The Huron River Data Report

Dexter Area (Flook Dam downstream to Barton Pond)

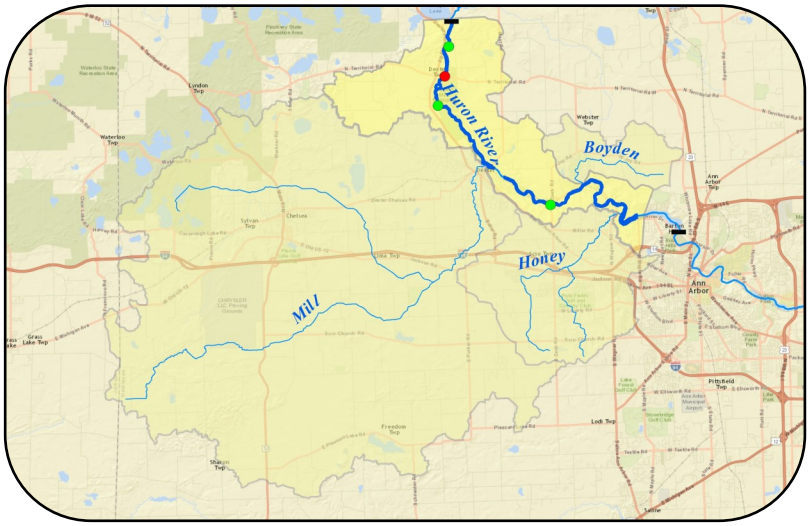
Creekshed Profile

The Huron River flows 125 miles from its headwaters at Big Lake, near Pontiac in Oakland County, to its mouth at Lake Erie in Monroe County. HRWC divides the river into five sections based on its geology, ecology, and hydrology. This report is based on the 3rd section from the headwaters, which runs 16.7 miles from Flook Dam on Portage Lake downstream to North Maple Road, where Barton Pond begins to backup from Barton Dam. This section has an average gradient of 2.9 feet per mile. Two hundred miles of creeks, including Mill Creek, Honey Creek, and Boyden Creek, drain into this Huron River section. There are 50 lakes (open water > 5 acres) and 27 ponds (open water < 5 acres) throughout the areas highlighted in yellow on the map below.

The land immediately around the Huron River in this section (brighter yellow, below) is the focus of this report. It is governed by Washtenaw County, the City of Dexter, and Dexter, Webster, and Scio Townships. The Huron-Clinton Metropolitan Authority also own a significant amount of land bordering on the Huron River.

This entire river section lies within a State of Michigan designated "Natural River District." The Natural River District goes 400 feet back from the river's edge. Within this distance, most development activities require a permit, including building houses, decks, stairs, and other structures, cutting vegetation, and splitting the property into smaller parcels. New buildings must be set back 125 feet from the river to obtain a permit, and a 50-foot natural vegetation strip must be maintained along the river's edge. Because of this protected designation, this Natural River District area has an "up north" feel while playing a vital role in keeping our water clean. In southeast Michigan, the Huron River is the only river with this designation.

A river ecosystem is only as healthy as the quality of the water flowing into it. This section of the Huron is heavily impacted by Mill, Boyden, and Honey Creeks, as well as the upstream Chain of Lakes Huron River. Reports exist for all of these sections: https://www.hrwc.org/our-watershed/features/huron-river-creeks-streams/



- Monitoring sites for Aquatic Insects, Stream Habitat, and Stream Temperature
- Monitoring site for Stream Flow, Phosphorus, Total Suspended Solids, and *E. coli*
- Natural River District
- Dams

For more details on these parameters, please see inside.

Huron River Watershed Council, 1100 North Main Street, Ann Arbor, MI 48104, (734) 769-5123, **Updated 2017**

Watershed Status and Trends

The Huron River near Bell Road is wide and generally shallow, and has a wide forested riparian zone. Credit: HRWC

Watershed Land Use

Low impervious, high residential and agriculture

Total watershed size: 29 square miles (not including Mill, Boyden, and Honey creeksheds)
Land use based on the year 2000:
Agriculture: 32%, *9 square miles*
Residential & urban: 29%, *8 square miles*
Forest: 5%, 5 *square miles*
Open: 13%, 4 *square mile*
Wetland: 9%, 3 *square miles*

Total impervious surface: 6%, *1.7 square mile*

Fish and insect communities are less diverse when impervious surface exceeds 10-12% of the total watershed area. 6% of this area is impervious. However, the river is impacted by impervious surfaces upstream and upstream tributaries as well, which are not taken into ac-

Watershed Natural Areas

Many natural lands yet unprotected

The watershed's forests, wetlands, and grasslands soak up rainwater and runoff, filter pollutants from runoff, and provide wildlife habitat and beautiful places for us all to enjoy. About 29% of this stretch remains as intact natural areas. About a third of these areas are protected from development. (including Hudson Mills, Dexter-Huron, and Delhi metroparks). Without designated protection, the rest of the natural areas in this area face an uncertain future. It will be important to keep these lands natural, so they can continue to help keep the Huron healthy.

Stream Habitat

Excellent habitat throughout

The Huron River has substrate favorable for aquatic life throughout this section; boulders, rocks, gravel, with a small amount of sand. Most of this section has thick forested riparian buffers, although irregularly spaced houses have grassy lawns on the stream banks. There is plentiful instream woody debris and a wide variety of water depths that provide cover and flow refugia.

Dams and Impoundments

Up and downstream influence

This section of the river is bounded by the upstream Flook dam and the downstream Barton Pond which is created by Barton Dam, but otherwise there are no dams here. As a result, throughout the stretch the river runs freely and only begins to slow down as it enters Barton Pond. This maintains good river habitat and cool temperatures for a wide variety of river species.

Fish Community

Excellent fishery

The cool-to-warm water, rocky substrate, and plentiful woody debris habitat allow the Huron River in this section to maintain a high quality and very well known smallmouth bass fishery. The fish community also contains a variety of sunfish, darters, bass, minnows, and sucker species.

Aquatic Insect Community

High quality and diverse

The Huron River in this section contains the best aquatic insect communities seen throughout the entire watershed with the exception of the Huron headwaters. Many of the insect families found here are not found in waters with habitat disturbance and water pollution. Rocky substrate, instream woody debris, and occasional wetland margins provide many habitat options for the insects.

Stream Water Temperature

Cool to warm-water

The Huron River receives a mix of cold groundwater and warmer surface runoff. The river is too wide for the forested riparian areas to shade the entire width, but much of the river's margins are shaded. At the Zeeb Road location, average water temperatures range between 70°F and 75°F during July and August. The highest temperature HRWC recorded at this location in three years of continual measurements is 85°F.

E. coli

Low

E. coli bacteria is a useful water quality indicator for the presence of fecal contamination. In this area near N. Territorial Road, E. coli is normally present in low concentrations. Downstream, Mill, Honey, and Boyden Creeks could increase E.coli levels. After heavy rain events, E. coli levels may rise above State standards. It can take 48 hours for the E. coli to return to safe levels.

Phosphorus

Low

Phosphorus is the limiting nutrient in most freshwater systems, and too much phosphorus can cause algal blooms and water quality problems. The target for area streams is < 50 μg/l. This section of the river's mean total phosphorus (TP) near N. Territorial Road is 30 μg/l. Mill, Honey, and Boyden have elevated levels of phosphorus which likely raise levels as the river flows downstream.

Color Coded Ranking

Excellent | Fair | Poor

Low

Total Suspended Solids

Low

Total suspended solids (TSS) is a measurement of the amount of sediment and organic material held by the stream. A high TSS indicates high turbidity and erosion problems. Good TSS values during rain storms are below 80 mg/l; this section of the river at N. Territorial Road has a peak storm TSS of 46 mg/l. Honey, and Boyden Creeks also have low TSS levels., though Mill is sometimes high.

Conductivity

Normal

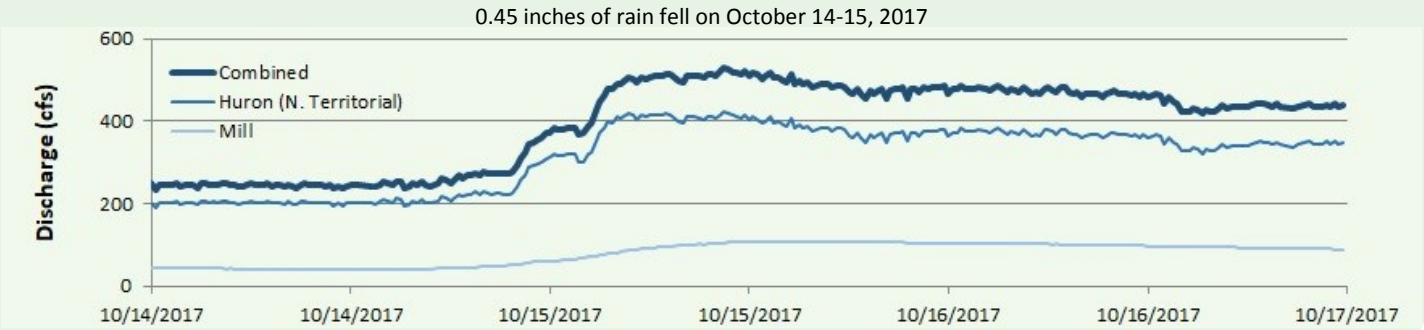
Conductivity is a measurement of the amount of ions (also known as salts) dissolved in water. Conductivity is a quick and easy measurement to make, and is useful as an indicator of potential problems. Conductivity levels in this section of the Huron River are at natural background levels and do not indicate the presence of unknown pollutants.

Stream Flow

Mostly Natural

Stream flow is an important underlying factor for determining likely erosion rates, stream habitat quality, and aquatic community diversity. In this section, the river combines upriver flow with flow from Mill Creek. Both exhibit flow characterized by slow rises during storms and long return periods, resulting a stable base flow. This is good for aquatic life.

Storm Event Graph



Successes & Challenges

Successes

• Michigan DNR has established the Huron River as a catch-and-release fishery from the Mast Road bridge in Dexter downstream to the Delhi Road bridge.

• This stretch of the river is a state-designated Natural River District, due to its beauty, natural flows, native forest and wetland-lined banks. District rules prohibit building within 125 feet of the river's edge and that natural woods, wetlands, and grasses be allowed to grow along the banks at least 50 feet deep.

•Most of the riverfront along this stretch flows through Hudson Mills, Dexter Huron, and Delhi Metroparks, keeping it safe from development.

•The Washtenaw County Border-to-Border Trail runs alongside the river, allowing biking, hiking, birding and other activities.

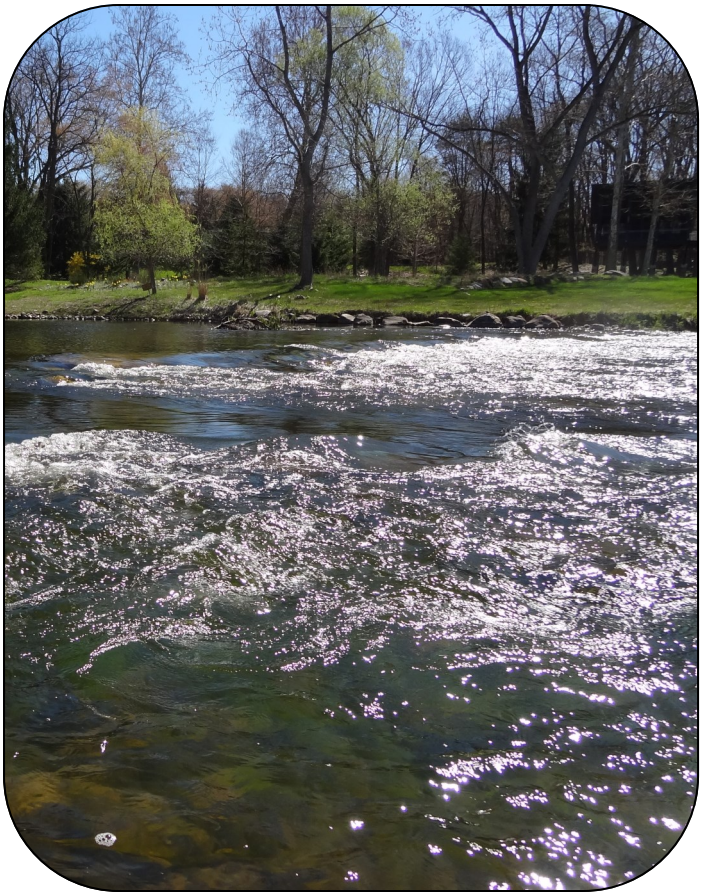
•The nationally-designated Huron River Water Trail creates linkages from city to village; improves recreational access to the river; adds interpretive, way-finding, and historical signage; and creates economic development opportunities along the entire stretch of the Huron.

Challenges

• Clearing of vegetation and building does occur in the Natural River District in violation of the rules. Communities along the river will need to stay vigilant in overseeing activities along this stretch.

• This section of the Huron River is very popular with recreational users, such as anglers, paddlers, and tubers. HRWC is working to promote shared uses and respect for the river.

• Phosphorus and *E.coli* are known problems in Mill, Honey, and Boyden creeks. These three creeks enter the Huron River in this section, lowering the river's water quality. Learn more about these three tributaries from their reports. **link?**



Rocky substrate and shallow water depths create plentiful riffle areas in the Huron River around the crossing of North Territorial Road. Credit: HRWC

What you can do!

At home

• Residents of the Huron's Natural River District live in one of the most beautiful places in Michigan and have a unique opportunity and responsibility to protect the river's scenery, wildlife and water quality. State rules require a natural vegetation buffer of 50 feet from the river's edge, and that building be set back 125 feet away.

• Report Natural River District violations such as clearing of vegetation and building along the river.

•Don't use phosphorus fertilizer. Michigan law prohibits application of phosphorus fertilizer without a soil test to prove that phosphorus is needed.

•If you own a septic system, have it checked regularly. Leaking septic systems can be a large source of phosphorus and *E. coli*.

•If you have pets, clean up after them and dispose of their waste properly. Pet waste left on the ground can contribute bacteria to the stream.