



# MENOMONEE FALLS STORM WATER UTILITY

# Introductions and Roadmap

## ► Introductions

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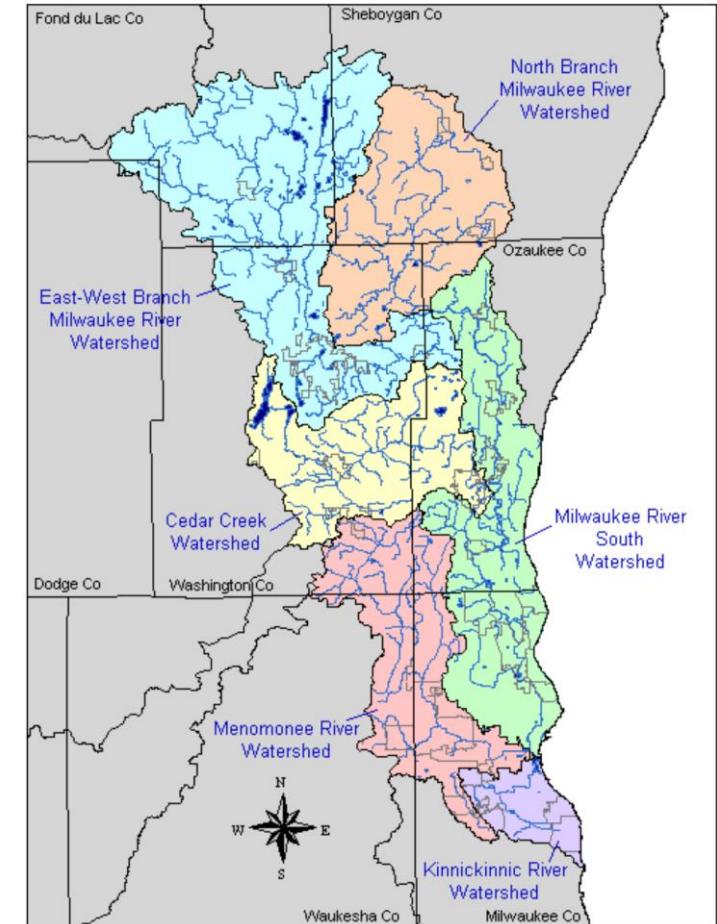
## ► Agenda

- The need: regulations, water quality, & flooding
- Storm water utilities: costs and revenues



# DNR Storm Water Permit - History

- Federal Clean Water Act = 1972
- Initial DNR Storm Water Permit = 2006
- Menomonee River Watershed Permit = 2012
  - 11 municipal entities
  - Milwaukee (City & County) to Butler
  - Current permit (2020-2025)
- Regulates storm water discharge throughout Village, not just in the Menomonee River watershed
- Individual & shared responsibilities



# DNR Storm Water Permit

- 6 Minimum Control Measures
  - Public information & outreach
  - Public involvement
  - Illicit discharge detection & elimination
  - Construction site pollutant control
  - Post-construction pollutant control
  - Pollution prevention
- 20% sediment reduction
- Mapping updates
- Annual report

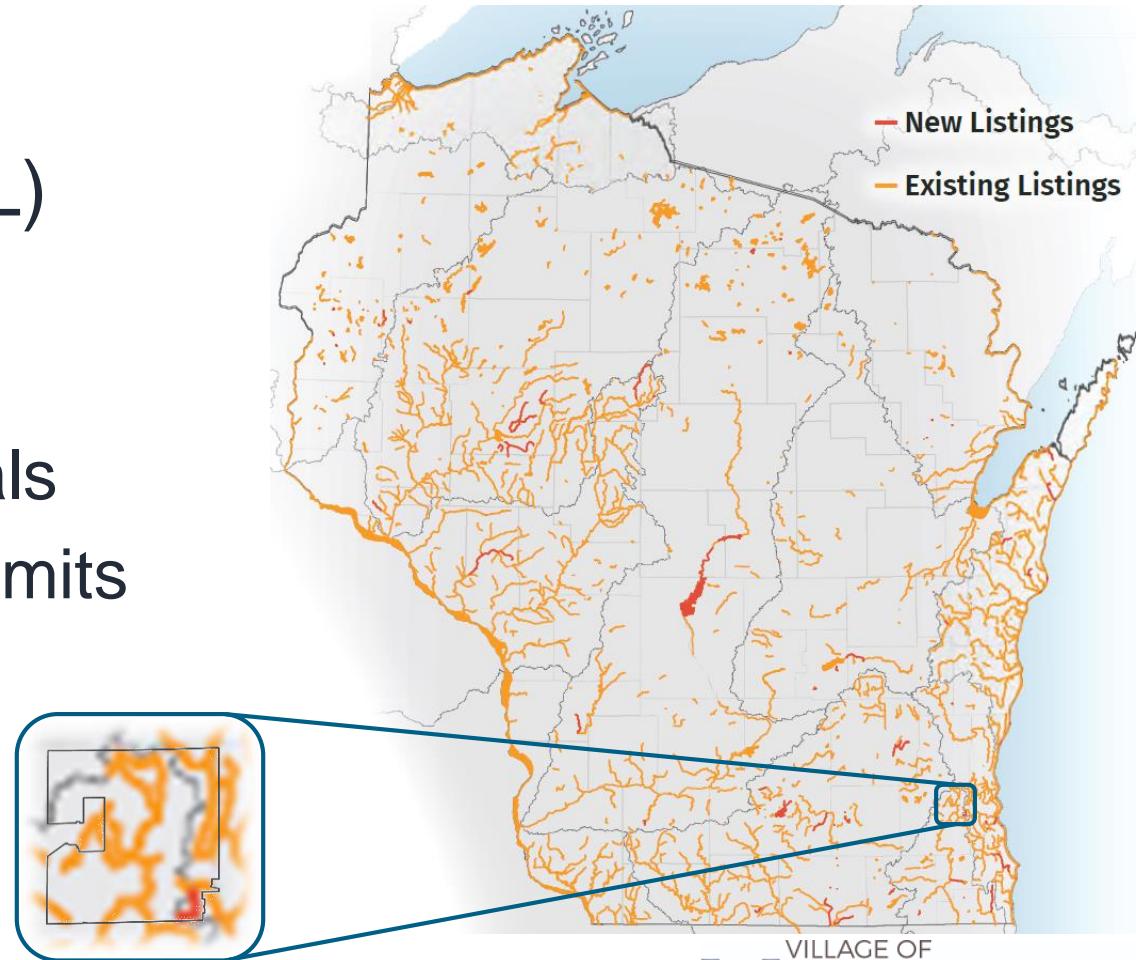


# DNR Storm Water Permit Requirements

- ▶ Public Education: Survey (9/30/21); prioritized program (9/30/23)
- ▶ Illicit Discharge: Ordinance, update program, annual screening (2021)
- ▶ Erosion Control: Ordinance, update program, site inspections (4/1/21)
- ▶ Post Const.: Ordinance, update program, pond maint. tracking (2021)
- ▶ Pollution Prevention: Snow/ice, nutrients, street sweeping, catch basins, leaves/grass, municipal property SWPPP, training (2021)
- ▶ Other: Annual catch basins cleaning (2021), update street sweeping & leaf collection program (3/21/22), group public education (9 topics), public involvement, map updates, annual report

# DNR Storm Water Permit

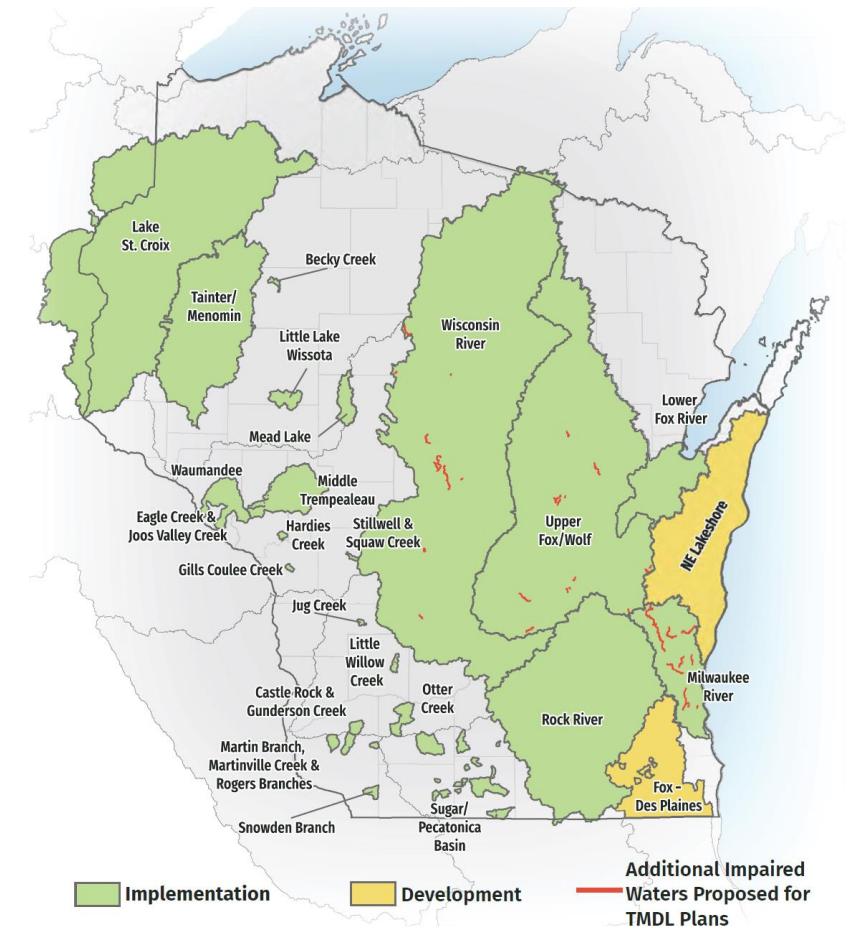
- Impaired waters (1,465 in WI)
- Total Maximum Daily Load (TMDL)
  - Required on impaired waters
  - Establishes a pollution budget to meet EPA & DNR water quality goals
  - Sediment, phosphorus & bacteria limits



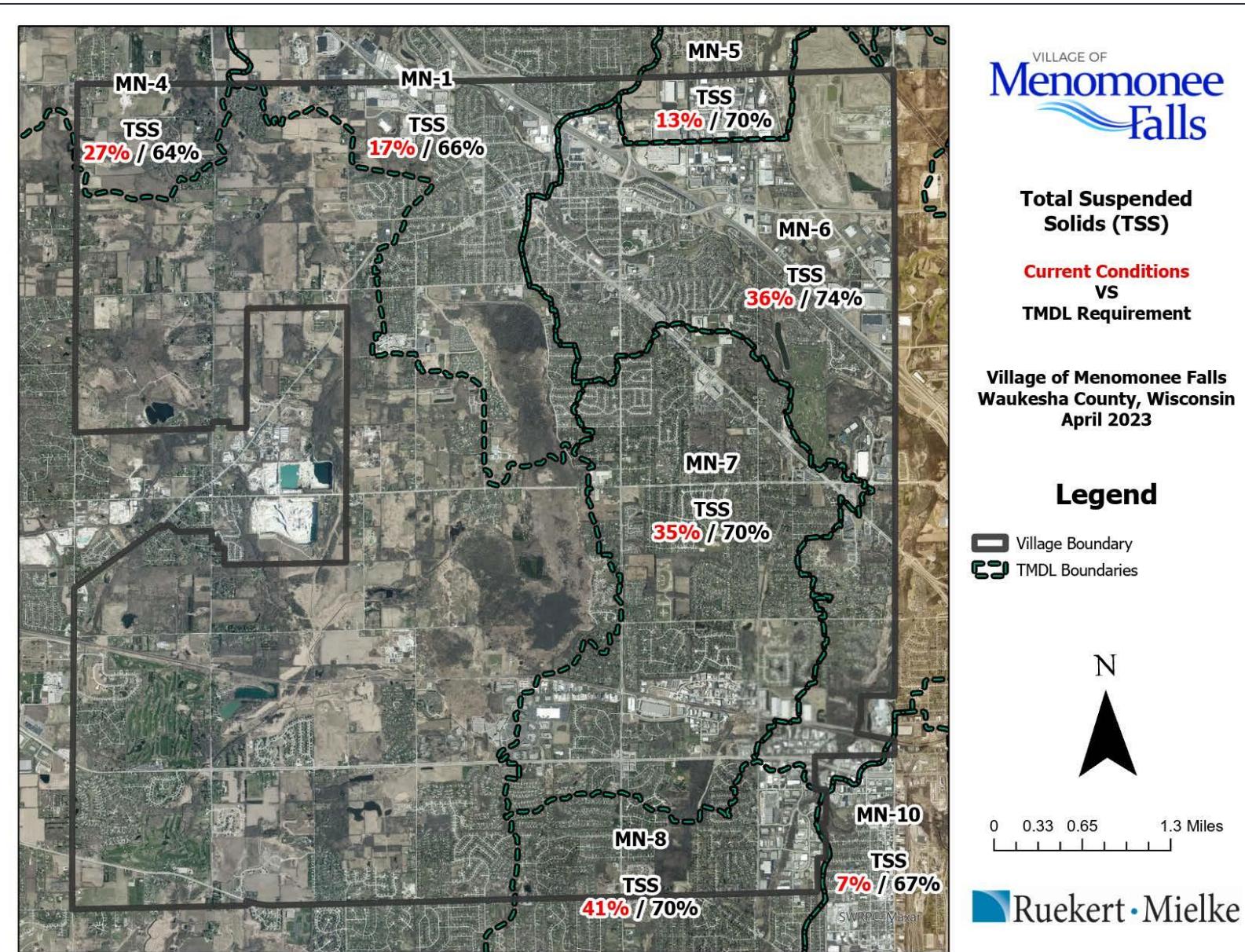
VILLAGE OF  
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Falls

# Total Maximum Daily Load (TMDL)

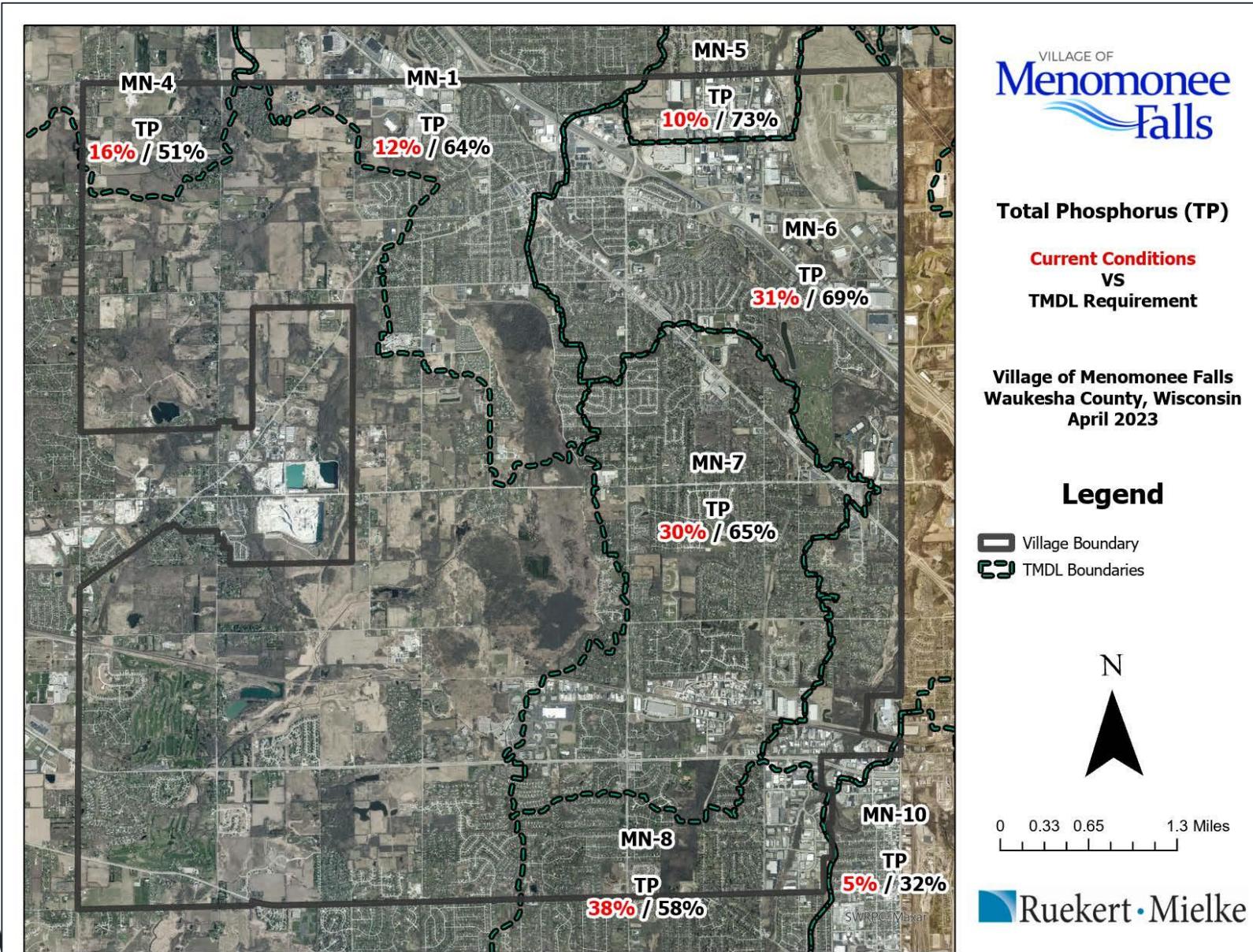
- ▶ All impaired waters will be covered by TMDLs
- ▶ First TMDL in WI = Rock River (2011)
- ▶ Menomonee (MKE) River TMDL (2018)
- ▶ TMDL requirements added to Village permit in 2020
  - ▶ Goal = Reduction in Sediment, Phosphorus, Bacteria
  - ▶ 7 reachsheds in Village



# Menomonee Falls Reachsheds: TSS



# Menomonee Falls Reachsheds: TP



# DNR Storm Water Permit Requirements – Action Steps

- ▶ SWPPP for new public works building (12/31/20)
- ▶ Bacteria action limits for IDDE (6/30/21)
- ▶ Fecal coliform source inventory (3/31/23)
- ▶ Analysis of TSS & P status vs. TMDL goals (3/31/23)
- ▶ Fecal coliform elimination plan (9/30/23)
- ▶ TMDL compliance plan (9/30/23)
- ▶ TMDL benchmarks (9/30/24)
- ▶ Complete 3 storm water quantity or quality projects (2025)

# What If We Do Nothing?

DNR Audits (once  
every 5 years)

Notice of  
Noncompliance

Notice of Violation

Fines (up to  
\$10,000 / day)

Impacts to other  
regulatory approvals  
(e.g., sanitary  
extensions)

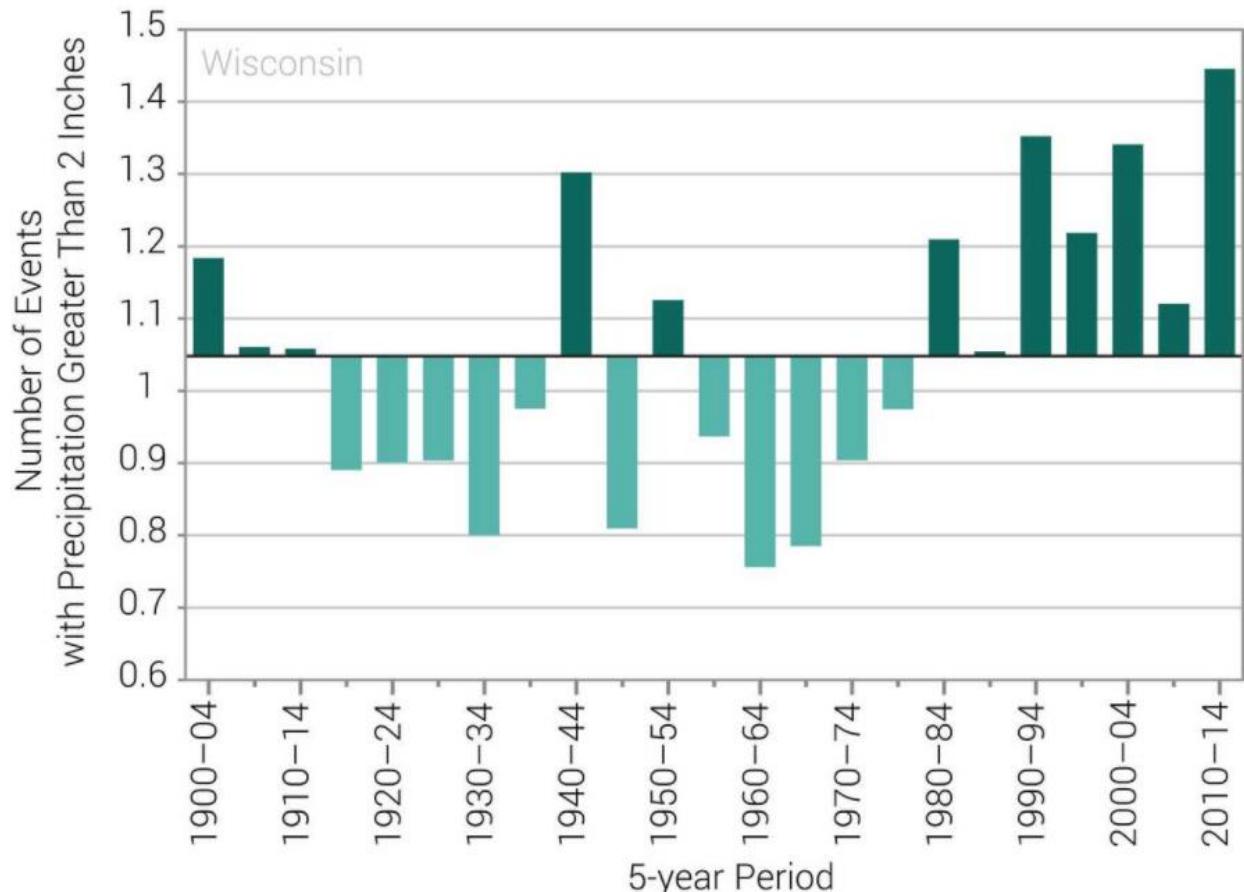


# Flooding Patterns and Forecast

Observed Annual Precipitation



Observed Number of Extreme Precipitation Events



# Village History

- ▶ Initial study done in 2001
  - ▶ Flood control & storm sewer capacity focus
- ▶ Village storm water ordinance = proactive flood control
- ▶ Limited historic water quality efforts
  - ▶ Village focus shifting to include DNR permit compliance
  - ▶ Current R/M & Village effort focused on near-term DNR permit items

# Next Steps

- Need to ramp up efforts to maintain compliance
- Financial status of SW funding
  - \$931,000 annually from general fund
  - Borrowing from water utility – \$2.6+ million
- Additional funding is necessary
  - Annual operating costs of \$1.9 million
  - Significant cash flow needs for operating and capital expenses



# Storm Water Utilities

- Created to address unmet needs
- Mission:
  - Control flooding
  - Improve water quality
  - Comply w/ regulations
- Housed within other departments
- Fees to match costs
  - Tax-exempt properties
  - Credits
  - Appeals process



# Establishing a Storm Water Utility Fee

- ▶ Revenue requirement = expenses
- ▶ Expenses split into base and volumetric
  - ▶ Account = administrative/fixed
  - ▶ Volume = dealing with SW
- ▶ Volume rates based on impervious surface area
- ▶ Equivalent Residential Units (ERUs)
- ▶ 1 ERU = 3,725 square feet of impervious surface area
- ▶ All nonresidential properties measured in terms of ERUs

# Customers and ERUs

## Summary of Proposed ERUs and Customer Accounts

Customer Class	Number of Customers	ERUs
Residential	11,355	11,355
Non-residential	599	15,557
<b>Totals</b>	<b>11,954</b>	<b>26,912</b>

# Potential Rates

<b>Summary of Proposed Storm Water Utility Rates</b>		
Volume Costs	\$	1,719,712
Account Costs		172,188
<b>Total Costs</b>	<b>\$</b>	<b>1,891,900</b>
Volume Costs	\$	1,719,712
Equivalent Residential Units (ERUs)		26,912
Monthly Volume Charge / ERU	\$	5.33
Annual Volume Charge / ERU	\$	63.96
Account Costs	\$	172,188
Customers		11,954
Monthly Account Charge	\$	1.21
Annual Account Charge	\$	14.52
Total Monthly Charge/ERU	\$	6.54
Total Annual Charge/ERU	\$	78.48

# Sample Properties

**Table 2 - Proposed Monthly Charges for Example Properties**

Property	Base ERUs	Volume Charge	Account Charge	Total Charge
Single-family Home	1	\$ 5.33	\$ 1.21	\$ 6.54
Gas station	11.7	\$ 62.36	\$ 1.21	\$ 63.57
Bank	14.9	\$ 79.42	\$ 1.21	\$ 80.63
Restaurant	18.2	\$ 97.01	\$ 1.21	\$ 98.22
Church	46.6	\$ 248.38	\$ 1.21	\$ 249.59
Wholesaler	56.1	\$ 299.01	\$ 1.21	\$ 300.22
Manufacturing facility	115.1	\$ 613.48	\$ 1.21	\$ 614.69

# Operating Expenses

## Utility Expenses

Depreciation	\$ 816,000
Other Operation & Maintenance	1,101,700
<b>Total Operation &amp; Maintenance</b>	<b>\$ 1,917,700</b>
General & Administrative	25,200
Other Revenues	51,000
<b>Total Net Operating Expenses</b>	<b>\$ 1,891,900</b>

# O&M Detail

<b>Operation and Maintenance</b>	<b>Projected</b>
	<b>2024</b>
Depreciation Expense	\$ 816,000
Salaries	332,000
Health Insurance	96,300
Overtime	9,100
FICA	25,900
Pension-VMF	23,700
Dental Insurance	4,400
Life Insurance	1,200
Worker's Comp Insurance	9,500
Wage/Benefit GF Transfers	91,800
Department Supplies	100
River Cleanup Expense	300
Storm Watr.Dischg.Permit	6,600
Gas & Diesel Fuel	5,100
Diggers Hot Line	6,100
Cellular Data Service	500
Engineering Services	5,100
Audit/Acctg. Serv.	5,100
Consulting Services	70,400

<b>Operation and Maintenance (continued)</b>	<b>Projected</b>
	<b>2024</b>
Rent - Equipment	40,800
Leaf Collection	10,200
Leaf Collection Labor	76,500
Sweeping	10,200
Sweeping Labor	45,900
Catch Basin Clean Labor	16,300
CB & MH Repair	8,200
CB & MH Repair Labor	40,800
Curb & Gutter	1,200
Frozen Culverts	200
Frozen Culverts Labor	2,000
Culverts/Ditching	10,200
Culverts/Ditching Labor	71,400
Ditch/Dentention Pond Mowing	40,800
Erosion Control	6,100
Detention Basin Maint.	1,000
Illicit Discharge	500
Public Education	12,200
Storm Sewer Monitoring/Sampling	13,500
Bond Expenses	500
<b>Subtotal</b>	<b>1,917,700</b>

# Capital Expenses

Stormwater Utility Capital Improvement Budget						
Project	2024	2025	2026	2027	2028	Total
Storm Sewer Program	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
Catch Basin Cleaning	250,000	250,000	250,000	250,000	250,000	1,250,000
Aero Park- Community Park - Phase II (Bio Swale & Storm Sewer)	200,000				266,000	466,000
Ann Ave - Shady Ln to Sheridan Dr - Storm Sewer			248,000		266,000	514,000
Arthur Ave Pond & Storm Sewer - Arthur & Men River		580,000				580,000
Dardis Dr - Jacobson Dr to Dardis Place - Storm Sewer	165,000					165,000
Graysland Storm Sewer Replacement		355,000				355,000
Hiawatha Dr - Mary Ct to Men Ave - Storm Sewer				200,000		200,000
Hillcrest Dr - Shady Ln to Sheridan Dr - Storm Sewer				165,000		165,000
Men Ave & MacArthur Pond & Storm Sewer - Rotary Park to Schllafer Dr				62,000	1,030,000	1,092,000
Menomonee Ave Culvert Replacement - 200 feet East of Main St	145,000	390,000				535,000
Menomonee Ave Reconst (Appleton Ave to Townhall Road) Storm Sewer		330,000				330,000
Norman Drive Pond & Storm Sewer Relay - Men Ave to Manhattan Dr					132,000	132,000
Overview Drive - Culvert Replacement over Butler Ditch			265,000			265,000
Richfield Subdivision Pond Dredging				275,000		275,000
Rozanne Dr Storm Sewer Relay - Wheeler Dr to Main St	570,400	95,000	1,316,000			570,400
Shady Lane Pond & Storm Sewer Extension - Grand Ave Int to Erika Rd						1,411,000
Sheridan Dr - Hillcrest to Main St - Storm Sewer				130,000		130,000
Theodore Dr - Jacobson Dr to Ann Ave - Storm Sewer		145,000				145,000
<b>Total</b>	<b>\$ 1,430,400</b>	<b>\$ 2,245,000</b>	<b>\$ 2,179,000</b>	<b>\$ 1,182,000</b>	<b>\$ 2,044,000</b>	<b>\$ 9,080,400</b>

# Cash Flow

Cash Flow Analysis					
	2024	2025	2026	2027	2028
<b>Revenues</b>					
User Rates	\$1,891,900	\$1,905,149	\$1,918,490	\$1,931,925	\$1,945,453
Interest Income	1,500	1,500	1,500	1,500	1,500
License & Permit Revenues	49,000	49,000	49,000	49,000	49,000
Misc. Revenues	500	500	500	500	500
<b>Total Revenues</b>	<b>\$1,942,900</b>	<b>\$1,956,149</b>	<b>\$1,969,490</b>	<b>\$1,982,925</b>	<b>\$1,996,453</b>
<b>Expenses</b>					
O&M less Depreciation	\$ 1,126,900	\$1,149,438	\$1,172,427	\$1,195,875	\$1,219,793
Subtotal Debt Service	\$207,610	\$321,523	\$493,010	\$659,423	\$749,191
<b>Total Cash Expenditures</b>	<b>\$1,334,510</b>	<b>\$1,470,961</b>	<b>\$1,665,437</b>	<b>\$1,855,299</b>	<b>\$1,968,984</b>
<b>Net Cash Flow</b>	<b>\$608,390</b>	<b>\$485,187</b>	<b>\$304,053</b>	<b>\$127,626</b>	<b>\$27,470</b>
<b>Cash Reserve Balances</b>					
Beginning of Year Cash Balance	\$86	\$608,476	\$1,093,663	\$1,397,716	\$1,525,342
Cash Flow	\$608,390	\$485,187	\$304,053	\$127,626	\$27,470
End of Year Cash Balance	\$608,476	\$1,093,663	\$1,397,716	\$1,525,342	\$1,552,811
Cash Reserve as % of Annual O&M	54%	95%	119%	128%	127%

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# Rate Comparison w/ Neighbors

Southeast Wisconsin Annual Storm Water Utility Fees				
Municipality	Charge / ERU			
Hales Corners	\$ 14.00			
Delafield	\$ 29.00			
Slinger	\$ 47.76			
Lisbon	\$ 48.00			
Glendale	\$ 54.00			
New Berlin	\$ 60.00			
Greenfield	\$ 68.00			
West Allis	\$ 77.16			
<b>Proposed Menomonee Falls</b>	<b>\$ 78.48</b>	<b>Mean</b>	<b>\$ 78.74</b>	
Wauwatosa	\$ 78.72	Median	\$ 78.72	
Greendale	\$ 79.60			
Brookfield (Town)	\$ 81.60			
Watertown	\$ 82.92			
Whitefish Bay	\$ 100.00			
Sussex	\$ 105.12			
Brown Deer	\$ 106.08			
Pewaukee (City)	\$ 120.00			
Elm Grove	\$ 122.80			
Fox Point	\$ 142.80			

# Takeaways

- Needs are growing
- So are regulations
- Funding must grow to match these



# Next Steps

- Education and outreach during summer
  - 3 public information meetings
- Adoption of SW fees on Monday, September 18

# Questions?

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