

# 2020 National Storm Water Roundtable

## San Antonio, Texas

# TMDLs and General Permits

**Suzy Limberg**  
**Storm Water Program Coordinator,**  
**Municipal & Technology**  
**Wisconsin DNR**



*This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.*

# Overview - TMDLs in Wisconsin

- **TMDLs in Wisconsin**
  - ✓ Development & terminology
  - ✓ What does it look like?
  
- **TMDLs & General Permits**
  - ✓ Construction
  - ✓ Industrial
  - ✓ MS4
  
- **TMDLs & MS4 General Permit**

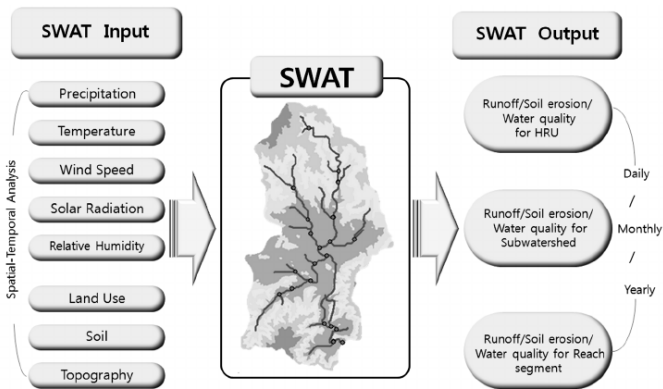


**Disclaimer: I am not a TMDL developer!**

# TMDLs in Wisconsin

✓ Development & terminology

- ✓ Wasteload Allocation (WLA) – point sources
- ✓ Load Allocation (LA) – nonpoint sources and background
- ✓ MOS – margin of safety



Appendix T. Daily Total Phosphorus Allocations by MS4

Municipality	Reach	Daily TP Wasteload Allocation (lbs/day)												Annual Wasteload Allocation (lbs/year)
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Beaver Dam, City	33	0.71	2.14	2.59	3.46	3.66	4.52	4.37	2.25	0.69	0.31	0.39	0.34	772.85
	34	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.04	0.03	0.02	0.02	0.01	9.74
	37	0.08	0.36	0.49	0.58	0.55	0.62	0.65	0.62	0.52	0.39	0.28	0.16	161.22
Beloit, City	39	0.65	0.95	0.78	0.49	0.60	0.87	1.29	1.34	1.24	0.92	0.88	0.70	325.68
	79	0.77	1.24	1.45	2.12	2.37	2.86	2.74	2.10	1.53	1.18	1.01	0.92	617.23
	81	2.34	2.74	2.44	2.83	2.79	4.57	6.74	7.47	6.42	4.48	3.33	2.82	1492.85
Beloit, Town	79	0.51	0.82	0.96	1.39	1.56	1.88	1.80	1.38	1.01	0.77	0.66	0.60	405.89
Blooming Grove, Town	64	0.06	0.08	0.06	0.07	0.08	0.11	0.12	0.11	0.09	0.07	0.06	0.06	29.03
	65	0.02	0.03	0.04	0.05	0.04	0.05	0.04	0.04	0.03	0.03	0.03	0.03	13.26
	66	0.62	0.64	0.56	0.58	0.65	0.82	0.83	0.77	0.60	0.56	0.57	0.59	236.89
Bristol, Town	45	4.22	4.17	2.42	1.50	1.76	3.20	3.82	3.88	3.96	3.88	4.32	4.05	1250.75

$$TMDL = \Sigma WLA + \Sigma LA + MOS$$



# TMDLs in Wisconsin

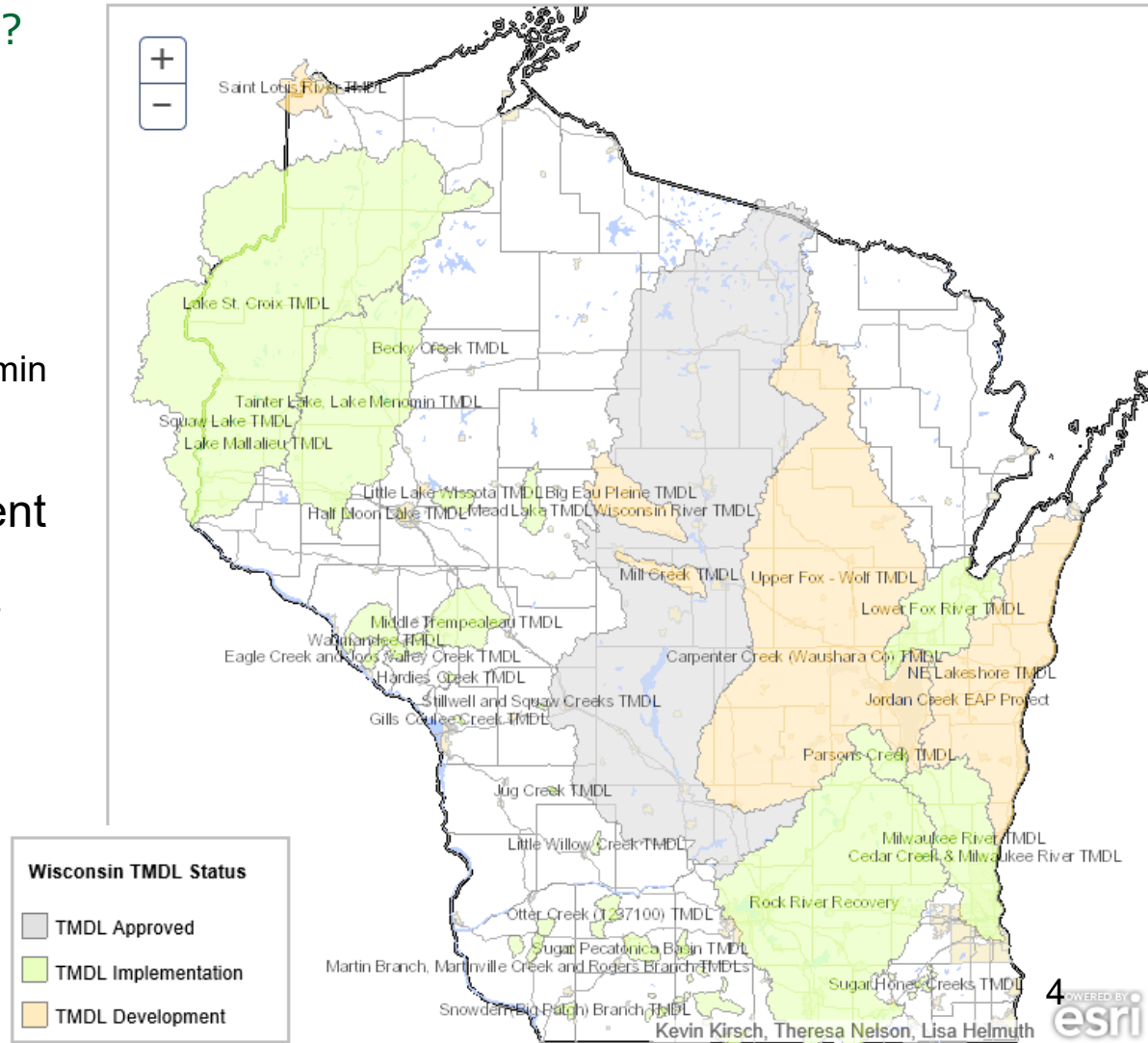
✓What does it look like?

## TMDLs Approved

- Lake St. Croix
- Lower Fox River
- Milwaukee River Basin
- Rock River
- Tainter Lake/Lake Menomin
- Wisconsin River

## TMDLs in Development

- Northeast Lakeshore
- Upper Fox & Wolf Rivers



# TMDLs in Wisconsin

✓What does it look like?

**Wisconsin River Basin**



- 9156 sq. miles
- 22 counties
- 73 streams
- 120 individual segments
- 9 lakes

**Lower Fox River Basin**



- 640 sq. miles
- 4 counties
- 14 streams
- 27 individual segments
- 0 lakes



# TMDLs in Wisconsin

✓What does it look like?

**Wisconsin River Basin**



- 9156 sq. miles
- 22 counties
- 73 streams
- 120 individual segments
- 9 lakes
- **3.5 hour TMDL**

**Lower Fox River Basin**



- 640 sq. miles
- 4 counties
- 14 streams
- 27 individual segments
- 0 lakes
- **45 min TMDL**

# TMDLs in Wisconsin

✓What does it look like?

## Typical Pollutants of Concern

– Total suspended solids, sediment, total phosphorus, fecal coliform



# TMDLs & General Permits

- ✓ Compliance with permit is compliance with TMDL
  - Construction  $\neq$  WLA
  - Industrial  $\neq$  WLA
- ✓ Permit terms and conditions define TMDL compliance
  - MS4 = WLA

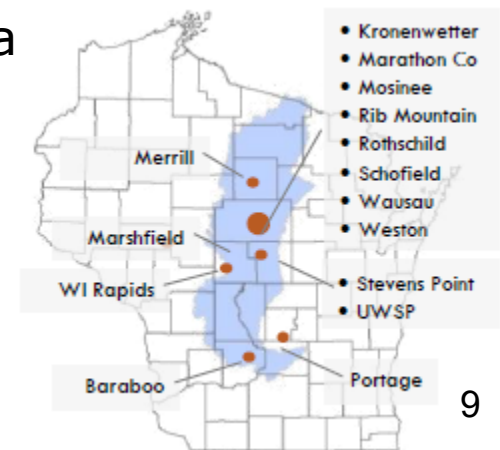




# TMDLs & MS4 General Permit

✓ Wasteload allocations for MS4s

1. WLAs are assigned for each pollutant of concern by reach
  - a. MS4 can have **multiple** pollutant reduction goals
2. Reduction goals are a **% reduction** from a defined **no controls** scenario
3. Municipal-wide analysis already **completed** prior to TMDL
  - a. Ch. NR 151, Wis. Adm. Code, urban a performance standard





# TMDLs & MS4 General Permit

✓ Implementation framework

## **1. Permit term 1 – planning phase**

- a. Update storm sewer system map with TMDL boundary
- b. Express WLA as a Percent Reduction
- c. Cost-effective analysis & consideration of alternatives
  - i. Identifies what measures will be implemented and timeframe

## **2. Permit term 2+ – implementation phase**

- a. Show progress by meeting 'benchmarks'
- b. Submit tabular summary each term

# TMDLs & MS4 General Permit

✓ Implementation framework

1. MS4 general permit reissued May 2019
2. Remand Rule – Comprehensive General Permit
3. TMDL Appendices



**STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES**

**GENERAL PERMIT TO DISCHARGE UNDER THE WISCONSIN  
POLLUTANT DISCHARGE ELIMINATION SYSTEM  
WPDES PERMIT NO. WI-S050075-3**

In compliance with the provisions of ch. 283 Wis. Stats., and chs. NR 151 and 216, Wis. Adm. Code, owners and operators of municipal separate storm sewer systems are permitted to discharge storm water from all portions of the

**MUNICIPAL SEPARATE STORM SEWER SYSTEM**

owned or operated by the municipality to waters of the state in accordance with the conditions set forth in this permit.

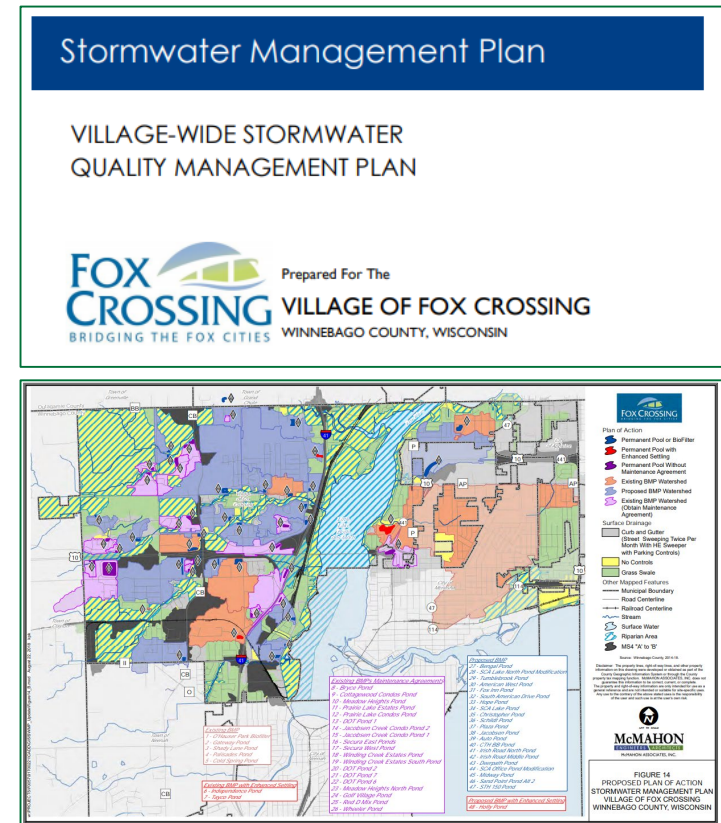
**APPENDICES**

Appendix A: MS4 Permittees Subject to a TMDL Approved Prior to May 1, 2014 including Applicable Updates	37
Appendix B: MS4 Permittees Subject to Milwaukee River Basin TMDL	49
Appendix C: MS4 Permittees Subject to the Wisconsin River Basin TMDL or a TMDL Approved After May 1, 2019	59

# TMDLs & MS4 General Permit

✓ Implementation framework – TMDL appendices

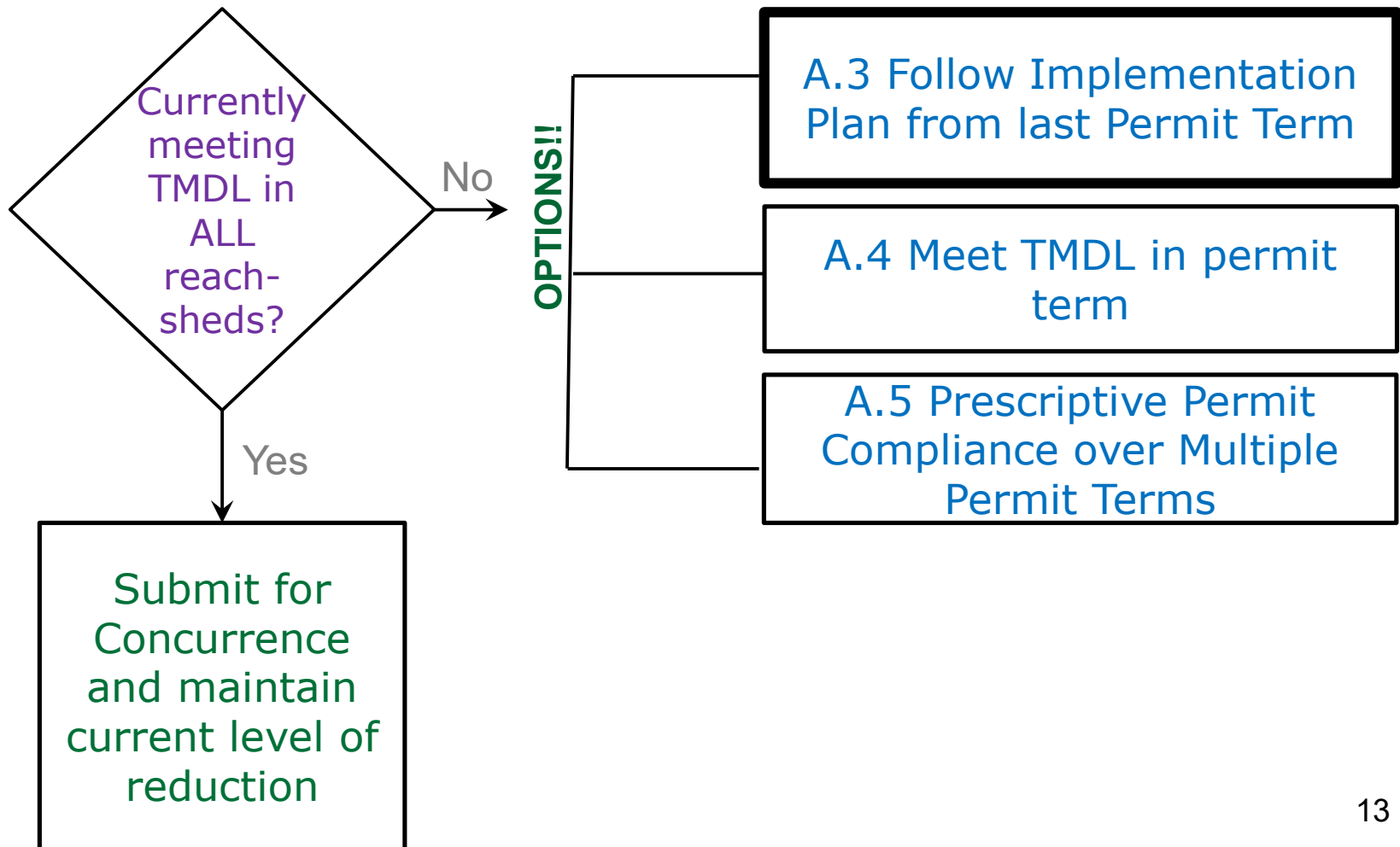
- Appendix A
  - Implementation Phase
- Appendix B
  - Planning and Implementation Phase
- Appendix C
  - Planning Phase





# TMDLs & MS4 General Permit

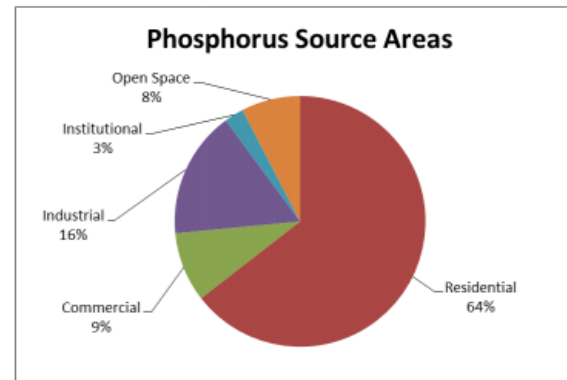
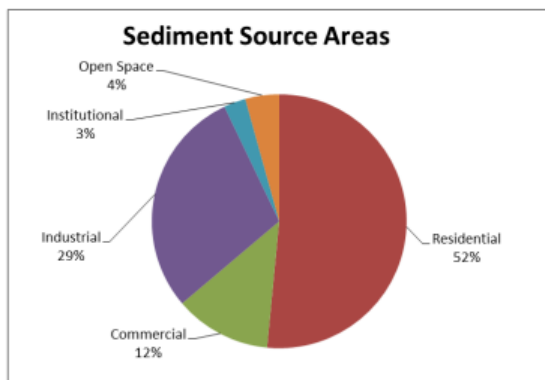
✓ Implementation framework – Appendix A



# TMDLs & MS4 General Permit

✓ Implementation – **A.4 TMDL Compliance in permit term**

- Full compliance by the end of Permit Term (5 years)
- Meet reductions in each reachshed
- May apply excess reductions in upstream reach-sheds to downstream reach-sheds
- Requires DNR concurrence





# TMDLs & MS4 General Permit

✓ Implementation – **A.5.2 Prescriptive compliance – Numeric Progress**

- Quantifiable practices
- 'Additional reduction' measured from MS4 baseline
  - A minimum of a 20% additional reduction in sediment or total suspended solids.
  - A minimum of a 10% additional reduction in total phosphorus.

Note: Progress may be located in or upstream of any reachshed where progress is needed (this permit term)



# TMDLs & MS4 General Permit

✓ Implementation – **A.5.3 Prescriptive compliance – Optimize Programs**

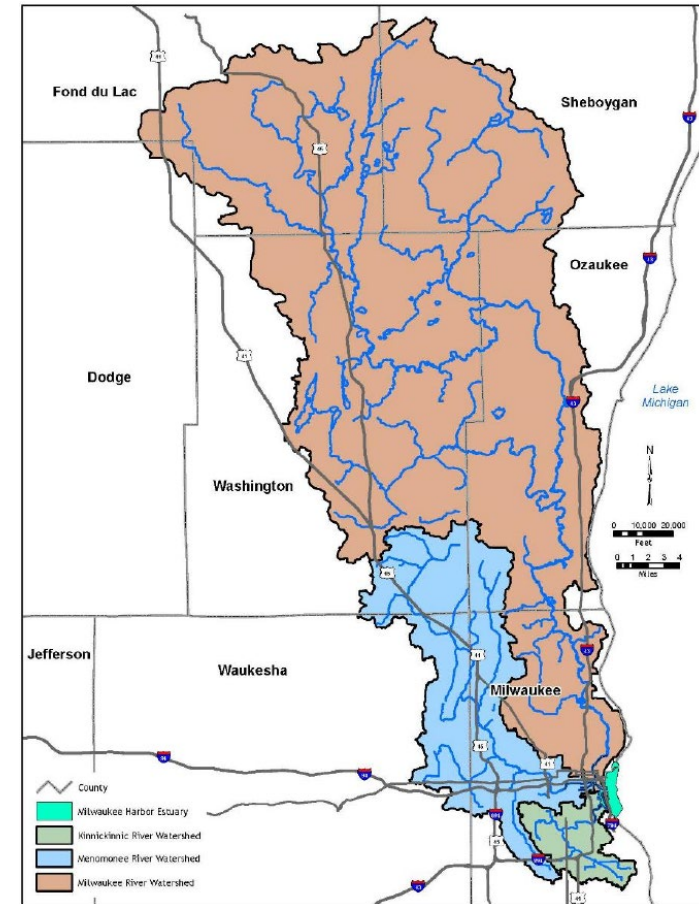
- Non-quantifiable practices
  - Redevelopment post-construction ordinances
  - Private post-construction BMP maintenance and record drawings
  - Municipal leaf management
  - Outfall & conveyance stabilization
  - Optimize street cleaning
  - 1 (quantifiable) new/enhanced structural BMP



# TMDLs & MS4 General Permit

✓ Planning/Implementation framework – **Appendix B**

- Milwaukee River TMDL only
- EPA approved on March 9, 2018
- TSS/TP/**Bacteria** TMDL requirements
- **Finish planning** initiated under previous permit
- Begin implementing



# TMDLs & MS4 General Permit

✓ Planning framework – Appendix C



- Prepare MS4 Map with TMDL reachsheds
  - Identify excluded areas with reason
- Provide tabular summary
- Written plan



## Lessons Learned

- ✓ TMDL modeling tools are different than MS4 compliance modeling tools
- ✓ Look at the TMDL implementation plans
- ✓ Talk with your experts
- ✓ Build off existing permits & policy expectations



## Lessons TO Learn

- ✓ How are others tracking TMDL implementation?
- ✓ What tools are permittees using to meet TP TMDLs?
- ✓ Bacteria implementation?
- ✓ Other?



# Questions?



Suzy Limberg  
Storm Water Program Coordinator  
WDNR WT/3, P.O. Box 7921  
Madison, WI 53707-7921  
phone: (608) 266-9278  
e-mail: [suzan.limberg@wisconsin.gov](mailto:suzan.limberg@wisconsin.gov)



[dnr.wi.gov](http://dnr.wi.gov)