and GTCD to discuss the township’s zoning ordinances and policies as they relate to the protection of water quality. The discussion was guided by a modified version of the Code and Ordinance Worksheet (Worksheet), a tool developed by the Center for

Watershed Protection for use throughout the country to help communities assess impacts on water quality.

The Worksheet focuses on three topics: **roads and parking lots, lot design and development, and conservation of natural areas.** The roads and parking lot section addressed management of roads and parking lots. The lot development and design section included discussion of open space ordinances, cluster ordinances, site plan review, front yard setbacks, driveways, on-site stormwater management, and septic system maintenance. The conservation of natural areas section focused on retention of native vegetation around water resources, tree conservation, and land clearing. The Worksheet was provided in advance of the meeting, and the participants at the meeting discussed the responses to the question.

The partners to the project discussed the results of the discussion in relation to design principles and targets for each of the three areas and developed general recommendations for specific areas of focus for East Bay Township.

### **Suggested Actions for Consideration in East Bay Township**

East Bay Township's zoning ordinance and policies include some strong protections for water resources, including riparian buffer provisions and cluster and open space development options.

The discussion below includes a more detail regarding the three topic areas, as well as suggested actions. In general, the more a local government can do to reduce impervious surfaces and increase the retention or restoration of native vegetation along riparian buffers and in open spaces, the better for water quality. The suggested actions relate directly to the General Water Quality Protection Principles and Targets that accompany the plan. The principles and targets were developed from the Better Site Design resources of the Center for Watershed Protection. The List of Additional Resources that also accompanies this plan provides information to support implementation of the suggested actions. Finally, we are including a copy of "A Natural Solution" about low-impact design methods to manage stormwater.

#### Roads and Parking Lots

The large majority of paved areas within a township are roads or parking lots. In the course of conducting the interviews with townships, it became clear that road design is significantly influenced by the county road commissions and local fire departments. The Grand Traverse County regulations for private roads allows for roads of 22 feet in width if agreeable to the local fire department. East Bay Township has a private road ordinance that includes a waiver to protect natural features, and it was indicated during the meeting that the township ordinance promotes reduction of street length.

Addressing parking space numbers and space size are two ways to reduce paved areas. These savings may seem insignificant on a particular site, but across the township the reductions in paved area could be substantial. The reduction of parking spaces from 10

feet by 20 feet to 9 feet by 18 feet results in a 20 percent savings in impervious surface. East Bay Township's ordinance includes specific standards for parking space ratios and addresses shared parking. It appears that reductions in parking requirements for shared parking are at the discretion of the planning commission.

**ACTION:** Consider limiting the width of private roads to no greater than 18 feet.

**ACTION:** Consider reducing parking ratios and setting them as a maximum number of spaces as opposed to a minimum.

**ACTION:** Consider clarifying and adding reductions in parking requirements for shared parking.

**ACTION:** Consider reducing the parking space length requirements.

**ACTION:** Consider allowing spillover areas to be pervious surface or planted in grass.

### Lot Design and Development

East Bay Township's zoning ordinance includes both an open space ordinance and a cluster ordinance. Provisions for shared driveways are included in the Subdivision Control Ordinance. The township has adopted the stormwater ordinance administered by the Grand Traverse County Drain Commissioner, which the township relies on to address on-site stormwater management. The township's ordinance addresses groundwater protection for non-residential sites. Part of the township is served by public sewer, but a large part of the township that contains the majority of lakes and streams is serviced by septic systems to manage wastewater.

**ACTION:** Educate residents about proper septic system management and encourage residents to maintain septic systems on a regular basis.

**ACTION:** Consider adopting a septic maintenance ordinance or supporting a county septic maintenance ordinance.

**ACTION:** Consider ways to encourage shorter driveways.

**ACTION:** Consider adopting stormwater best management practices and other water quality protections in the site plan review ordinance.

### Conservation of Natural Areas

East Bay Township has a comprehensive set of ordinances that address river, stream, and lake front areas, establishing a tiered system of vegetated buffers that allow for increasing intensity of management activities as the distance from the surface water increases. Maintaining and enforcing these ordinances is crucial to protecting the

township's water resources. The ordinance also includes a Forest Lake Overlay District. Tree conservation is addressed in the site plan review process and landowners are encouraged or required to maintain of native vegetation along shoreline areas. The ordinance requires that a wetland permit be obtained before a site plan is submitted to the township.

ACTION: Consider requiring a vegetated buffer around wetlands.

## **Next Steps**

Specific work on these recommendations is at the discretion of the township and what the local officials and local residents view as priorities for the community. The additional resources accompanying the action plan are designed to support the township's consideration of implementation. These include:

- General Water Quality Protection Principles and Targets -Attachment-A
- Internet resources, including example local ordinances, best management practices, the Boardman River Natural River Plan, Center for Watershed Protection resources, and Filling the Gaps (a Michigan Department of Environmental Quality document with sample ordinances) – Attachment-B
- A Natural Solution. An introduction to low impact development for commercial and residential applications in the Grand Traverse Region, prepared by the Watershed Center Grand Traverse Bay through an MDEQ grant. – Attachment-C

The partners to this project will assist, to the extent possible, with work on these recommendations. In addition, the partners will be working on public road design for water quality protection. This work will require further discussions with the road commissions and fire departments. The partners will also be pursuing workshop opportunities to help interested townships strengthen or develop ordinance language that will benefit water quality.

### **Contact Information**

Watershed Center Grand Traverse Bay (231) 935-1514; [www.gtbay.org](http://www.gtbay.org)

Grand Traverse Conservation District (231) 941-0960 [www.natureiscalling.org](http://www.natureiscalling.org)

NMC's Great Lakes Water Studies Institute (231) 995-1722 [www.nmc.edu/water](http://www.nmc.edu/water)