

# WDNR Planning Grant & TMDL Stormwater Analysis



PHIL KLEMAN  
Municipal & Water Resource Engineer  
May 15, 2019



## Overview

- Regulatory Background
- Town's Municipal Stormwater Permit
- Upper Fox & Wolf River Basins TMDL
- WDNR Planning Grant
- TMDL Stormwater Quality Analysis
- Recommendations & Funding Options

## Regulatory Background

- Federal
  - 1987 - Clean Water Act Amendment
  - 1990 - EPA Phase I Regulation
  - 1999 - EPA Phase II Regulation
- Wisconsin – Phase II
  - 2002 - NR 151 Performance Standards
  - 2004 - NR 216 Municipal Permit
  - 2006 - Municipal Permit Application & Permit Issuance
  - 2014 - Municipal Permit Renewals & New Permits
  - 2019 - Municipal Permit Renewals & New Permits



## Town's Municipal Stormwater Permit

- Public Education & Outreach
- Public Involvement & Participation
- Illicit Discharge Detection & Elimination
- Construction Site Pollution Control
- Post-Construction Site Storm Water Management
- Municipal Pollution Prevention
- Storm Sewer System Mapping
- Stormwater Quality Management

## Town's Municipal Stormwater Permit

- Town received its original Municipal Stormwater Permit from Wisconsin DNR in Dec, 2006
  - Developed urban areas
  - Achieve 20% sediment reduction by 2008
  - Achieve 40% sediment reduction by 2013
- 2011 - Wisconsin Act 32
  - Removed 40% sediment reduction requirement
  - 20% sediment reduction remained
  - Existing best management practices (BMPs) to be maintained.

## Town's Municipal Stormwater Permit

- Wisconsin DNR issued an updated permit in May 2014 & recently issued a new permit in May 2019
- TMDL phosphorus and sediment reductions now implemented thru Municipal Stormwater Permit
- Within 36 months of TMDL approval, Town must submit a Stormwater Quality Management Plan and Plan of Action, including proposed schedule for compliance

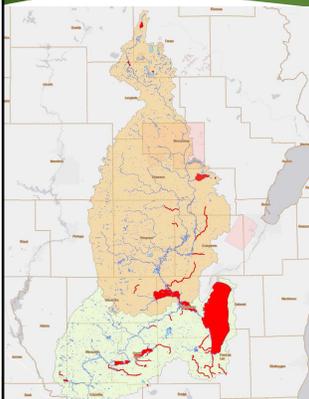
TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## Total Maximum Daily Load (TMDL)

- EPA requires that waterbodies not meeting water quality standards be listed as impaired on Wisconsin's 303-d list & have TMDL's developed
- TMDL's determine the amount of a pollutant that a waterbody can receive and still meet water quality standards
- TMDL = Nonpoint Allocation + Point Allocation + Margin of Safety



TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS



## Total Maximum Daily Load (TMDL)

- Upper Fox & Wolf (UFW) River Basins TMDL for phosphorus and sediment pollutants will likely be approved by US Environmental Protection Agency during 2019.

TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## TMDL Implementation

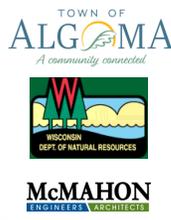
- Municipal & Industrial Wastewater Permits
- Municipal, Industrial, and Construction Site Stormwater Permits
- CAFO Permits and Other Agriculture



TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## WDR Planning Grant

- Ordinances
- Dedicated Revenue
- Storm Sewer System Map Update
- Public Education
- Preliminary Pond Design
- Stormwater Quality Management Plan
  - NR 151 Analysis
  - TMDL Analysis



TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## Ordinances

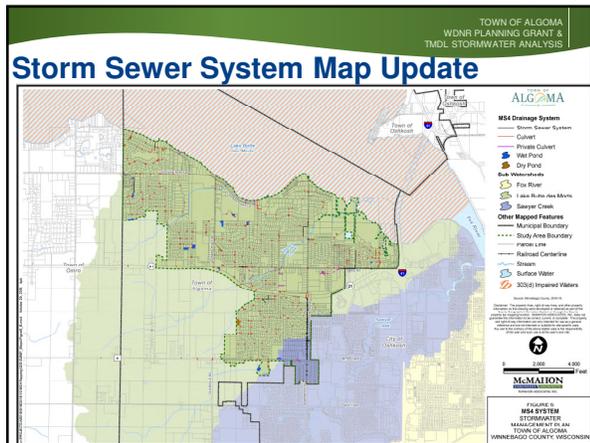
- Construction Site Erosion Control
  - Developed draft Chapter 226 – Erosion and Sediment Control
  - Developed Reference Guide to assist developers/engineers
- Post-Construction Stormwater Management
  - Developed draft Chapter 227 – Post-Construction Stormwater Management
  - Incorporated TMDL water quality requirements
  - Developed Reference Guide to assist developers/engineers
- Illicit Discharge
  - Developed draft Illicit Discharge Ordinance
  - Developed a Policies & Procedures Plan to prevent and eliminate illicit discharges to the Town's MS4

TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## Dedicated Revenue

- Fee Schedules
  - Developed permit application fees, inspection fees and forfeitures/fines schedules.
- Permit Application / Certificate of Coverage
  - Created Application & Certificate of Coverage to supplement Fee Schedules
- Regional Pond User Charge Policy
  - Identifies how a user charge would be calculated for a Town Regional Pond





TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## Public Education

- Created Educational Brochures
  - Construction Site Erosion Control
  - Post-Development Stormwater Management

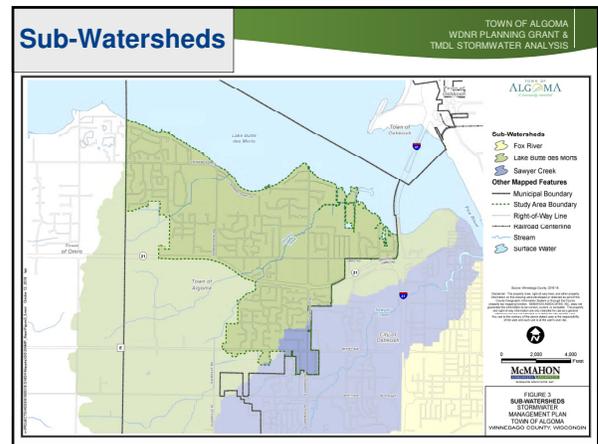
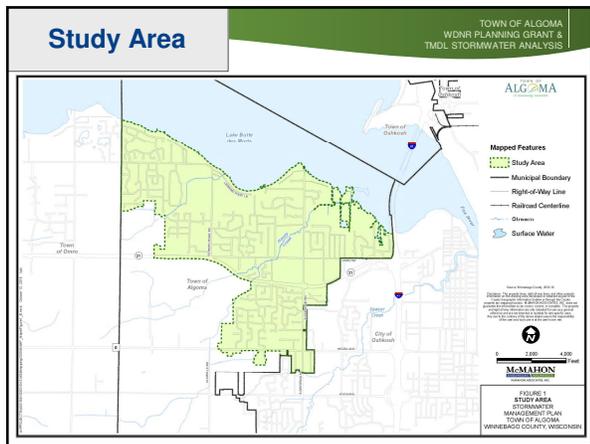


TOWN OF ALGOMA  
WDR PLANNING GRANT &  
TMDL STORMWATER ANALYSIS

## Stormwater Quality Management Plan

- NR 151 Analysis
  - Developed urban area / land uses in 2004
  - Achieve 20% TSS reduction by 2008
- TMDL Analysis
  - Draft UFW River Basins TMDL identifies Phosphorus & Sediment pollutant reductions required for the Town's developed urban area.

Sub-Watershed	TMDL Phosphorus Reduction Required	TMDL Sediment Reduction Required
Lake Butte des Morts	83.0%	-
Sawyer Creek	83.0%	48.0%







## TMDL Analysis – Recommendations

- Consider adopting the draft Post-Development Stormwater Management Ordinance created under grant
- Stormwater “treatment train” of grass swales and wet detention ponds likely needed to obtain the TMDL’s 83% phosphorus reduction requirement
- Develop a TMDL Plan of Action & 20-30 year capital improvement plan
- Look for opportunities within the Town to construct regional stormwater ponds identified in the TMDL Alternatives
- Look for opportunities to work with other MS4’s (County, State, C. Oshkosh) – Can sometimes be more cost-effective.

## Funding Options

- Grant Funds
- Connection/User Charge Fees
- Special Assessments
- Tax Incremental Financing (TIF) Districts
- Stormwater Utility
- Low Interest Rate Loans

## Questions

