

# SWMP Updates

Connecting Water Quality & SWMP  
Implementation

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# Fall is a good time for reflection...

## NPDES Small MS4 General Permit

- Storm Water Management Program (SWMP)
  - Goals (OAC 3745-39-02):
    - Reduce the discharge of pollutants from MS4:
      - Sediment and suspended solids,
      - Nutrients and heavy metals,
      - Pathogens, toxins and oxygen-demanding substances,
      - Floatables (includes oil and grease)
    - Protect or improve existing water quality
  - How?
    - OAC 3745-39-03: Use Best Management Practices (BMPs) to implement 6 Minimum Control Measures (MCMs)
    - MS4 Permit No. OHQ000003: Enhance BMP selection based on TMDLs



# SWMP Updates

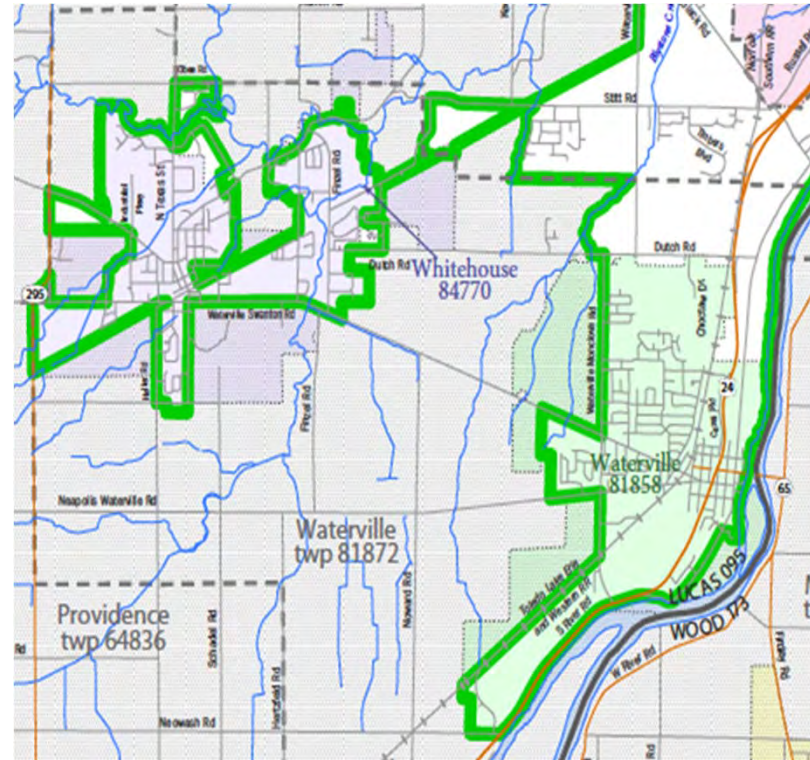
Small MS4 General Permit (Part III.D.4.) requires SWMP updates...

- If a transfer in MS4 ownership or operational responsibility,
  - e.g., annexations, transfers in operational control, newly-constructed MS4s, expanded Urbanized Area (UA)
  - Must develop plan to implement the SWMP in new areas within 90 days of transfer
  - Must implement SWMP in new areas within one year of transfer
- May request an extension in the following annual report for:
  - Updates to MS4 map
  - Dry weather screening of new MS4 outfalls



# Changes to UA Due to Census

- UAs based on 2010 US Census were released in 2012
  - Existing permittees must **expand SWMP implementation to include new areas in the UA by September 11, 2015**
    - Is intended to be self-implementing
    - Prescribed in Federal regs when rules first promulgated
  - Regulated MS4 area is the area within the UA per the 2000 Census **plus** any additional areas identified in 2010 Census.



# SWMP Updates

Small MS4 General Permit (OHQ000003) requires:

- SWMP update within 2 years of MS4 renewing permit coverage.
- MS4 to submit 1 copy of updated SWMP to Ohio EPA NWDO.
  - Due by November 2016 for most; a few have until January 2017.

November 2016

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			



# SWMP Updates to Address TMDL

*Part III.A.1.a and Part III.A.1.e.*

- NPDES Permit No. OHQ000003 requires a MS4's discharge to be consistent with Total Maximum Daily Loads (TMDLs) approved by U.S. EPA.
- For each of the six MCMs
  - “Where applicable, BMPs shall be selected to address U.S. EPA approved TMDL recommendations for identified water quality problems associated with MS4 discharges within your MS4's watershed(s).”
  - “Provide a rationale for how and why you selected each of the BMPs and measurable goals for your SWMP, including how selected BMPs address applicable TMDL recommendations.”

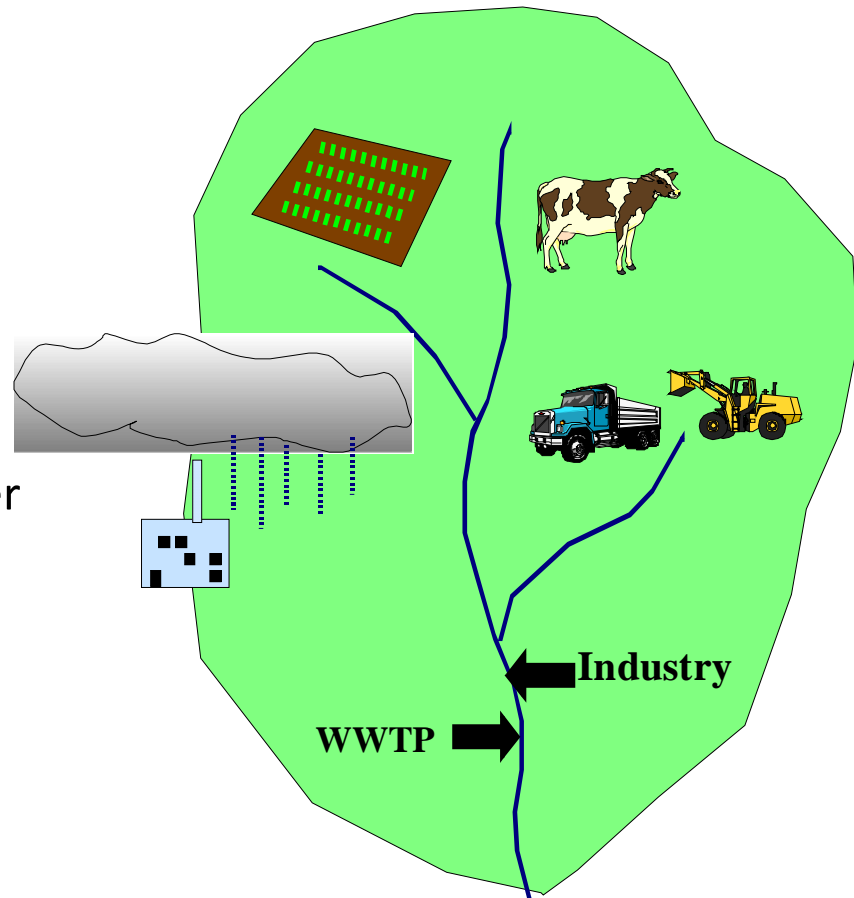


## What this language means:

- Requires MS4s to be aware of and use U.S. EPA approved TMDL report recommendations in their decision process for selection of BMPs.
- Does not require MS4s to monitor storm water discharges to ensure that TMDL MS4 wasteload allocations are met.
- Requires MS4s to use the recommendations found within TMDL reports to better tailor their mix of BMPs to address noted water quality problems attributed to MS4 discharges.

# What is a TMDL?

- Total Maximum Daily Load (TMDL)
  - Is watershed-specific, e.g., Portage River TMDL
  - Is the maximum amount of pollutant the waterbody can contain and still maintain water quality standards
  - $TMDL = WLA + LA + MOS$ 
    - WLA = waste load allocation from point sources (includes regulated MS4s)
    - LA = load allocation from non-point sources, e.g., agriculture
    - MOS = margin of safety





# Ohio Supreme Court TMDL Decision

- Ohio EPA is still evaluating the implications of the Court's decision.
  - March 24, 2015, the Court issued a decision invalidating a phosphorus limit that was imposed on a Fairfield County WWTP (Fairfield Cty. Bd. of Commrs. v. Nally).
  - The Court determined that Ohio EPA did not follow public rulemaking laws when using TMDLs as a basis for setting effluent limits in NPDES permits.
- However, **the MS4 permit issued September 11, 2014, remains in effect and is enforceable.**
  - It does not contain any numeric effluent limits based on TMDLs.
  - It only requires MS4s to use TMDL recommendations as a basis for BMP selection when revising SWMPs.



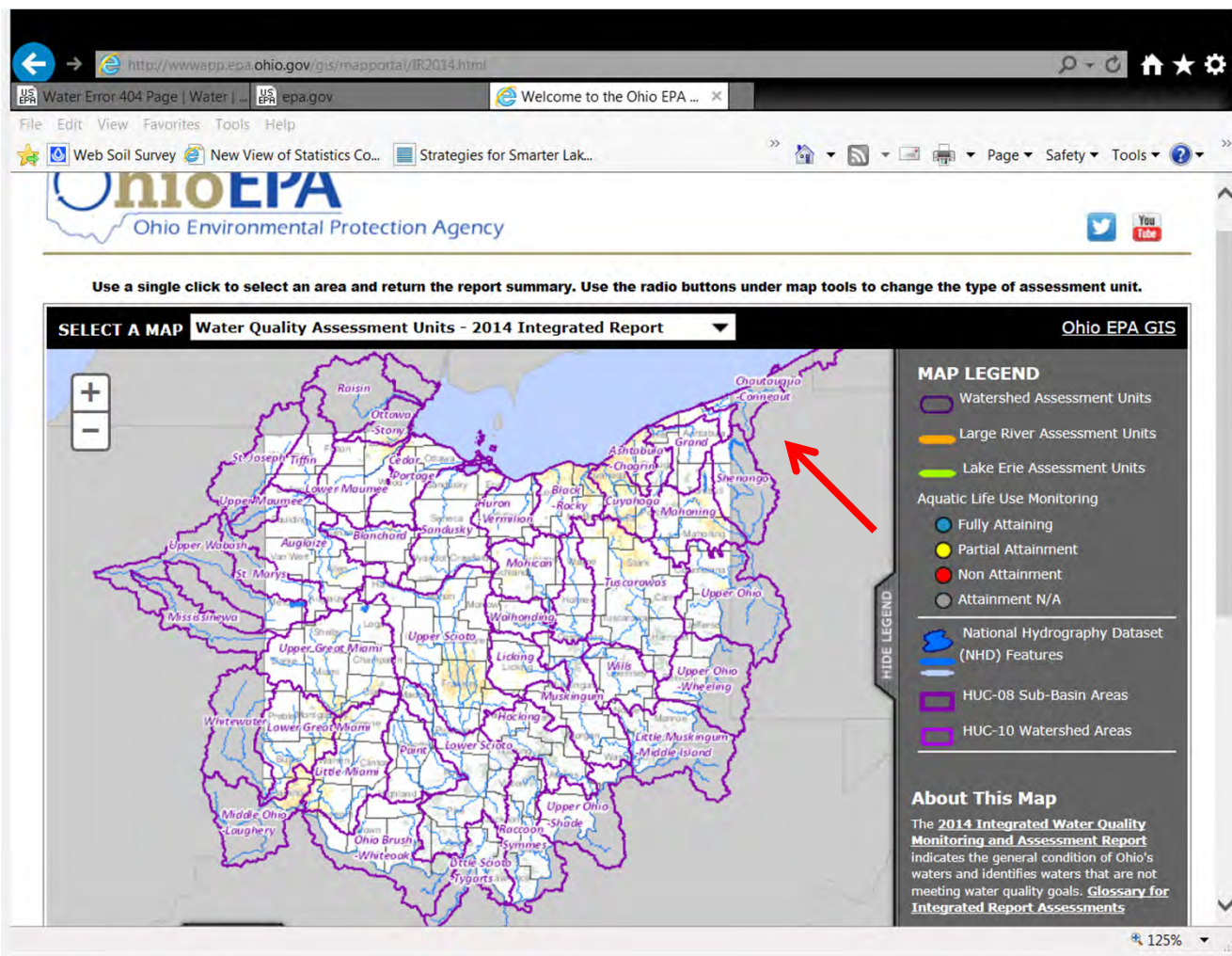
## Linking SWMP & TMDLs

*What are my water quality goals?*

- ID each watershed within your MS4.
- Consult Ohio Integrated Water Quality and Assessment Report (a.k.a. Integrated Report)
  - Go to: [epa.ohio.gov/dsw/tmdl/OhioIntegratedReport.aspx](http://epa.ohio.gov/dsw/tmdl/OhioIntegratedReport.aspx)
- ID Pollutant of Concern (POC)
- Select BMPs that address POC
- Select Measurable Goal for BMP
- Document Rational



# Interactive Map





Use a single click to select an area and return the report summary. Use the radio buttons under map tools to change the type of assessment unit.

**SELECT A MAP** Water Quality Assessment Units - 2014 Integrated Report Ohio EPA GIS

**MAP LEGEND**

- Watershed Assessment Units
- Large River Assessment Units
- Lake Erie Assessment Units
- Aquatic Life Use Monitoring
  - Fully Attaining
  - Partial Attainment
  - Non Attainment
  - Attainment N/A
- National Hydrography Dataset (NHD) Features
- HUC-08 Sub-Basin Areas
- HUC-10 Watershed Areas

**About This Map**

The 2014 Integrated Water Quality Monitoring and Assessment Report indicates the general condition of Ohio's waters and identifies waters that are not meeting water quality goals. [Glossary for Integrated Report Assessments](#)

MAP TOOLS HIDE MAP

# Watershed Assessment Unit Summary

## Wolf Creek

04100009 08 03

Area: 27.16 square miles

### Total Maximum Daily Loads (TMDL)

Status: **Approved**

Reports: **Swan Creek: Maumee River Watershed**

Next Monitoring: **2022**

The year in which Ohio EPA expects to revisit the assessment unit for comprehensive monitoring.

Priority Points Total: **Not Applicable**

Aquatic Life: NA Recreation: NA Public Water: NA Fish Tissue: NA

Priority point values range between 1 and 20, and are calculated if any of the use assessment categories is 5 (Impaired; TMDL Needed) or the assessment unit is not impaired but is on the nitrate and/or pesticide watch lists for public drinking water supply.

### Assessment Unit Landuse

- Developed 48.30%
- Forest 26.70%
- Grass/Pasture 10.00%
- Row Crops 14.40%
- Other 0.60%



### Aquatic Life Use Assessment

Reporting Category: Impaired; TMDL not needed (4A)

Aquatic Life Beneficial Uses: WWH

Sampling Years: 2006

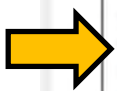
### Watershed Score

- More Impaired (0 - 33)
- Impaired (33 - 66)
- Less Impaired (66 - 99)
- Fully Attaining (100)



### Comments:

TMDLs for pollutants impairing designated or recommended aquatic life uses in the Swan Creek basin were approved by U.S. EPA on January 6, 2010. The TMDL report is available via the Swan Creek tab at <http://epa.ohio.gov/dsw/tmdl/MaumeeRiver.aspx>. Monitoring in support of the TMDL report was conducted in 2006. The monitoring report is available at [http://www.epa.ohio.gov/dsw/document\\_index/psdindx.aspx](http://www.epa.ohio.gov/dsw/document_index/psdindx.aspx) (See Index Number EAS/2008-12-11).





<http://wwwapp.epa.ohio.gov/gis/mapportal/IR2D14.html>

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**Aquatic Life Use Assessment Details:**  
*Most Recent Data:*

Year	Station Name	Attainment Status	Beneficial Uses	River Mile	Drainage Area (sqm)
2006	WOLF CREEK E OF HOLLAND @ HOLLAND-SYLVANIA RD.	Non	Warmwater Habitat	0.48	26.1
2006	WOLF CREEK NEAR HOLLAND @ PERRYSBURG-HOLLAND RD.	Partial	Warmwater Habitat	1.96	12.9
2006	WOLF CREEK @ ALBON RD.	Partial	Warmwater Habitat	4.06	7.9
2006	CAIRL CREEK @ PILLIAD RD.	Non	Warmwater Habitat	1.32	10.3

**Causes of Impairment:**  
 sedimentation/siltation  
 Polycyclic Aromatic Hydrocarbons (PAHs)  
 direct habitat alterations  
 aluminum

**Sources of Impairment:**  
 impervious surface/parking lot runoff  
 channelization  
 dam or impoundment  
 sewage discharges in unsewered areas  
 urban runoff/storm sewers  
 sand/gravel/rock mining or quarries  
 crop production with subsurface drainage

**Recreational Use Assessment**

**Reporting Category:** Impaired; TMDL not needed - TMDL complete (4A)  
**Causes of Impairment:** bacteria  
**Recreation Use Score:** 0  
**Recreation Use Class A:** No

**Public Drinking Water Supply Assessment**

**Reporting Category:** No waters currently utilized for water supply (0)  
**Causes of Impairment:**  
**Public Water Supplies:**  
**Nitrate Watch List:** No  
**Pesticides Watch List:** No  
**Harmful Algae Watch List:** No

**Fish Tissue Assessment**

**Reporting Category:** Use attainment unknown (3)  
**Causes of Impairment:**  
**PCBs:** NA  
**Hg(Mercury):** NA

110%

U.S. EPA's "Getting In Step: A Guide for Conducting Watershed Outreach Campaigns" 3rd edition

<http://www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf>

Examples of indicators for various goals, objectives, and tasks			
Goal	Objective	Task/Activity	Indicators
Improve Water Quality			Overall Indicator: Attainment of water quality criteria and designated uses (impact)
	Objective A: Reduce phosphorus loadings from subwatershed X		<ul style="list-style-type: none"> <li>Reduction in soluble reactive phosphorus concentrations (impact)</li> </ul>
		Offer free soil testing to row crop farmers	<ul style="list-style-type: none"> <li>Total acres of soil tested; farmers reached (process)</li> <li>Number of farmers applying fertilizer based on soil tests (impact)</li> </ul>
		Conduct workshops for homeowner lawn care	<ul style="list-style-type: none"> <li>Number of workshops held; total attendees (process)</li> </ul>
	Objective B: Reduce erosion and sediment from construction sites		<ul style="list-style-type: none"> <li>Target: 40 percent decrease in total suspended solids and turbidity measurements (impact)</li> </ul>
		Train job site superintendents in proper erosion and sediment control practices	<ul style="list-style-type: none"> <li>Number of training sessions held; total number of attendees (process)</li> <li>Pre/post tests on knowledge of erosion and sediment control practices (impact)</li> </ul>
		Conduct random inspections of construction sites to review erosion and sediment control practices	<ul style="list-style-type: none"> <li>Inspections conducted; resulting scores; referrals of low-score sites to training program (impact)</li> <li>Inspection score trends over time (impact)</li> </ul>

Need Measurable Goal.  
Such as 10% increase in scores



# Appendix A: Building blocks worksheets

Appendix A

Building Blocks Worksheets

Sample Summary Sheet					
<p><b>Driving Force:</b> Serious water quality problems, including phosphorus and nitrogen overloading due to urban runoff, sedimentation and erosion, bacterial contamination, and flooding due to impervious surfaces.</p>					
<p><b>Goal:</b> Increase awareness of residential nutrient runoff and encourage behaviors that will reduce nutrient pollution in local streams and lakes.</p>					
Objective	Target Audience	Message	Format	Distribution	Evaluation
<p>Increase awareness of residential nutrient runoff by 25 percent within 1 year and encourage behaviors that will reduce nutrient pollution in local streams and lakes.</p>	<p>Homeowners and homeowner associations (HOAs) and apartment/landscape managers</p>	<p>Fertilize in the Fall. That's All!</p> <p>With slow-release or organic fertilizers, you need to fertilize only once in the fall to help your grass grow new roots and store nutrients for next year's growth.</p>	<p>5 public transit posters</p> <p>Full-size educational posters</p> <p>Waterbill inserts</p> <p>Workshop for HOA representatives</p> <p>Workshop for apartment/landscape managers</p> <p>Stormwater hotline</p>	<p>City bus system</p> <p>Light rail system</p> <p>Bulk mail</p> <p>Workshops</p> <p>Stormwater hotline</p>	<p>Pre- and post-project phone survey of watershed residents</p> <p>Number of attendees at workshops</p> <p>Number of calls to hotline during and after distribution of formats</p> <p>Pre- and post-project nitrogen and phosphorus levels in the local streams and lakes</p>



Measurable Goal

\*Blank worksheets are available from U.S. EPA's "Getting In Step: A Guide for Conducting Watershed Outreach Campaigns", 3rd Edition



# SWMP Update

- Explain why you selected those BMPs, how you set the corresponding measurable goals, and why this combination of practices is appropriate for your community.
- For example, your community may be subject to a Total Suspended Solid (TSS) TMDL, but does not see a lot of construction activity for new development or redevelopment.
  - Increasing the frequency of construction site inspection or implementing an enhanced enforcement escalation plan for construction site operators would not be appropriate for your community.
  - Perhaps the source of TSS in your community is erosion from unmaintained and unstable road ditches. A program to grade, vegetate or otherwise stabilize a certain length of road ditch per year would be more appropriate.
  - Perhaps the source of TSS in your community is street litter. If so, an enhanced street sweeping and catch basin cleaning program and/or an education campaign on litter control may be more appropriate for your SWMP.

# Addressing TMDLs: Example

Phosphorus is a concern per TMDL

- Typical sources of phosphorus in urbanized areas:
  - Fertilizers
  - Discharging/failing septic systems
  - Leaves and street debris
  - Sediment



# Addressing TMDLs: Phosphorus

- How can the SWMP address these issues?
  - Increase enforcement on construction site runoff controls
  - Establish a proactive inspection and maintenance program for home sewage treatment systems (HSTS)
  - Increase enforcement to eliminate illicit discharges
  - Conduct a public education campaign to influence behaviors regarding fertilizer usage
  - Do not use fertilizers on public properties
  - Implement or increase frequency of street sweeping program and dispose of collected waste properly
  - Conduct sewer system maintenance to eliminate infiltration and inflow of sanitary wastewater to the storm sewer system

**QUESTIONS?**

