



THE PURPOSE. THE PLAN.

PROTECTING
THE QUALITY
OF LIFE

Photo credit: Peter Fenton

GUIDING PRINCIPLES

Seven guiding principles were identified that served as the foundation for identifying and prioritizing specific goals, objectives, and strategies for achieving our vision.

- 1 Preserving natural resource attributes
- 2 Broad, diverse economy
- 3 Diversity of uses
- 4 Public involvement and education
- 5 Integration with regional initiatives
- 6 Sustainability of the Prosperity Plan
- 7 Balancing increased tourism and quality of life of area residents

COMMUNITY QUALITY OF LIFE ISSUES

The Prosperity Plan identifies community quality of life issues that are a critical part of the watershed's prosperity.

- 1 Abundant, diverse, and high-quality outdoor recreation amenities
- 2 Available entertainment and cultural opportunities clustered in downtown areas
- 3 Available multimodal transportation options
- 4 Charming, walkable, compact downtowns
- 5 High-quality education facilities

The Boardman River Watershed Prosperity Plan is a vision and roadmap for the future management of one of Michigan's most beautiful watersheds. It meets the community's desire to have a management plan for the river and provides a blueprint for multijurisdictional cooperation to improve the environmental, economic, and social prosperity of our watershed region.

PROSPERITY

The Prosperity Plan identifies prosperity for the watershed as achieving economic well-being for its residents, protecting and maintaining a high-quality environment, supporting healthy lifestyles, helping people connect and engage with the environment and with each other, and offering a diverse range of social and cultural opportunities.

IMPLEMENTATION STRATEGIES

Specific and tangible actions and recommendations were developed that residents, businesses, and communities in the Boardman River watershed need to undertake to achieve the Prosperity Plan's goals and objectives. Effective watershed management relies on an integrative approach that includes best management practices; partnerships, community consensus building, and local government participation; and information and education components.

COMMUNITY BENEFITS

A highly engaged, well-informed, and civic-minded community is one of the strongest mechanisms for protecting and enhancing the prosperity of the watershed. The vision for the Prosperity Plan is to build a consensus for community actions that will protect the Boardman River watershed and contribute to the overall quality of life for present and future generations. The Prosperity Plan process was designed to integrate and build upon work that is already in progress, reflect community values and be embraced by the community, generate new community leaders, and include voices from the entire watershed.

EVALUATION AND OVERSIGHT

As projects and tasks identified in the Prosperity Plan are implemented, they will be monitored and evaluated for success. The plan will be evaluated both in terms of progress in implementing proposed tasks and in success improving and protecting water quality, as well as overall environmental, economic, and social prosperity in the watershed.

TIMELINE

The Prosperity Plan lays out a roadmap for monitoring, protecting, enhancing, and leveraging the region's natural, cultural, economic, and recreational assets in a manner that will maintain and improve the quality of the Boardman River watershed's resources. The Prosperity Plan was approved by the Michigan Department of Environment, Great Lakes, and Energy and the U.S. Environmental Protection Agency in 2018. Implementation of the plan is spread out over ten years and will be evaluated for its success in 2028.



EVERYDAY WAYS YOU CAN PROTECT THE BOARDMAN RIVER

Photo credit: Kim Healy

- Properly operate and maintain your septic system, including regular pumping and inspections.
- Establish a buffer of native plants between your lawn and the water to absorb pollutants from runoff, prevent shoreline erosion, and provide fish and wildlife habitat.
- Only fertilize your lawn if tests show you need it.
- To help reduce *E. coli* bacteria, don't feed waterfowl and put pet waste in the trash immediately.
- Put all litter, including cigarette butts, in the trash.
- Clean and drain your boat after leaving every water body to prevent spreading invasive species.
- Do not dump motor oil, litter, or cigarettes in storm drains.
- Direct runoff from your property onto vegetated areas instead of onto your driveway or the street.
- Avoid using coal tar-based sealants to coat your driveway and parking areas and instead look for less toxic asphalt-based products for sealing surfaces.
- Check local government meeting agendas to stay up to date on decisions and policies that may affect your area.

Get involved by visiting theboardman.org or gtbay.org for updates on the Boardman River Watershed Prosperity Plan.

WE PROTECT WHAT YOU LOVE

Photo credit: Snap Happy Girl Photography

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BOARDMAN RIVER
WATERSHED
PROSPERITY PLAN



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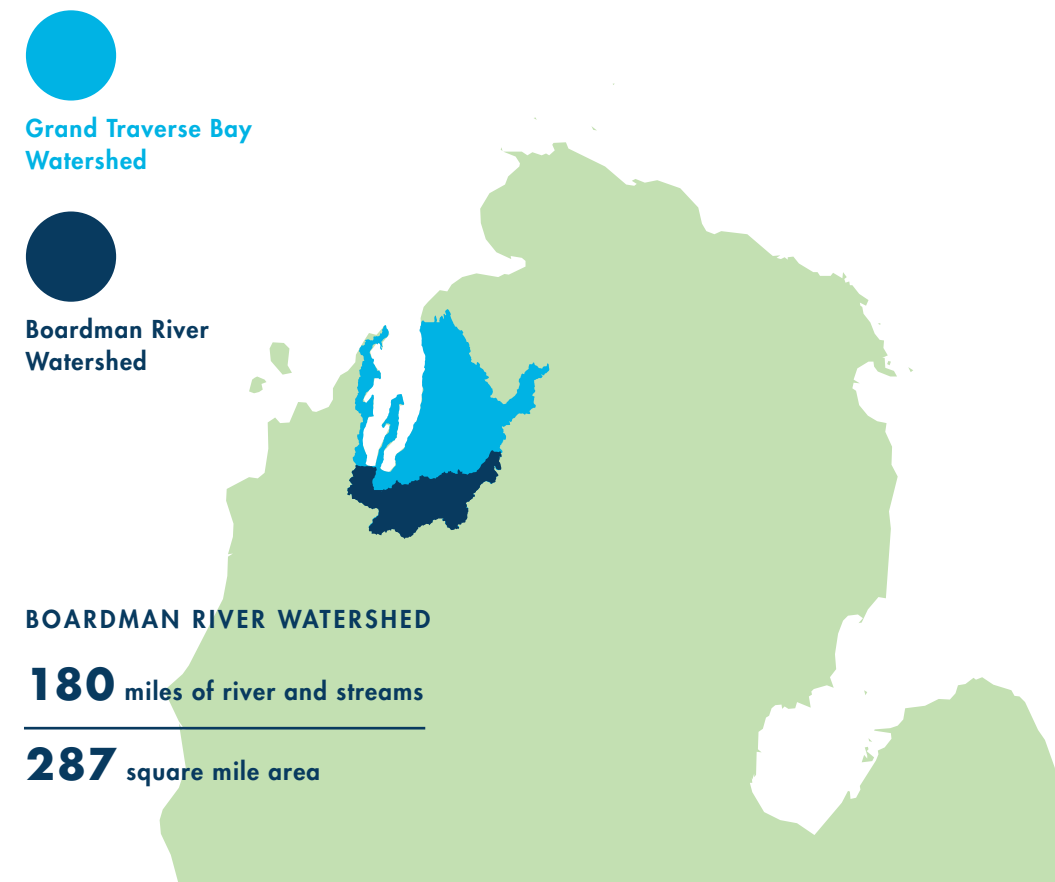
Protecting and enhancing the quality of our watershed is critical to our region's future. The Boardman River Watershed Prosperity Plan is a 10-year strategy for the management of this valuable resource.

DESCRIPTION OF THE WATERSHED

The Boardman River watershed is located within the Grand Traverse Bay watershed in northern Michigan. It encompasses parts of Grand Traverse and Kalkaska counties as well as 20 smaller municipalities. The watershed includes 180 miles of river and tributary streams and covers 287 square miles. It makes up almost a third of the Grand Traverse Bay watershed land area and provides almost one-third of the tributary inputs of water to Grand Traverse Bay. It also contains the majority of the Grand Traverse Bay watershed population. As such, the Boardman River watershed plays a large role in the ecological health of Grand Traverse Bay.

NATURAL RIVER DESIGNATION

The Boardman River is considered among the top 10 trout streams in Michigan and is a designated Natural River, a program administered by the Michigan Department of Natural Resources. This designation affords specific protections to preserve and enhance water quality, recreation opportunities, and fisheries and wildlife habitat. For property along Natural Rivers segments of the Boardman River and its tributaries, there are additional setbacks and development restrictions incorporated into and administered as part of the zoning ordinance for that municipality.



GOALS AND OBJECTIVES

To achieve the vision of the Boardman River Watershed Prosperity Plan, five broad goals for the watershed were identified. These goals help protect and restore the designated and desired uses for the watershed identified in this plan. The goals are interrelated and together will make the Boardman River watershed a world-class place to live, operate a business, or visit.

GOAL 1 Protect, restore, and enhance the high-quality water and other natural resources that are the backbone of social and economic prosperity in the watershed.

OBJECTIVES

- 1 Reduce threats to water quality in the Boardman River and tributaries from stormwater and wastewater inputs.
- 2 Restore and enhance wetlands and other aquatic habitat and improve fish passage.
- 3 Reduce erosion and minimize barriers to fish passage associated with transportation crossings along the Boardman River and its tributaries.
- 4 Control the spread and introduction of invasive species that threaten designated uses of the Boardman River and its tributaries.
- 5 Maintain and improve forests and other key wildlife habitat corridors throughout the watershed.

GOAL 2 Grow a sustainable economy that benefits and strengthens all of the watershed communities.

OBJECTIVES

- 1 Focus and support economic growth in the watershed's existing downtown hubs.
- 2 Encourage the growth of a diverse range of emerging and new business sectors and entrepreneurs.
- 3 Expand the tourism economy throughout the watershed.
- 4 Preserve and expand agricultural economic activity in the watershed.

WATERSHED POLLUTANTS, SOURCES, AND CAUSES OF DECLINE

Numerous watershed pollutants and other sources of water quality decline in the Boardman River watershed have been identified.

MAJOR POLLUTANTS

- Sedimentation
- Nutrients (nitrogen and phosphorus)
- Thermal pollution
- Habitat loss
- Hydrologic flow alteration
- Invasive species
- Pathogens
- Toxins (oils, metals, grease, other chemicals)

OTHER SOURCES AND CAUSES

- Loss of habitat
- Introduction of invasive species by recreationalists and other sources
- Lack of protective development zoning/planning
- Poor urban stormwater, agriculture, and forestry management practices
- Failing or undersized septic systems



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WATERSHED

Photo credit: Holly Wright

THE WATERSHED. THE VISION.

GOAL 3 Improve the quality of life and advance greater social equity throughout the watershed to retain and attract businesses, a talented workforce, and student and retiree residents.

OBJECTIVES

- 1 Advance educational opportunities for watershed residents to expand potential economic and social opportunities.
- 2 Provide affordable and regular transportation options within and between watershed communities in order to better accommodate workforce participants throughout the watershed.
- 3 Expand affordable housing opportunities throughout the watershed to accommodate the needs of the Traverse City worker market.
- 4 Protect scenic vistas, rural character, and key cultural and historic sites.

GOAL 4 Provide managed expansion and improvement of recreation opportunities in the watershed to attract a talented workforce, student and retiree residents, and visitors from around the world.

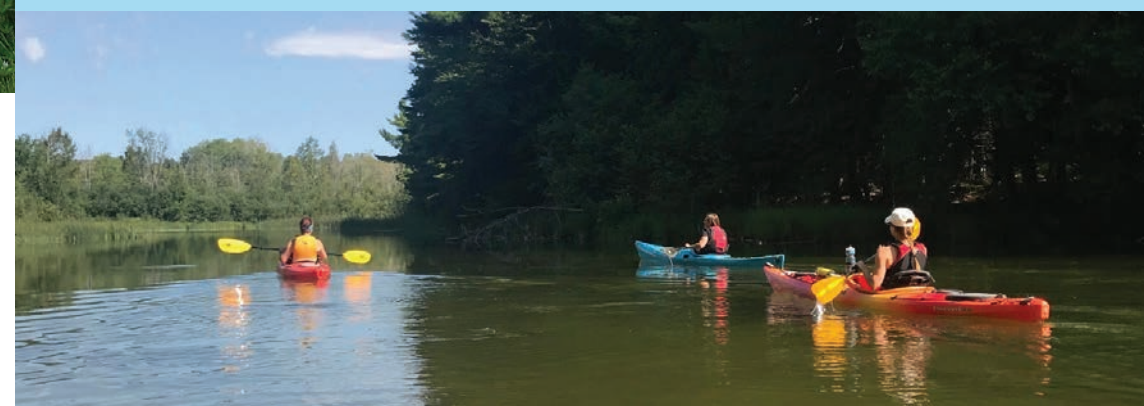
OBJECTIVES

- 1 Manage and capture opportunities for diverse water-based recreation in the watershed.
- 2 Manage and capture opportunities for diverse land-based recreation in the watershed.
- 3 Promote recreation opportunities to residents and visitors.

GOAL 5 Through education and engagement efforts, create community ownership of the Boardman River Watershed Prosperity Plan and community capacity that will assure implementation of recommended actions and achievement of the goals and objectives.

OBJECTIVES

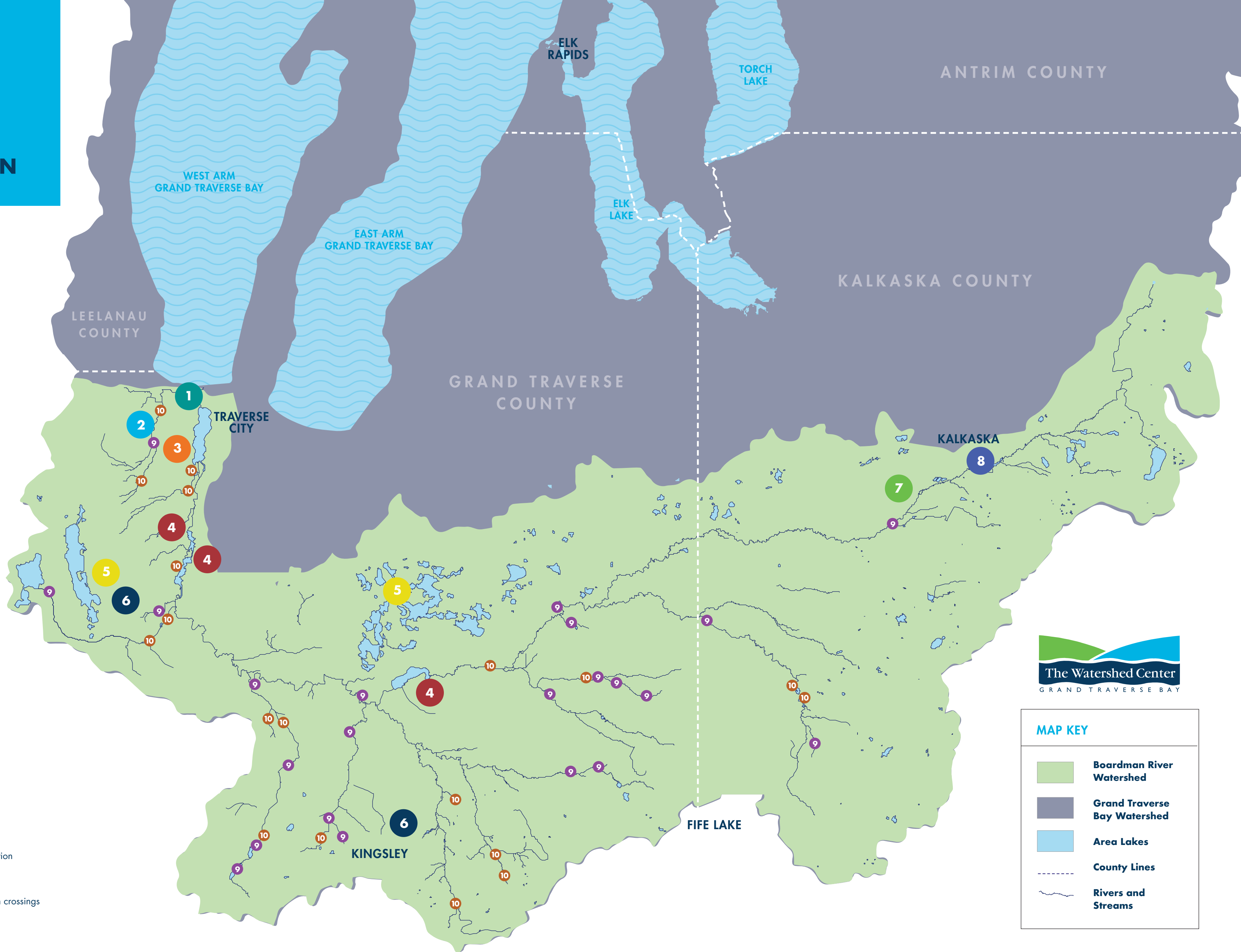
- 1 Cultivate the development of local public and private watershed champions (both individual and organizational) through training, organizational capacity building, and opportunities for leading implementation efforts.
- 2 Foster an ongoing culture of prosperity stewardship among watershed residents by integrating stewardship learning into education at all levels, providing regular information to the public on the overall economic, ecological, and social health of the watershed, and providing organized opportunities for residents and businesses to participate in the implementation of the Boardman River Watershed Prosperity Plan.
- 3 Create a watershed prosperity stewardship ethic among visitors to the region so that they might help protect and promote natural resource protection and the region as a high-quality destination.





THE BOARDMAN
RIVER WATERSHED
**CRITICAL AREAS
FOR RESTORATION**

- 1** **Location:** Traverse City and surrounding urban area
Critical Concerns: Urban stormwater
- 2** **Location:** Kids Creek subwatershed
Critical Concerns: Urban stormwater and sedimentation
- 3** **Location:** Boardman Lake shoreline
Critical Concerns: Sediment contamination
- 4** **Location:** Bottomlands and impacted upstream areas from Brown Bridge, Boardman, and Sabin dam removals
Critical Concerns: Restoration of bottomlands to prevent soil erosion and sediment contribution, protect and enhance in-stream habitat, and control invasive species
- 5** **Location:** Inland lakes with hydrologic connection to the Boardman River and/or increased residential development, including Silver, Arbutus, and Spider lakes
Critical Concerns: Development may be causing increased pollutant contributions from stormwater, bank erosion, and septic systems
- 6** **Location:** Agricultural lands – Kingsley and Garfield Township areas
Critical Concerns: Nutrient and sediment inputs
- 7** **Location:** North Branch of the Boardman River from Kettle Lake Road downstream to the confluence of Failing Creek
Critical Concerns: Temperature and sediment
- 8** **Location:** Village of Kalkaska
Critical Concerns: Urban stormwater
- 9** **Location:** Small dam removal
Critical Concerns: Sediment, hydrologic flow, thermal pollution
- 10** **Location:** Severe streambank erosion sites and transportation crossings
Critical Concerns: Erosion and sedimentation



MAP KEY

- Boardman River Watershed**
- Grand Traverse Bay Watershed**
- Area Lakes**
- County Lines**
- Rivers and Streams**

CRITICAL AND PRIORITY AREAS

Since water in the Boardman River watershed is of high quality, several areas in the watershed were identified for protection or restoration activities. Recommendations were aimed at protecting land from future development or protecting water quality from future potential impairment. Locations for these actions were placed into either **Critical Areas** (for restoration actions) or **Priority Areas** (for protective actions).

CRITICAL AREAS FOR RESTORATION

Critical areas are those in need of restoration that are contributing a significant amount of pollutants to the watershed (currently or in the future).

General: riparian corridors; wetlands; city and village centers; transportation crossings (road, railroad, etc.); agricultural lands

Specific: 10 locations outlined on the watershed map above

PRIORITY AREAS FOR PROTECTION

Priority areas are those that are particularly vulnerable to degradation or development pressure and should be protected from future harm.

General: ridgelines and other areas with expansive viewsheds of the Boardman River; headwaters of tributaries

Specific: natural lands of high conservation value/priorities for protection; Wild and Scenic designated areas along Boardman River; Boardman River channel from “The Forks” down to Brown Bridge Quiet Area (Not listed on map)



IMPAIRED REACH — KIDS CREEK

A 4-mile portion of Kids Creek, a major tributary to the Boardman River, is on the State’s Impaired Waters List due to a poor aquatic macroinvertebrate community caused by sedimentation, flow regime alteration, and other human-caused sources related to stormwater. Kids Creek drains almost 11 square miles, beginning from springs in the Charter Township of Garfield and entering the Boardman River near its mouth at Grand Traverse Bay in Traverse City.

Kids Creek experiences severe changes in flow due to stormwater inputs during storm events. The creek exhibits increased flow after rain events and causes regular flooding within the City of Traverse City limits. This increased flow has led to scoured stream bottoms and increased sedimentation within the stream from eroding streambanks. Restoration efforts aimed at helping remove the creek from the Impaired Waters List have already begun. The Watershed Center’s large-scale Kids Creek Restoration Project kicked off in 2013 and is focusing on reducing stormwater inputs to Kids Creek as well as improving in-stream habitat for macroinvertebrates and fish communities.