

Manitowoc-Sheboygan Watershed

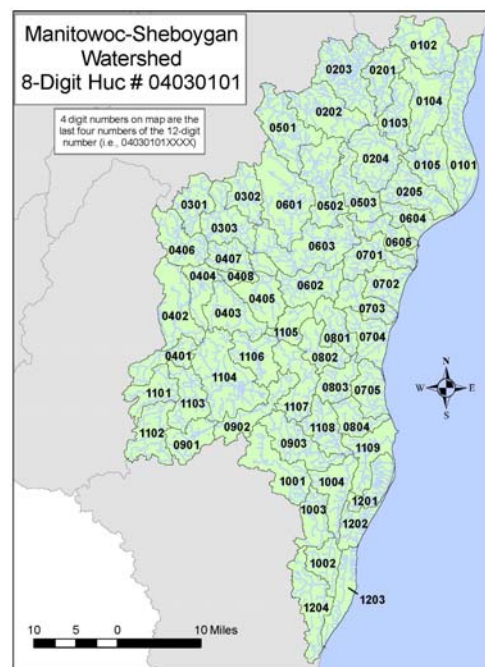
Hydrologic Unit Code: 04030101

For more information, see the USEPA website at cfpub.epa.gov/surf/huc.cfm?huc_code=04030101

The Wisconsin DNR divides the Sheboygan-Manitowoc watershed (as defined by the USGS) between the Sheboygan basin management area and the Lakeshore basin management area. For more information, see the Wisconsin Department of Natural Resources' "Wisconsin's Basins" website at dnr.wi.gov/org/gmu/gmu.html.

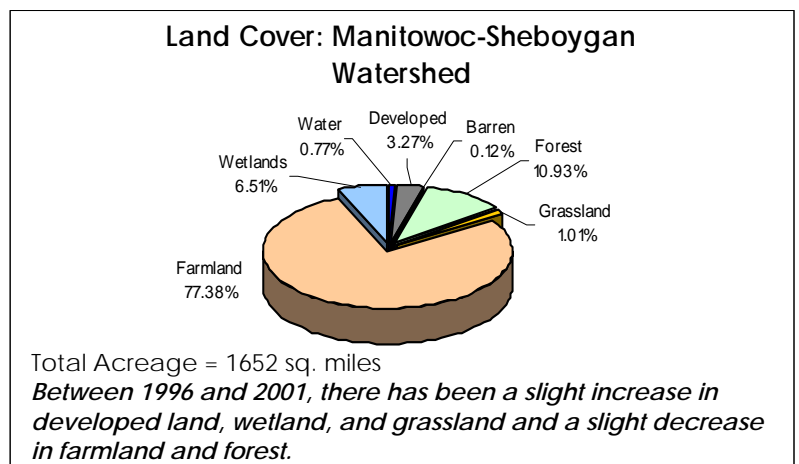
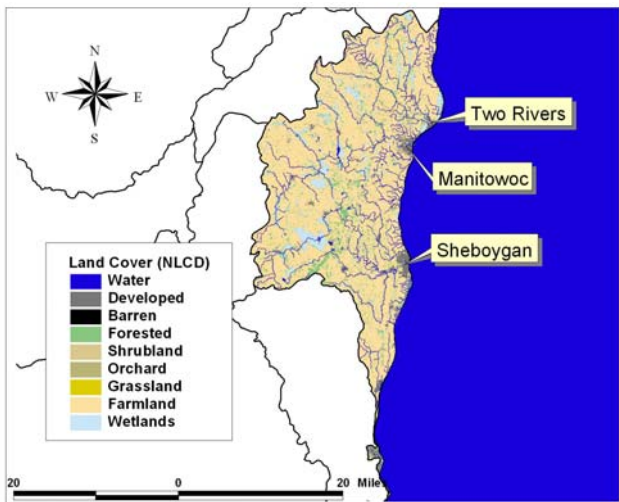
Watershed Groups

- Sheboygan River Basin Partnership — www.sheboyganrivers.org
- Lakeshore Basin Website — basineducation.uwex.edu/lakeshore
- Lakeshore Natural Resource Partnership — www.lnrp.org
- Sheboygan River Basin DNR Team — www.dnr.state.wi.us/org/gmu/sheboygan
- Vic Pappas , Sheboygan River Basin Water Team Leader — Victor.Pappas@dnr.state.wi.us
- Deb Beyer, UW Extension Basin Educator, Lakeshore & Sheboygan Basins — deb.beyer@ces.uwex.edu



Subwatersheds of the Manitowoc-Sheboygan Watershed

- 0101 Molash Creek-Frontal Lake Michigan
- 0102 Krok Creek-East Twin River
- 0103 Jambo Creek
- 0104 Tisch Mills Creek-East Twin River
- 0105 East Twin River
- 0201 Black Creek
- 0202 Devils River
- 0203 Neshota River
- 0204 Francis Creek-West Twin River
- 0205 West Twin River
- 0301 Headwaters North Branch Manitowoc River
- 0302 Spring Creek
- 0303 North Branch Manitowoc River
- 0401 Headwaters South Branch Manitowoc River
- 0402 Stony Brook-South Branch Manitowoc River
- 0403 Pine Creek
- 0404 City of Chilton-South Branch Manitowoc River
- 0405 Cedar Creek
- 0406 Headwaters Killsnake River
- 0407 Killsnake River
- 0408 South Branch Manitowoc River
- 0501 Upper Branch River
- 0502 Middle Branch River
- 0503 Lower Branch River
- 0601 Village of Reedsville-Mud Creek
- 0602 Village of St. Nazianz-Mud Creek
- 0603 Cato Falls-Manitowoc River
- 0604 Little Manitowoc River-Frontal Lake Michigan
- 0605 Manitowoc River
- 0701 Silver Creek
- 0702 Pine Creek-Frontal Lake Michigan
- 0703 Point Creek
- 0704 Centerville Creek-Frontal Lake Michigan
- 0705 Sevenmile Creek-Frontal Lake Michigan
- 0801 Meeme River
- 0802 Upper Pigeon Creek
- 0803 Middle Pigeon Creek
- 0804 Lower Pigeon Creek
- 0901 Upper Mullet River
- 0902 Middle Mullet River
- 0903 Lower Mullet River
- 1001 Upper Onion River
- 1002 City of Belgium
- 1003 Middle Onion River
- 1004 Lower Onion River
- 1101 Community of Mt. Calvary
- 1102 Headwaters Sheboygan River
- 1103 Feldner's Creek-Sheboygan River
- 1104 Sheboygan Lake-Sheboygan River
- 1105 Cedar Lake
- 1106 Kiel Marsh State Wildlife Area-Sheboygan River
- 1107 Otter Creek-Sheboygan River
- 1108 City of Sheboygan Falls-Sheboygan River
- 1109 Sheboygan River-Frontal Lake Michigan
- 1201 Black River
- 1202 Barr Creek-Frontal Lake Michigan
- 1203 Sucker Creek-Frontal Lake Michigan
- 1204 Sauk Creek



Watershed Overview

- The major tributaries of the watershed include the Branch River, the North and South branches of the Manitowoc River, the Lower Manitowoc River, Sevenmile and Silver Creeks, (all in the Manitowoc sub-watershed) Sauk and Sucker Creeks, the Black River, the Sheboygan River, the Onion River, the Mullet River, and the Pigeon River (in the Sheboygan River subwatershed).
- Predominant land uses are agricultural or rural and include pasture land, cropland and vacant fields. Natural Areas, including open water, woodlands, wetlands, parklands and undisturbed non- agricultural lands are the second most abundant land use.
- The Natural Heritage Inventory has documented 10 endangered, 20 threatened and 37 special concern plant and animal species, and 24 rare aquatic and terrestrial communities within the Sheboygan River basin.
- Willow Creek, a small tributary to the Sheboygan River that has its confluence in the AOC. The creek receives annual runs of trout and salmon from Lake Michigan, and recent fish surveys discovered the presence of young brook trout and salmon, which seemed to indicate at least some amount of natural reproduction. It appears that stream improvements are possible in some of the degraded sections and SRBP has been meeting with landowners and local municipal officials to discuss projects in the watershed. In addition, the SRBP is seeking grant funds to conduct additional stream studies.
- Runoff from specific and diffuse sources, contaminated sediment, habitat modifications (such as channelization and dams) have degraded water quality throughout the Basin.
- Recreational highlights include wildlife watching, hiking, fishing, birding, bicycling, golf, horseback riding, snowmobiling, skiing, camping, picnicking and water sports.
- State facilities such as the Kettle Moraine State Forest, Kohler- Andrae State Parks, Harrington Beach State Park, various state wildlife areas, and the Ice Age National Scenic Trail provide both satisfying and unique recreational experiences.
- The Basin includes the Southeast Glacial Plains and Northern Lake Michigan Ecological Landscapes.
- Some streams have the ability to support trout populations. Others have spring and fall runs of Stocked Steelhead and Salmon. Fishing opportunities exist in rivers and harbors for Northern Pike, Small Mouth Bass, and Yellow Perch.
- Wildlife include White- Tailed Deer, Ring- Necked Pheasant, Waterfowl, Geese, Gray and Flying Squirrels, Raccoons, Woodcock, a variety of hawks, songbirds, and shorebirds.
- Grasslands and barrens are promoted through prescribed burns and mowing.
- The Nature Conservancy identified critical habitats of Black Ash - Mixed Hardwood Swamp, Great Lakes Dune Pine Forest, Great Lakes Hemlock - Beech - Hardwood Forest, Great Lakes Beachgrass Dune and Great Lakes Beach as well as baymouth/barrier beaches with sand nearshore at Point Beach State Park.
- The Nature Conservancy identified Pitcher's Thistle and the Piping Plover as critical species at Point Beach State Park.

Watershed Priorities

- Identified Environmental concerns for the Sheboygan River management area include:
 - ◊ Water quality problems are from in- place pollutants, runoff in urban areas, floodplain development, and agricultural practices.
 - ◊ Preserve biodiversity and protect endangered and threatened species by preserving their habitat.
 - ◊ A need for a comprehensive approach to wetlands protection and restoration.
 - ◊ Educate people to help prevent the spread of exotic nuisance species, which can wreak havoc on ecosystem balance.
 - ◊ Monitoring of wildlife populations, water quality, and ecosystem function are needed to understand the status and trends of resources in the basin.

- Partnership priorities for the Sheboygan River Basin include:
 - ◊ Educate members and the public about the ecology of the Sheboygan River Basin and threats to its health.
 - ◊ Promote sustainable use and recreation in the Sheboygan River Basin and its watersheds.
 - ◊ Increase public awareness and membership.
 - ◊ Promote sound decision-making when issues affect the health of the basin's rivers and watersheds.
 - ◊ Support the protection and improvement of the Sheboygan River Basin and its watersheds for the benefit of the general public.
 - ◊ Develop a working relationship with local officials and collaborate with conservation organizations.
 - ◊ Promote improved health of the rivers and watersheds through conservation projects and education.
 - ◊ Purchase or promote the purchase of land or easements for conservation purposes.
- There have been several projects undertaken to install buffers to control runoff.
- On streams impaired by bacterial contamination, there have been projects undertaken to control animal waste runoff.
- Numerous actions have been completed or are underway to acquire public land, remove of ponds and small dams, installation of lunker structures and farm runoff management practices.
- Recent trout surveys on the Onion River indicate that a newly instituted fishing regulation change on the river has protected many fish from harvest. The hope is that more adult trout will be available to boost natural reproduction of trout in the system.

Data Sources. Land cover map and percentages: National Land Cover database, 1992 (edc.usgs.gov/products/landcover/nlcd.html); Land use change: NOAA Coastal Change Analysis Program, 1996 and 2001 (www.csc.noaa.gov/crs/lca/ccap.html); Total Maximum Daily Load (TMDL) Impaired Waters: Surf Your Watershed (www.epa.gov/surf)

Impaired (303d) Waters

Waterbody Name	Impairment
Big Elkhart Lake	Mercury Fish Consumption Advisory
Bradford Beach -- Lake Michigan	Bacteria
Branch River in Maitowoc Co.	PCB Fish Consumption Advisory
Bullhead Lake	Mercury Fish Consumption Advisory
City of Kewaunee (Lake Michigan)	Bacteria
Crystal Lake	Mercury Fish Consumption Advisory
East Twin River Upstream To First Dam	PCB Fish Consumption Advisory
Fischer Park Beaches -- Lake Michigan	Bacteria
General King Beach (Lake Michigan)	Bacteria
Grandma Creek	Degraded Habitat, Dissolved Oxygen, Phosphorous, Sediment
Hika Park Bay -- Lake Michigan	Bacteria
Jordan Creek	PCB Fish Consumption Advisory
Lake Michigan	Mercury Fish Consumption Advisory PCB Fish Consumption Advisory
Manitowoc River	Aquatic Toxicity, PAHS
Manitowoc River (Mouth to N. Branch)	PCB Fish Consumption Advisory
Manitowoc River (N. Branch to Chilton)	PCB Fish Consumption Advisory
McKinley Beach -- Lake Michigan	Bacteria
Memorial Drive Wayside Beach-- Lake Michigan	Bacteria
Neshota Beach -- Lake Michigan	Bacteria
Otter Creek	Bacteria
Pigeon Lake	Mercury Fish Consumption Advisory
Pine Creek	PCB Fish Consumption Advisory
Point Beach State Park Beach -- Lake Michigan	Bacteria
Red Arrow Park Beach -- Lake Michigan	Bacteria
Sheboygan River	PCB Fish Consumption Advisory
Sheboygan R. Below Franklin Downstream To Sheboygan Falls	PCB Fish Consumption Advisory
Two Rivers Harbor	Aquatic Toxicity
Unnamed Trib (Osman Trib) to Meeme River	Phosphorus, Degraded Habitat, Dissolved Oxygen, Sediment
Unnamed Trib to Onion River in Waldo Impoundment	Degraded Habitat, Sediment
Unnamed Trib, to S. Br. Manitowoc (T18N, R19E, Sec 24	Degraded Habitat, Sediment
Upper Lake Park (Lake Michigan)	Bacteria
Warm Water Beach	Bacteria
West Twin River	Phosphorus, Organic Enrichment/Low DO
YMCA Beach -- Lake Michigan	Bacteria