

# District Adaptive Management Project Yahara WINS 2024 Annual Report

Madison Metropolitan Sewerage District





# Discussion

- Background & Regulatory Context
- 2024 Watershed Highlights
- Partner Successes
- Reach-Specific Goals & Opportunities
- Looking Ahead

Madison Metropolitan Sewerage District



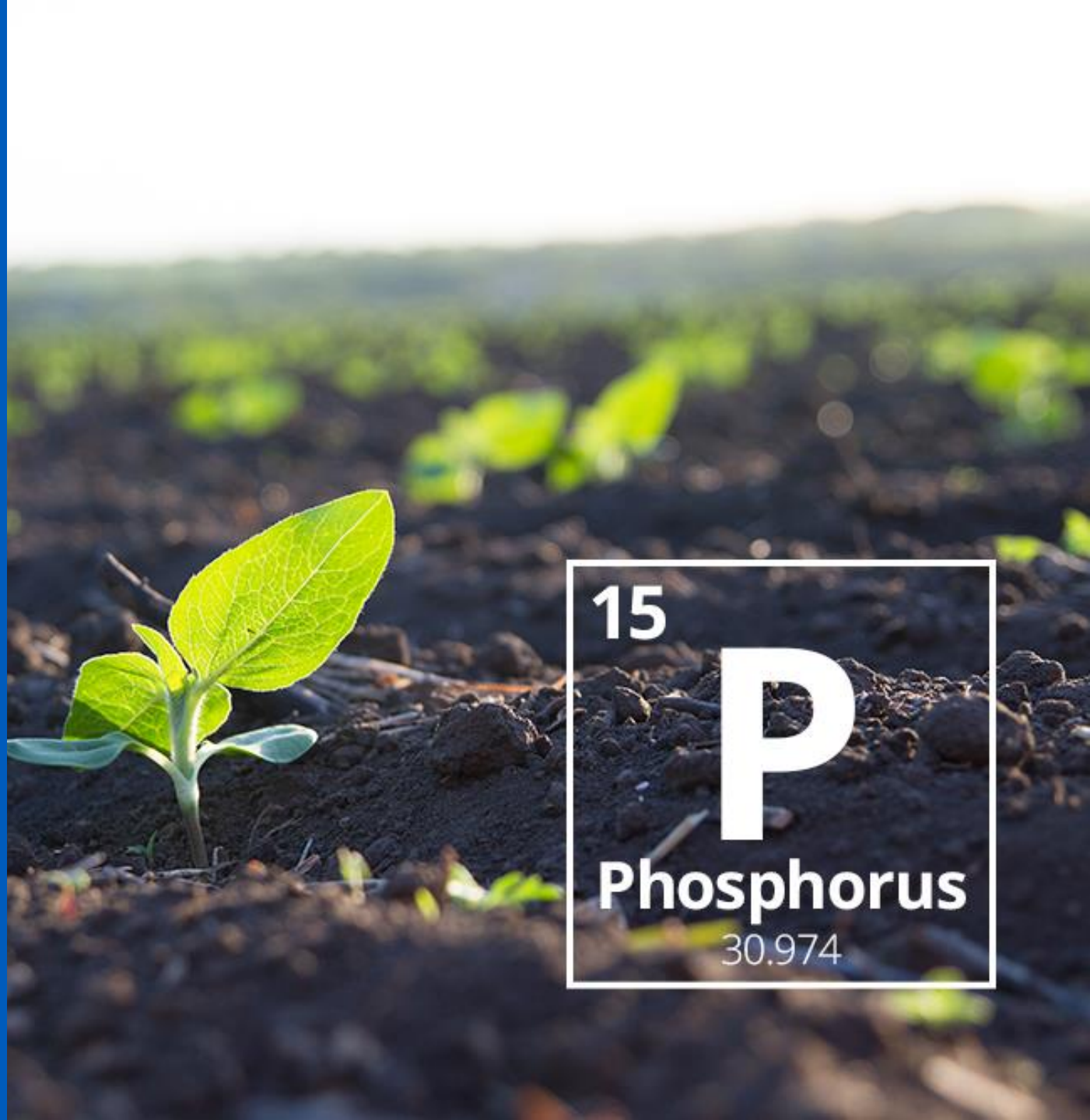
**Phosphorus is an  
essential element**

for plant & animal growth.

**But excess phosphorus**

can be a water resource concern.

Madison Metropolitan Sewerage District





## Point Sources

## Nonpoint Sources



**Treatment  
Plants**

**20%**  
Permits



**Urban  
Stormwater**

**30%**  
Permits

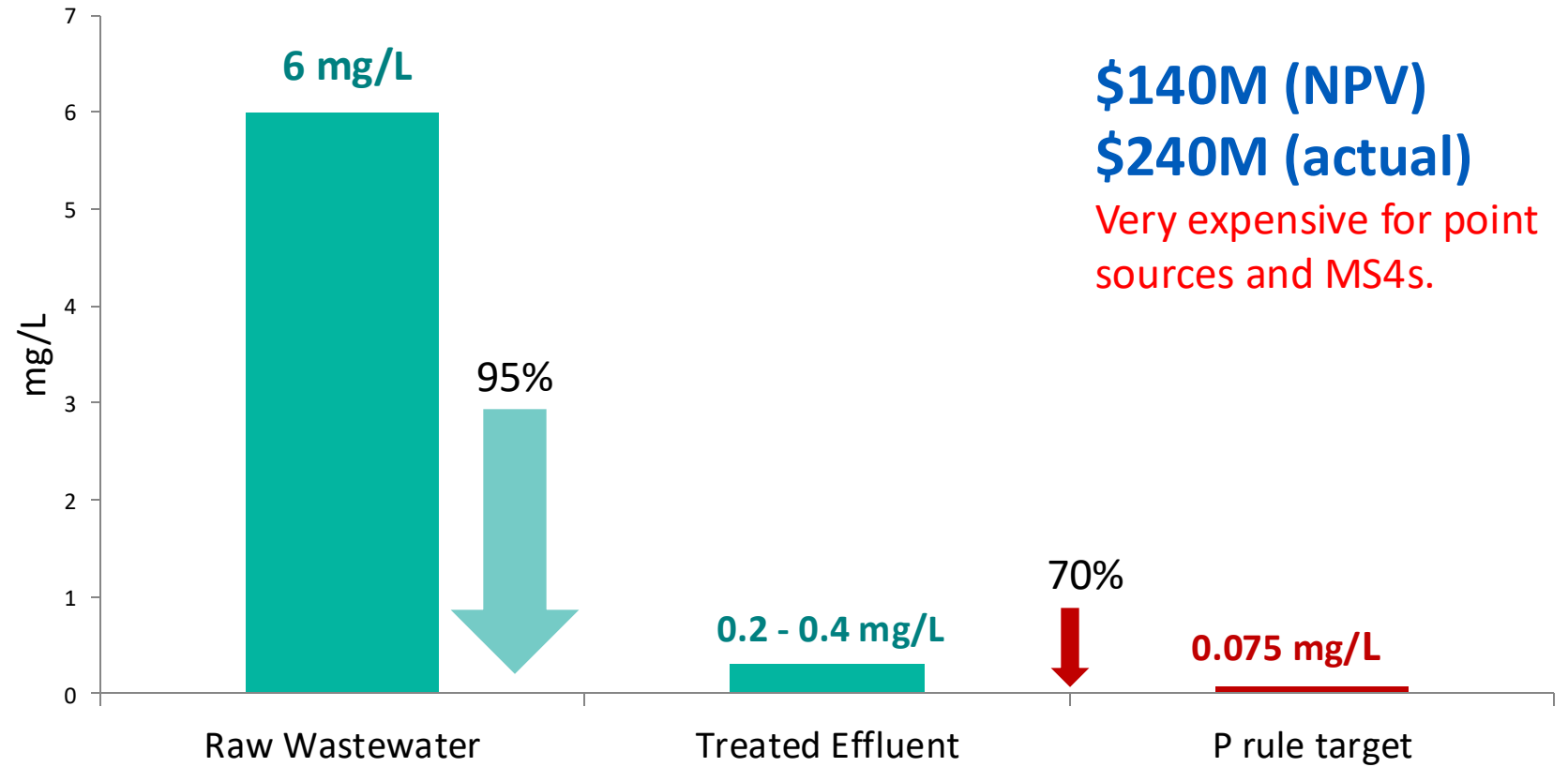


**Agricultural  
Runoff**

**50%**  
No Permits

# Cost of Additional Treatment

## Average Phosphorus Concentrations in District Wastewater



**\$140M (NPV)**

**\$240M (actual)**

Very expensive for point sources and MS4s.

# Treatment vs. Adaptive Management

- Minimal water quality benefit downstream.
- High cost, low public benefit.
- Missed opportunity to be a partner in Yahara chain of lakes improvements.





- 
- Rock River Basin**
- 540 square miles
- Impaired Waters
- Water
- Cities
- Rock River Basin
- 0 3 6 12 18 24 Miles
- Wisconsin
- Rock River Basin

# 2024 Highlights

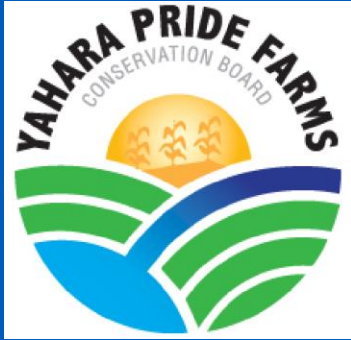
- Watershed reduction total **59,025 lbs.**
- Exceeds 2024 goals, looking good for 2025!
- Expanding conservation practices in lower reaches of the watershed.
- Continue meeting annual “ramp-up” reduction goals.
- Finalized cost model redevelopment.

Madison Metropolitan Sewerage District





# 2024 Partner Successes



- 33,252 lbs. of P reduction
- 29,713 acres in cropland conservation
- 78 farmers in their cost share program
- Leveraged additional \$548,507 for implementation



- 22,271 lbs. of P reduction
- ~ 60,000 ac. in Nutrient Management
- Assisted over 200 landowners/producers
- Allocated over \$600,000 in cost sharing



- 3,601 lbs. of P reduction
- Small area of the watershed (8%)
- Grassed waterways, harvestable buffers, perennial forage conversion
- Effective partner with fewer opportunities

- ✓ Review monitoring strategies
- ✓ Increase program resiliency
  - ✓ *Metrogro*
  - ✓ *New local partners*
- ✓ Assess implementation opportunities
- ✓ Targeted implementation
- ✓ Increase partner engagements



# Increase Partner Engagements

## “YWINS Road Show”

IGA Member(s)	Stoughton (City), Stoughton (WWTP)
TMDL Reaches	67, 68, 69
Total Paid-In to YWINS	\$45,158 (City) \$10,350 (WWTP)
Phosphorus Reduced	8,854 lbs.
Implementation Cost	\$4,670,000
Ag. Practices Implemented	Cover Crops, Fencing, Livestock Facilities, Filter Strips, Runoff Diversions



# Rock River TMDL Compliance Options

Madison Metropolitan Sewerage District



<i>Stoughton</i>	Tertiary Treatment (MMSD)	MS4 Practices (Stoughton)	YWINS Watershed Project (20 years)
<b>Phosphorus Reduction Goal</b>	Meet WQS	~200 lbs.	~100,000
<b>Anticipated Total Project Cost(s)</b>	\$209,000,000 (life cycle, NPV 2012)	\$5,000,000  Wet Pond(retrofit) ~ \$5,300/lb. Bioretention ~ \$28,500/lb. Underground Storage ~ \$280,000/lb.	\$75,000 (City) \$25,000 (WWTP)
<b>Variable Annual Costs</b>	\$5,200,000	Local	\$726 (City)* \$1,150 (WWTP)  * Adjustments for updated modeling
<b>Estimated Service Charge Increase</b>	27%	Local	1.4%





# Thank you

Madison Metropolitan Sewerage District

