When it rains, it pours — into the bay

More than 54 miles of pipe, 1,900 catch basins and other stormwater structures, and 54 outlets to Boardman Lake, Boardman River and Grand Traverse Bay comprise the Traverse City stormwater system. While it is the largest stormwater infrastructure in place in the watershed, it is by no means the only source of stormwater — thousands upon thousands of gallons of polluted water pours into area streams, rivers, ponds, lakes and the bay every time it rains from the many villages, towns, road stream crossings and eroded banks throughout the watershed.

Stormwater receives a lot of attention in the Grand Traverse Bay Watershed Protection Plan. And for good reason — it is a major source of the highest impact pollutants of concern in the watershed — excess nutrients, sediment, pathogens and toxins. Stormwater can also drastically alter the amount of flow in rivers, creeks and streams scouring banks, damaging habitat and causing flooding.

The following Watershed Center partners provide matching funds, in-kind support, technical support or are contracted to complete portions of the work highlighted below.

Sometimes they provide all four! These current and future success stories would not be possible without them:

- **Grand Traverse Conservation District**
- **Antrim Conservation District**
- **Kalkaska Conservation District**
- **City of Traverse City**
- **Inland Seas Education Association**
- **Northwest Michigan Council of Governments**
- **Grand Traverse and Kalkaska County Road Commissions**

In the last two years, The Watershed Center has successfully secured funding for nearly $850,000 in projects directly related to the control and treatment of stormwater in the region. Over the next two years we will be working on significant projects with partners that will have direct positive impacts on the quality and quantity of stormwater that reaches area water bodies.

Streambank Stabilization

Stormwater and human activity can erode streambanks, contributing to increased sediment inputs to our area streams and rivers during storm events. A number of erosion and stabilization projects are scheduled for the next year:

Two sites on Kid's Creek near Meijers will be repaired. They are among the few remaining sites on the southern reaches of this creek that need repair.

700 feet of Boardman River banks next to the Farmer's Market will be restored and repaired. This site will be stabilized and reconstructed to provide for recreational access that won't damage the banks. Stormwater currently washes dirt and waterfowl waste into the river — this project will alleviate that problem.

Road stream crossings are being repaired at six different sites. And projects are being coordinated by their respective county conservation districts and road commissions. The following sites will be repaired and upgraded to prevent erosion during storm events and restore more natural flows through these sections of river and stream:

- Three sites on the Boardman River: Twenty Two Road, Carpenter and Bancroft Creeks.
- Two sites on the Rapid River.
- One site on Williamsburg Creek.

125 feet of streambank will be restored on the North Branch of the Boardman River at three sites identified as priorities by the Grand Traverse Conservation District.

Trying Something New

Next year, the City of Traverse City will be repairing a retaining wall in Parking Lot K, which adjoins the Boardman River at the Union Street Bridge. As part of this project, the city will redo the parking lot with three different types of pervious pavement.

Pervious pavement systems allow stormwater to be absorbed through the pavement, rather than running off into drains. This reduces loads on the storm drain system and as the water is absorbed and travels through the soil, many of the pollutants are removed naturally.

This demonstration project will allow city engineers to determine what types of product work best and can effectively withstand Michigan's winters and other sometimes extreme weather conditions. Ultimately, pervious surface may be installed in other municipal lots depending on the results of this simple pilot effort.

Helping Mother Nature

Vegetated buffers along shorelines are one of the most cost effective means of preventing pollutants from entering waterways during storm events. Another solution for controlling stormwater on individual sites is the construction of rain gardens or small wetlands, which not only absorb higher volumes of water, but use natural process to help clean the water before it returns to the groundwater supply.

During the summer of 2006, Kid's Creek neighborhood residents will have the opportunity to use low impact development techniques, such as rain gardens and buffers, to help control stormwater. This area of Traverse City experiences frequent flooding problems. Cost-sharing opportunities and workshops will be available.

With funding from several sources, Inland Seas Education Association will be installing two wetland basins, a grassy waterway and emergency spillway on their property to help control and clean polluted runoff from the streets and gas station above their site in Suttons Bay.

700 feet of vegetated buffer will be installed at the Twin Birch Golf Course in the Village of Kalkaska. This buffer will help reduce fertilizer inputs from the course.

1300 feet of vegetated buffer will be installed in Hannah Park on the Boardman River. In addition, the storm drains in this vicinity will be retrofitted with oil/grit separators to cleanse the stormwater before it enters the river. Fishing access platforms will also be added.

Gathering more information

The Grand Traverse Bay watershed is 973 square miles — a lot of ground to cover and a lot of information that needs to be gathered and updated on a regular basis to keep track of features and conditions that might impact water quality. Here's a round-up of some of the current projects that are related to controlling stormwater.

Streambank Inventory

The Antrim County Conservation District gathered updated data about streambank and road stream crossing sites throughout the county. The Grand Traverse Conservation District is currently gathering the same information for the Boardman River and Yuba Creek watersheds. Many problem areas throughout the region have already been repaired, but this newly gathered data will help agencies prioritize future work.

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