

Boardman River Townships Project

GARFIELD TOWNSHIP

WATER QUALITY ACTION PLAN

Fall 2009

Partners:

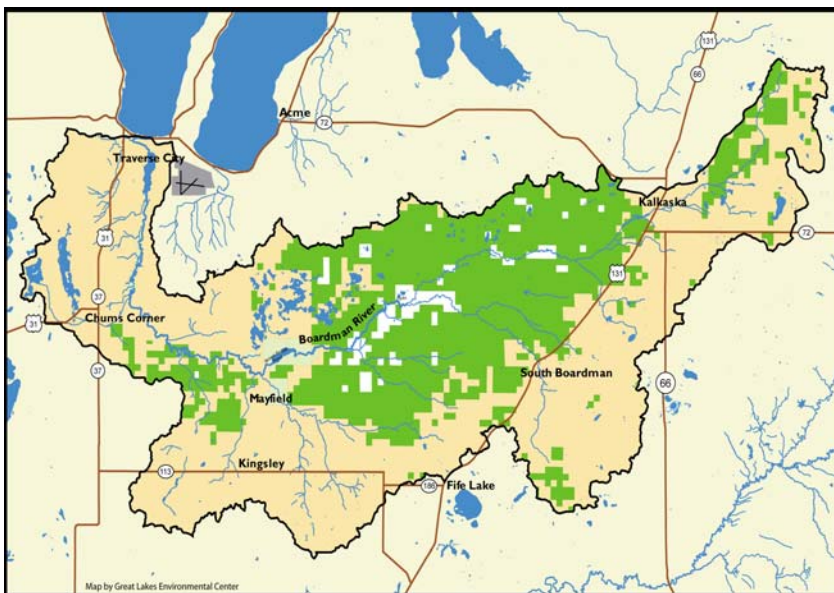
The Watershed Center Grand Traverse Bay

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 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 Garfield Township

Garfield Township contains the greatest amount of commercial and residential development in the Boardman River watershed. The township also contains significant parts of the Boardman River system. As such, over time, the river, its tributaries and associated wetlands, including Kids Creek, Jack's Creek, Mitchell Creek and Miller Creek have been subjected a wide variety of land use practices that have greatly impacted their ecological health and productivity. Partly to address concerns about water quality, the township has acquired and protected numerous natural areas and parklands, including the Miller Creek Nature Reserve, the Garfield Township Nature Reserve, the Hughes Drive Nature Reserve, Kids Creek Park, and the Natural Area at the Grand Traverse Commons.

Process

During the summer of 2009, Garfield 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 Garfield Township.

Suggested Actions for Consideration in Garfield Township

Garfield Township has significant lake, river and stream resources throughout the township. Protecting these resources benefits not only the residents of the township but also residents of the Boardman River watershed. The township has provisions for open space development through its planned unit development ordinance, vegetated riparian buffers, and floodplain protection. The township is in the process of updating its zoning ordinance.

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. Garfield Township addresses private roads that serve 4 parcels or fewer, requiring a right-of-way of 66 feet and paved surface of 24 feet.

Addressing parking space numbers and space size are two ways to reduce paved areas in parking lots. These savings may seem insignificant on a particular site, but across the township the reductions in paved area could be substantial. Reducing parking spaces from 10 feet by 20 feet to 9 feet by 18 feet results in a 20 percent reduction in asphalt. While some of the township’s standards for parking space ratios are low, others could be

reduced (i.e. office buildings). The ordinance does require parking lot landscaping and a minimum number of trees to be planted. It also allows for shared parking. The ordinance requires that parking lots be setback 75 feet from a shoreline and 25 feet from a wetland.

ACTION: Consider reducing the private road right-of-way width and paved surface width of 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 allowing reductions in parking requirements for shared parking.

ACTION: Consider reducing the parking space length requirements.

ACTION: Consider allowing spillover areas and snow storage areas to be pervious surface or planted in grass.

ACTION: Consider adding stormwater management as a purpose for parking lot landscaping and expanding the area required to be landscaped.

Lot Design and Development

Garfield Township's zoning ordinance includes an open space development provisions in the context of the planned unit development ordinance. It also includes provisions for shared driveways and access. While much of the township is served by public sewer and water, some of the wastewater is managed through private septic systems.

ACTION: Consider ways to encourage retention of native vegetation in open space/cluster/planned unit developments.

ACTION: Consider tree and other natural vegetation conservation in the site plan review process.

ACTION: Consider adopting site plan review standards and including stormwater management on site and utilization of stormwater best management practices as site plan review requirements.

ACTION: Consider making open space/cluster development a use by right.

ACTION: Consider ways to encourage shared driveways and the use of pervious surfaces for driveways.

ACTION: Consider incorporating stormwater management and treatment as a purpose for landscaping provisions in the ordinance.

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.

Conservation of Natural Areas

Garfield Township ordinance includes shoreline setbacks and riparian vegetative buffers. The building setback for rivers and streams is 75 feet, and 50 feet for Silver Lake and Boardman Lake. The ordinance states that setbacks for the Boardman River are controlled under the Natural Rivers Act. This part of the ordinance also includes a 25-foot setback of all buildings and parking lots for wetlands. The ordinance includes floodplain protection provisions, though it appears that the floodplains have not been designated. The landscaping provisions of the zoning ordinance apply to non-residential parcels and encourage the retention of existing vegetation, including trees.

ACTION: Consider educating residents about the benefits of maintaining native vegetation within shoreline setback areas.

ACTION: Consider including the specific provisions of the Natural Rivers Act directly in the zoning ordinance.

ACTION: Consider buffer protection in the site plan review process.

ACTION: Consider how to incorporate floodplain protection in the zoning ordinance.

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

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