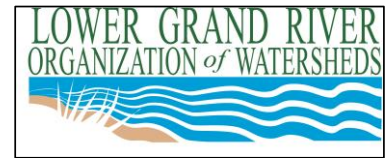


SUBWATERSHED MANAGEMENT UNIT SUMMARY SHEET

Subwatershed

Management Unit: Lower Thornapple River
Major Watershed Name: Thornapple River
Hydrologic Unit Codes: 04050007-0211, -0402, -0404, -0405, -0406, -0407, -0408



WATERSHED DESCRIPTION:

Size (acres):	93,534	Land Use (% of total)	
County:	Barry, Kent	<i>Agricultural</i>	43%
Cities, Villages & Townships:	Caledonia, Middleville, Hastings, Yankee Springs, Thornapple, Irving, Carlton, Castleton, Baltimore, Gaines, Bowne, Cascade, Lowell		
Critical Area for Restoration:	Low	<i>Forest Land</i>	29%
Priority Area for Preservation:	Medium	<i>Lakes</i>	2%
		<i>Open Land</i>	3%
		<i>Urban</i>	14%
		<i>Wetlands</i>	9%
Pollutant Loadings			
Sediment (tons/yr)	1,452		
Phosphorus (lbs/yr)	22,890		
Nitrogen (lbs/yr)	133,690		

Priority Pollutant	Unstable Hydrology		
Priority Sources	Wetland loss	Tiles and drainage networks	Filling of floodplains
Priority Causes	Drainage/filling for agriculture/development	Agriculture land use practices	Filling for agriculture/development
Trout Streams/Miles	Hill Creek, Turner Creek/Unnamed trib of Thornapple River 7		
Streams with Total Maximum Daily Loads & Dates of Implementation	Unnamed tributary to Thornapple River TMDL Bacterial Slimes 2016		
Wellhead Protection Area(s)	YES		

PLANS & STUDIES:

Watershed Management Plan	Thornapple River, Schoolhouse Creek		
Other Studies	Gaines Twp (In Progress)/Cascade Twp. Stormwater Management Plan		
MDNRE Surface Water Quality Assessment Surveys	0		
MDNRE Hydrologic Studies	Thornapple River Watershed Flashiness Report (MDEQ 2008)/Schoolhouse Creek Watershed Study (1997)		
Local Water Quality Monitoring / Inventories	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	Cascade Twp., Kent County Drain Commissioner, Kent County Road Commission		
Recommended Project Sites	Gerald R Ford International Airport Storm Water Runoff Controls; Cascade Twp. Riparian Management Sediment Controls		

Last Update: 9/14/2010