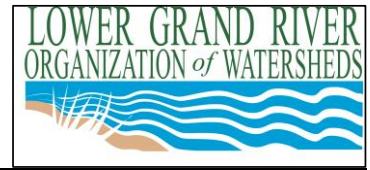


SUBWATERSHED MANAGEMENT UNIT SUMMARY SHEET

Subwatershed

Management Unit: Upper Thornapple River
Major Watershed Name: Thornapple River
Hydrologic Unit Code: 04050007-0101



WATERSHED DESCRIPTION:

Size (acres):	166,535	Land Use (% of total)	
County:	Barry, Eaton, Ionia	Agricultural	69%
Cities, Villages & Townships:	Nashville, Vermontville, Charlotte, Potterville, Maple Grove, Kalamo, Bellevue, Carmel, Eaton, Castletown, Chester, Benton, Woodland, Sunfield, Toxand, Oneida, Delta, Windsar, Eaton Rapids	Forest Land	15%
Critical Area for Restoration:	High	Lakes	1%
Priority Area for Preservation:	Low	Open Land	2%
		Urban	3%
		Wetlands	10%
Pollutant Loadings			
Sediment (tons/yr)	1,584		
Phosphorus (lbs/yr)	32,689		
Nitrogen (lbs/yr)	198,190		

Priority Pollutant Nutrients

Priority Sources Livestock Septic tanks Cropland

Priority Causes Over or improper application of manure Aging systems Over or improper application of fertilizers

Trout Streams/Miles Quaker Brook, Unnamed trib. to Quaker Brook
8.1

Streams with Total Maximum Daily Loads & Dates of Implementation Little Thornapple River TMDL Other anthropogenic substrate alterations & Other flow regime alterations, date NA; Unnamed Tributary to Butternut Creek TMDL Unknown 2016, Thornapple River TMDL Dissolved Oxygen 2023

Wellhead Protection Area(s) YES

PLANS & STUDIES:

Watershed Management Plan Thornapple River/Flat River/None

Other Studies None

MDNRE Surface Water Quality Assessment Surveys 003900, 25300, MI/DEQ/SWQ-02/001, MI/DNR/SWQ-92/320, MI/DEQ/SWQ-98/029

MDNRE Hydrologic Studies Thornapple River Watershed Flashiness Report (MDEQ 2008)

Local Water Quality Monitoring / Inventories Yes, by MiCorps for Macroinvertebrate community, Temp, DO and pH.

WATERSHED PARTNERS:

Watershed Organization(s) Thornapple River Watershed Council, LGROW

NPDES Municipal Separate Storm Sewer System (MS4) Communities None

Last Update: 9/14/2010