Restoring Our Water Heritage

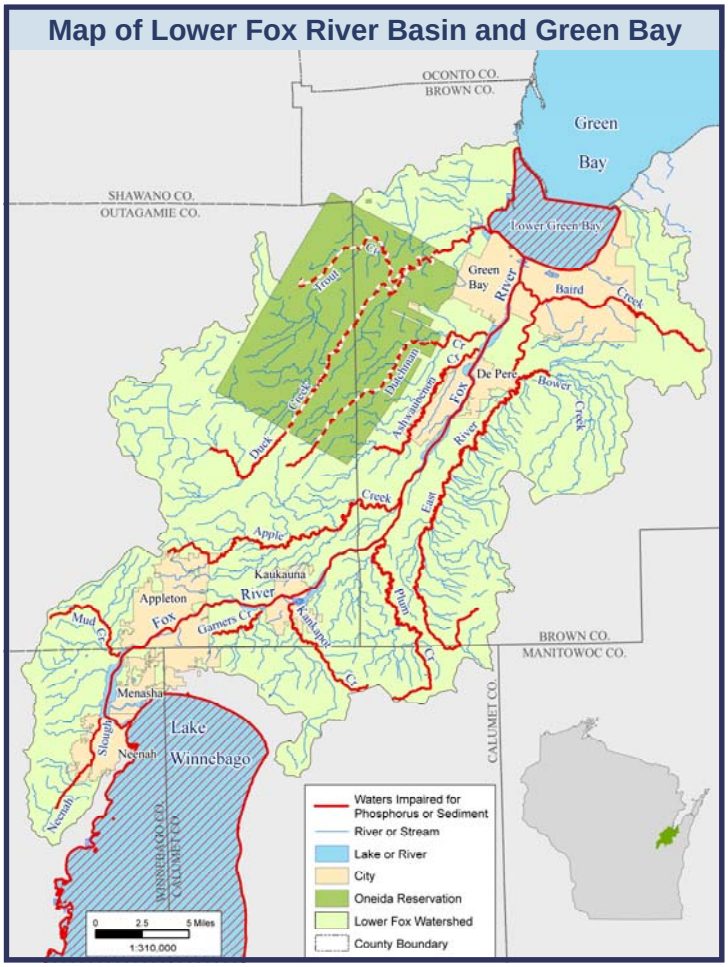
A TMDL: Creating a Better Future for the Lower Fox River and Green Bay

Wisconsin Department of Natural Resources

What is a TMDL?

- A TMDL is a framework for bringing together industries, homeowners, farmers, and local governments to improve the health of our water.
- Years of monitoring water quality in the Lower Fox River Basin show many streams and the river are polluted with excess amounts of phosphorus and sediment—these are called **impaired waters**.
- Wisconsin DNR is required to complete an analysis that determines the amount of phosphorus and sediment each impaired water can receive and still meet state water quality standards. This is called a Total Maximum Daily Load or **TMDL**.
- The TMDL calculates the reduction of phosphorus and sediment needed from **point sources** (sources such as industries and wastewater treatment plants that have a pipe leading directly to water body) and **nonpoint sources** (runoff from urban and rural lands).
- Decreasing phosphorus and sediment in the tributary streams and Fox River will improve the condition of **local streams and Green Bay**. Clean water and better habitat will enhance swimming, boating, and fishing opportunities for local citizens and may expand tourism in the basin.

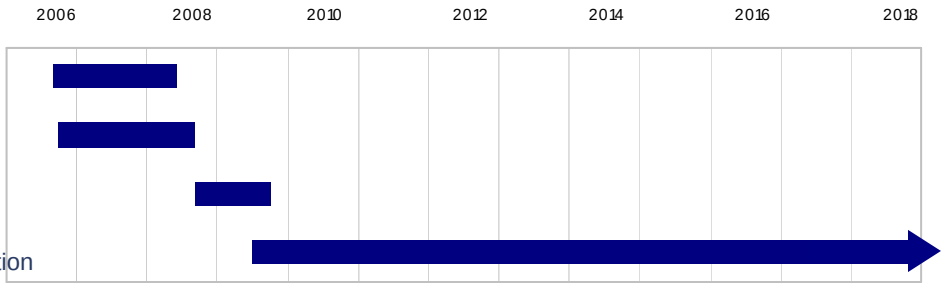
Map of Lower Fox River Basin and Green Bay



- Every citizen and interested party is **encouraged to become involved**. You can participate and stay informed by:
  - Watching your local newspaper for a meeting near you in **Spring 2009**
  - Contacting Trisha Cooper to sign up for the "**Our Watershed Newsletter**" (920-465-2979 or adamta26@uwgb.edu)
  - Visiting: **http://basineducation.uwex.edu/lowerfox/watershedplan.html**

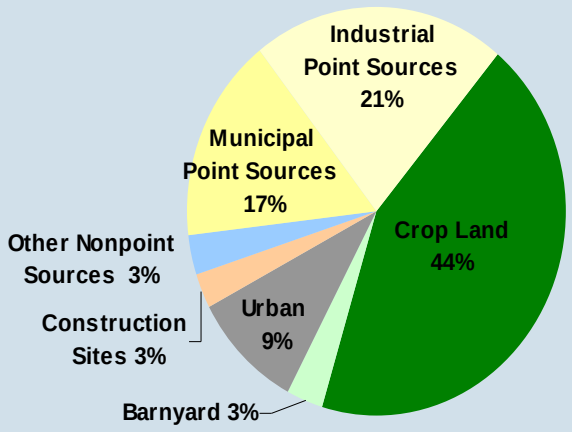
TMDL Timeline:

1. Studying Cost Effectiveness of Agricultural Best Management Practices
2. Planning to Involve Interested Parties
3. Planning and Developing TMDL
4. Implementation: Putting the TMDL into Action

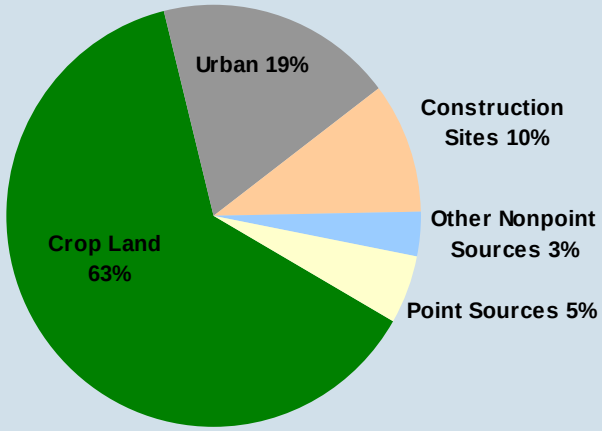


These charts show the sources of phosphorus and sediment in the Lower Fox River Basin. Phosphorus and sediment reduction targets will be set for each group. Creative and flexible approaches to meet these targets will be examined.

Sources of Phosphorus in Lower Fox Including Duck Ck.
(% of Total Phosphorus Load which is 238,912 kg/year)



Sources of Sediment in Lower Fox Including Duck Ck.
(% of Total Suspended Solids Load which is 57,518 kg/year)



Data Source: Paul Baumgart, UWGB, 2004. For detailed information see: August 2007. Report prepared for USEPA by The Cadmus Group, Inc. at http://dnr.wi.gov/org/water/wm/wqs/303d/FoxRiverTMDL/documents/Green_Bay_Integrated_Watershed_Approach_Final_Report.pdf

WE ARE ALL PART OF THE SOLUTION

In agricultural areas we can:

Cover crop in corn stubble near Oneida
Photo: Kevin Erb, UW Extension

- Lower phosphorus levels in soils and reduce soil loss.
- Use rotational grazing for livestock and conservation tillage on cropland.
- Install vegetated buffer and grass filter systems and protect natural buffers along water bodies.
- Develop and implement nutrient management plans with the most effective mix of management practices to reduce phosphorus and sediment runoff.
- Manage manure application on the landscape and explore composting, digesting, or other emerging technologies for manure management.

In residential areas we can:

- Test soil nutrient levels before applying fertilizer (contact County Extension office or purchase a home test kit).
- Use low impact development techniques, reduce impervious surfaces, control erosion, and increase infiltration using rain gardens and other methods.
- Design stormwater systems that go above and beyond current state standards.
- Restore wetlands to improve habitat and provide storage of flood waters.

Water directed to rain garden
Photo: Wisconsin DNR

Partners include, but are not limited to: WDNR, U.S. Environmental Protection Agency (EPA), U.S. Geological Survey, UW-Green Bay, UW-Sea Grant Institute, UW-Extension, Green Bay Metropolitan Sewerage District, County Land and Water Conservation Departments, and the Oneida Tribe of Indians.

WISCONSIN DEPT. OF NATURAL RESOURCES

To contact the DNR for more information about the Lower Fox River and Green Bay TMDL Process:

Nicole Richmond (608) 266-0152, Rob McLennan (920) 424-7894, or Erin Hanson at (920) 662-5419

http://dnr.wi.gov/org/water/wm/wqs/303d/FoxRiverTMDL/

Publication Date: November 2008