Southeastern Wisconsin

Regional Planning Commission



Regional Water Quality Management Plan Update

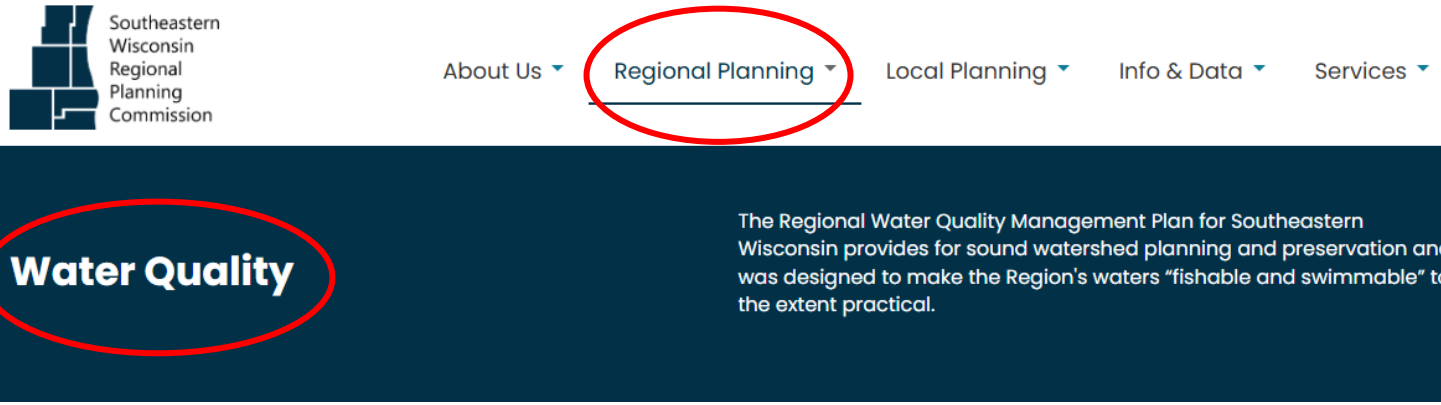
Prospectus

Technical Advisory Committee Meeting
November 13, 2026

Meeting Agenda

1. **Review September 11, 2026 Meeting Summary Notes**
2. **Review Prospectus Draft Chapters**
   - **Chapter 4 (Part 2)** – Work Program Continued
     - Sources of Pollution
     - Outcomes and Recommendations
   - **Chapter 5** – RWQMPU Organization
   - **Chapter 6** – Cost Estimate and Timeline
3. **Next Steps**

Document Location

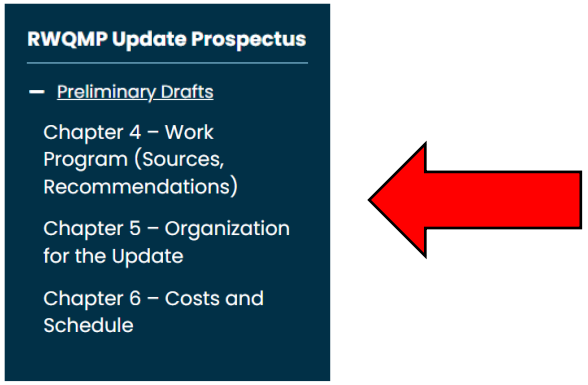




Summary Notes

Regional Water Quality Management Plan Update – Prospectus

The Commission has begun work on a Prospectus to update the Regional Water Quality Management Plan (RWQMP). This effort will be supported by a Technical Advisory Committee to develop a scope, schedule, and budget to update the RWQMP. Efforts to be considered include inventories and analyses related to wastewater treatment and stormwater runoff and their impacts to water quality in the Region.



September Meeting Updates

- Define "**waters in need of improvement**"
- Added ***E. coli*** to river and Lake Michigan assessments
  - Lake Michigan beaches and off-shore data
- Added **aquatic invasive species** to Lake Michigan assessment
  - Chelsea Snowden-Smith shared contact for Scott McComb (AIS Outreach Specialist with WI Sea Grant)
- **Internally drained areas** will not be included in sensitive areas mapping for entire Region
  - Dane County mapping approach too time intensive
  - Internally drained features in sensitive areas will be noted as areas in need of protection within RWQMPU recommendations

September Meeting Updates

- Regional agricultural practices inventory
  - Will estimate the presence and concentration of CAFOS
  - Identify where farms are land applying manure in each watershed
- Would also like to **identify farms that do not meet the criteria of a CAFO** that may also be land spreading manure
- **Do the counties maintain information on non-CAFO livestock operations and spreading locations?**

Chapter Four

4.4 - Sources of Pollution



Photo: Clean Wisconsin

Chapter 4 – Sources of Pollution

➢ RWQMPU Review of Sources of Pollution

- Compare current sources to historical sources in PR-30 and PR-50
- Identify and categorize sources of pollution
  - Point and Nonpoint
  - Urban and Rural
- Determine best management practices and state-of-the art methods for pollution reduction
  - Recommend implementation strategies for improving water quality
- Leverage TMDL pollutant loading calculations to estimate TP and TSS contributions from various sources within each of the 12 watersheds in the Region



Chapter 4 – Sources of Pollution

➢ Nonpoint Sources

- **Urban** - Stormwater runoff from parking lots, streets, rooftops, lawns, industrial facilities, and construction sites as well as leachate from landfills
- **Rural** – Runoff from sources such as livestock operations, cropland or agricultural lands, natural areas (woodlands, wetlands, prairies), and discharge from septic systems

➢ Point Sources

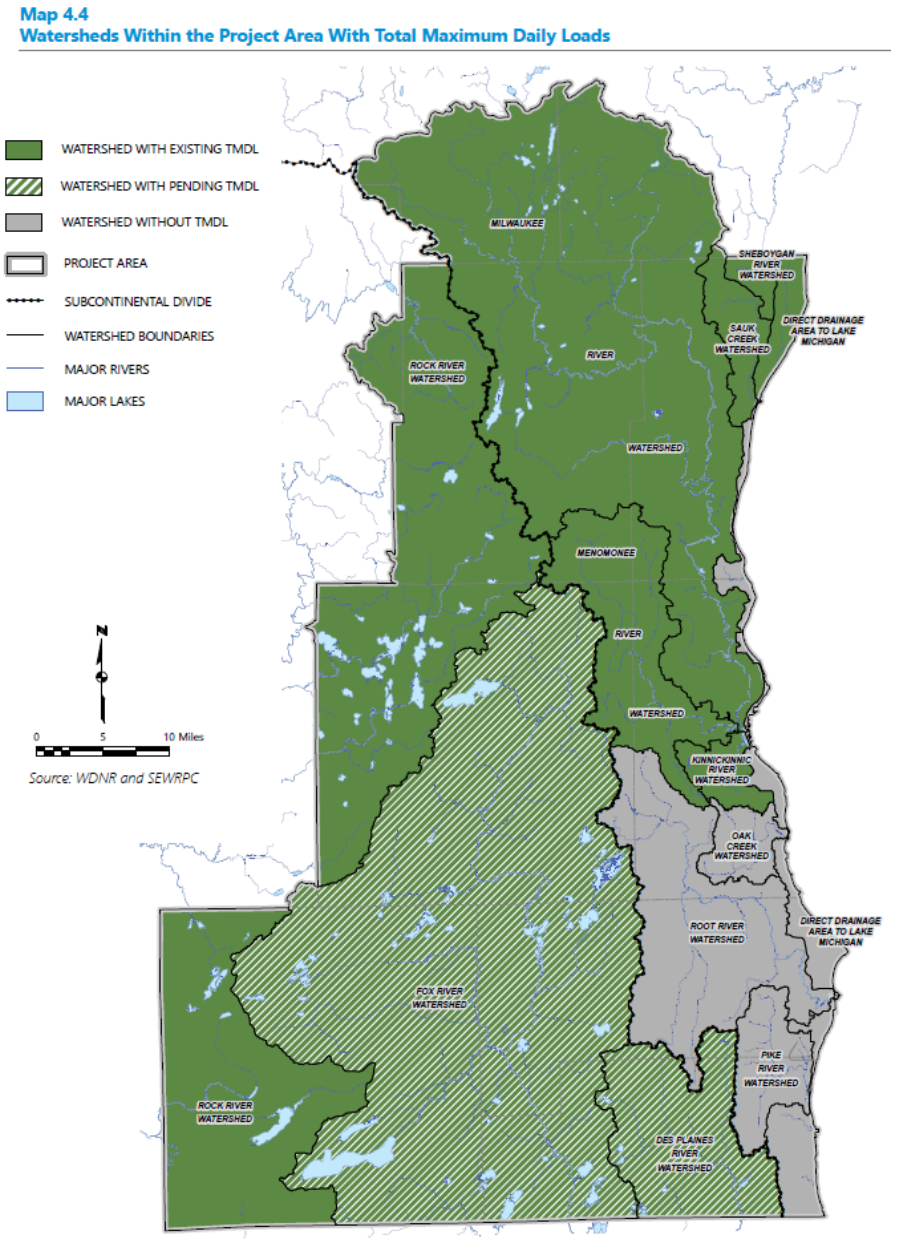
- Discrete discharge locations identified by conducting a review of discharge permits
  - Public or private WWTP discharge locations
  - Separate or combined sanitary sewer overflow sites
  - Industrial discharge locations



Chapter 4 – Sources of Pollution

TMDLs

- **Rock River TMDL (2011)**
  - TSS and TP for Rock River watershed
- **Milwaukee River Basin TMDL (2018)**
  - TSS, TP, and E. coli for the Milwaukee, Menomonee, and Kinnickinnic River watersheds
- **NE Lakeshore TMDL (2023)**
  - TSS and TP for Sauk Creek, Sheboygan River, and northern sections of the Lake Michigan Direct Drainage
- **Pending Fox-Illinois TMDL**
  - TSS and TP for Des Plaines and Fox River watersheds
- **No TMDL**
  - Pike River, Oak Creek, and Root River watersheds, and lower Lake Michigan Direct Drainage



Chapter 4 – Sources of Pollution

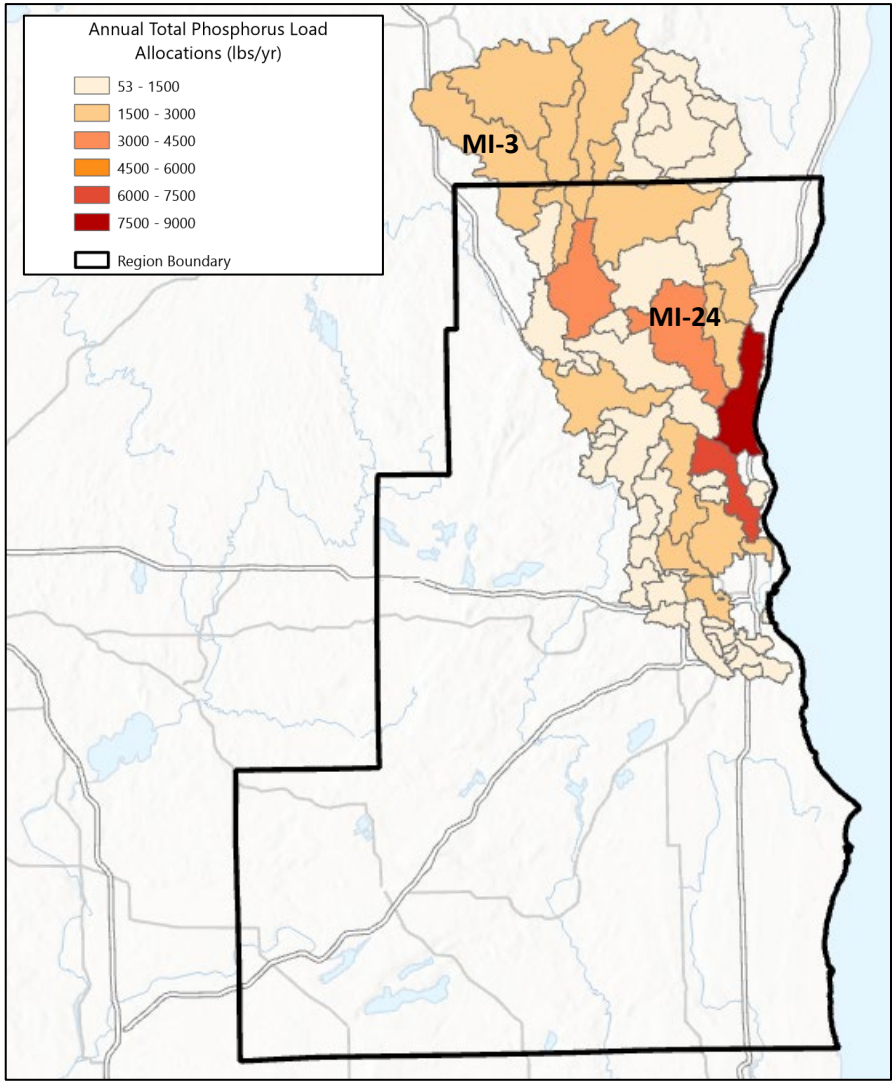
➢ RWQMPU Pollutant Load Estimates

- Focus on TP and TSS calculations included in TMDLs
- Determine the annual allocated loads (lbs/year) for the nonpoint and point sources in each TMDL subbasin
- Estimate the proportion (percentage) of the total annual load contributed by difference sources
- Display TP and TSS contributions (percentages) for point and nonpoint sources by subbasin and larger watersheds
  - **Point** – WWTPs, MS4s permitted industrial sites, and general permitted activities
  - **Nonpoint** – Agricultural lands, non-permitted urban lands, and background contributions from natural sources



Chapter 4 – Sources of Pollution

Milwaukee River Basin TMDL Example



Reach MI-3

	Annual Load Allocation (lbs/yr)	
Total Loading Capacity	**2,782.32**	
Reserve Capacity	118.1	
Load Allocation		
Background	324.94	
Agricultural	1039.7	**37%**
Non-Permitted Urban	1202.74	**43%**
Wasteload Allocation		
General Permits - NCCW	--	
General Permit - Other	95.33	
MS4	1.51	
Individual Permits	--	

Reach MI-24

	Annual Load Allocation (lbs/yr)	
Total Loading Capacity	**3,196.44**	
Reserve Capacity	140.58	
Load Allocation		
Background	274.35	
Agricultural	210.89	**6%**
Non-Permitted Urban	386.19	
Wasteload Allocation		
General Permits - NCCW	0.26	
General Permit - Other	110.46	
MS4	413.8	
Individual Permits	1659.92	**52%**

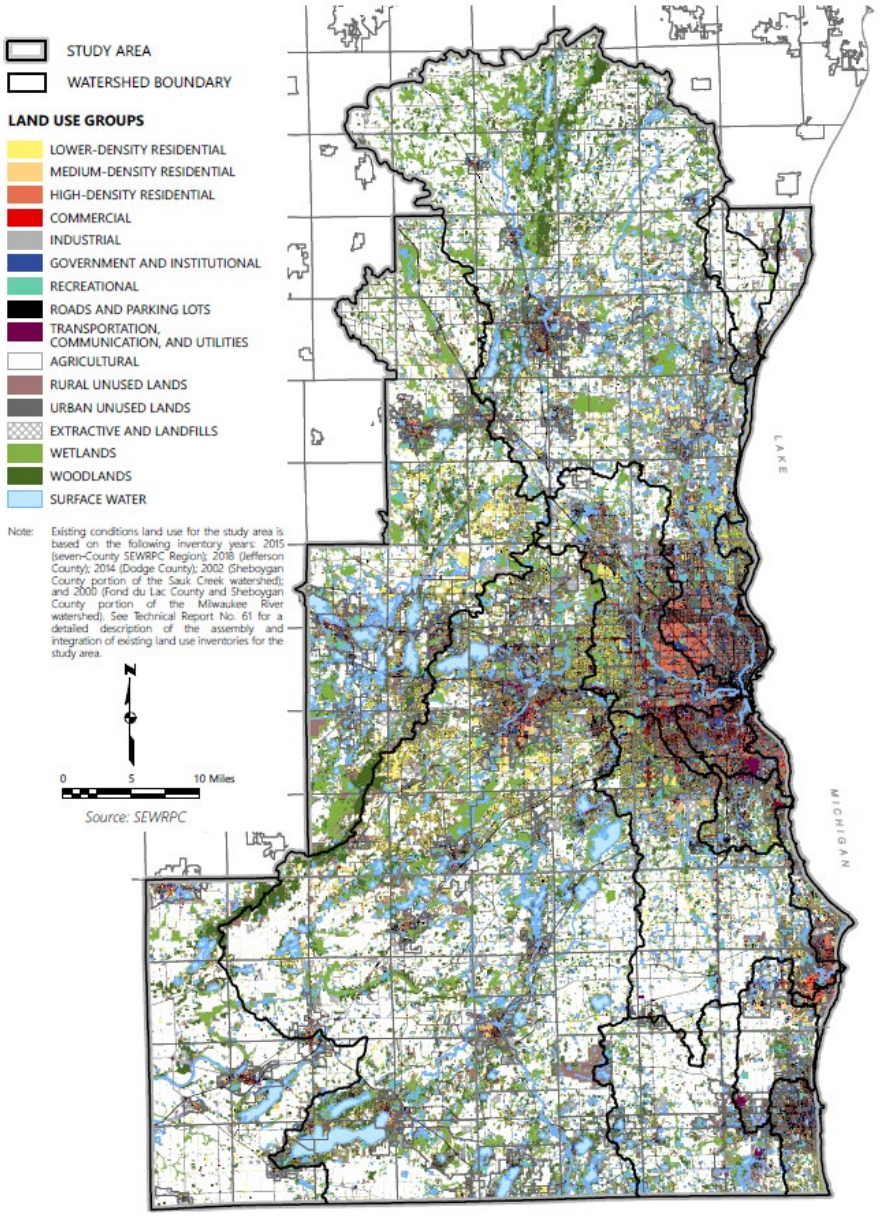
Point and Nonpoint Sources

Watershed	TMDL Subbasin	Stream	Phosphorus % Contribution						
			Point WWTP	Point MS4	Point Permitted Industrial	Point General Permits	Nonpoint Ag.	Nonpoint Non-Permit Urban	Background
Milwaukee	MI-3	West Branch Milwaukee River (entire length)	0	0.05	0	3	37	43	12
Milwaukee	MI-24	Cedar Creek from confluence with North Branch to Mouth	45	13	7	4	6	12	9



Chapter 4 – Sources of Pollution

Existing Land Use Within the Project Area (Chloride Study)



:Source SEWRPC

➢ Watersheds Without TMDL

- Develop source contribution estimates for subbasins with similar land uses
  - Pair Fox-Illinois TMDL load calculations with 2020 land use data
- Review Nine Key Element plans to support pollutant source estimates and management recommendations
  - Oak Creek Watershed Restoration Plan (2021)
  - Root River Watershed Restoration Plan (2014)
  - Pike River Watershed-Based Plan (2013)

Chapter 4 – Sources of Pollution

Emerging Contaminants

- Little monitoring data for surface water or groundwater in the Region
- **6PPD-quinone, PFAS, and pharmaceuticals**
  - Supplemental literature review
    - Sources of contaminants, their associated land uses, and their interactions with surface water and groundwater
  - Compare relationships to 2020 land use inventory
- **Neonicotinoids and herbicides**
  - Inventory of regional crop types and their locations
  - Identify likely application areas
  - Determine potential for pollution based on current application practices



Source: Washington State Dept. of Transportation



Source: Clean Wisconsin

Chapter Four

4.5 - Outcomes and Recommendations

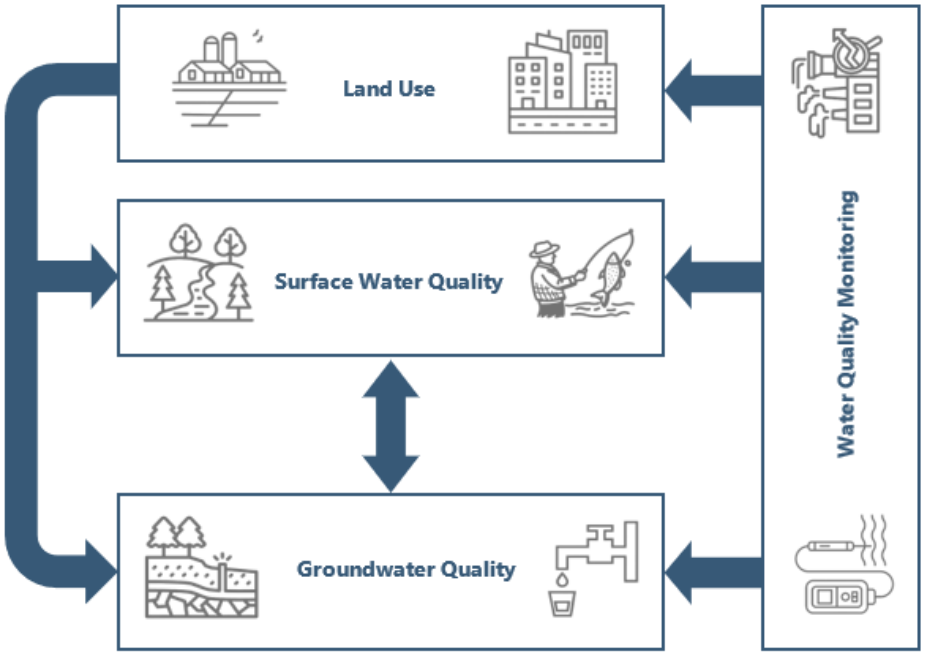


➢ RWQMPU Plan Elements

- Land Use Plan
- Surface Water Quality Management Plan
- Groundwater Quality Management Plan
- Water Quality Monitoring Plan

- Emphasize the interconnected nature of land use, surface water, and groundwater management planning

Figure 4.1
Relationships Between Regional Water Quality Management Plan Elements



Source: SEWRPC

Land Use Plan

- Summarize population and land use trends
- Include recommendations for
  - Urban development
  - Preserving natural areas and prime agricultural land
- Based on RWQMPU inventories and current and projected (2050) land use analyses
- Connect land use recommendations to surface water and groundwater quality
- Incorporate precipitation and temperature projections into regional planning recommendations

Chapter 4 – Outcomes and Recommendations

➢ Surface Water Quality Management Plan

- Recommendations based on stream, inland lake, and Lake Michigan water quality inventories and data analyses
- Prioritize waterbodies and parameters of greatest concern
- Suggest new or revised water quality standards
- Include TMDL and Nine-Key Element Plan implementation recommendations
- Outline strategies for addressing sources of pollution
  - Abandoning/combining WWTPs
  - Upgrading WWTP technologies and processes
  - Sludge disposal methods
  - Adopting stormwater measures for nonpoint sources
  - Nutrient management through water quality trading, adaptive management, or multi-discharger variance

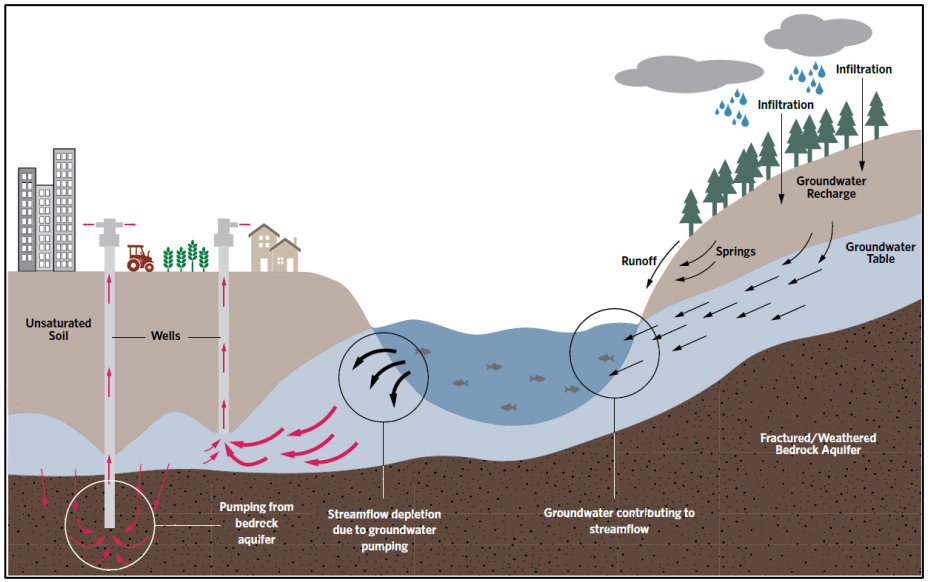


Surface Water Quality Management Plan

- Include opportunities to use modern platforms and tools
  - Sharing water quality data
  - Facilitating better public understanding and smoother information exchange between various agencies
- Highlight regional success stories
- Incorporate future conditions
  - Projected land use changes
  - Increasing precipitation and temperature trends
- **Tie surface water management to groundwater quality**

➢ Groundwater Management Plan

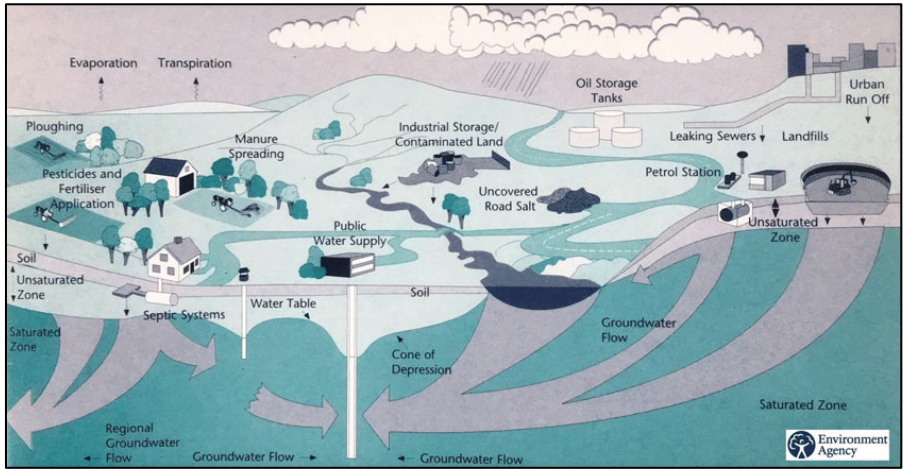
- Rely on municipal well data
- Prioritize specific locations and/or pollutants of greatest concern
- Consider future conditions
  - Land use changes
  - Temperature and precipitation projections
- **Connect groundwater management decisions to surface water quality**



Source: The Nature Conservancy

Groundwater Management Plan

- Outline strategies for addressing nonpoint pollution sources
  - **Agricultural**: precision techniques for fertilizer application; adoption of cover crops; managing animal waste to prevent contaminant leaching
  - **Urban or Residential**: minimizing lawn chemicals; implementing stormwater BMPs; establishing wellhead protection zones
- Use groundwater recharge and depth to groundwater inventories to help prioritize implementation locations



Water Quality Monitoring Plan

- Based on surface water and groundwater inventories
- Identify locations and constituents lacking monitoring data
- Address knowledge/data gaps
  - Establish detailed regional strategy for collecting data
    - Land use, surface water, and groundwater
    - Physical, chemical, and biological parameters
  - Monitor for occurrence of global water quality trends
    - Lake browning, acidification, harmful algal blooms



Chapter Five

RWQMPU Organization



Chapter 5 - Organization

➢ Organization

- RWQMPU carried out by Commission Staff
  - Environmental Planning Division
    - Support from Land Use Planning, Surveying, and GIS Divisions
  - Under direction of Chief Environmental Engineer
- Supporting Agencies
  - WDNR
  - Local county and municipal agencies
  - Local environmental agencies
  - WWTP operators

Chapter 5 - Organization

➢ Advisory Committee

- Standing committee maintained by Commission
- Extension of existing TAC plus additional members
- **Representatives**
  - USEPA, USGS
  - WDNR
  - Wisconsin Geological and Natural History Survey
  - MMSD and other WWTP operators
  - Counties/municipalities within Region
  - Environmental organizations
  - Academic community

Chapter 5 - Organization

➢ RWQMPU Deliverables and Format

- Presented as three reports produced over 5 years total
- **Water Quality Technical Report**
  - 3-year effort
- **Wastewater Technical Report**
  - 2-year effort
- **Final Planning Report**
  - 2-year effort

Chapter Six

6.1 – Cost Estimate and Schedule



Chapter 6 – Cost Estimate

Table 6.1
Regional Water Quality Management Plan Update Cost Estimate

Work Element	Effort	Total Cost
Water Quality Inventories	Collate Data	
	Streams	$360,000
	Lakes	$100,000
	Groundwater	$ 90,000
$1.31M	Data Analyses	$460,000
	Technical Report Development	$300,000
	Total Cost	$1,310,000
Wastewater Inventories	Collate Data	$180,000
	Data Analyses	$250,000
$0.61M	Technical Report Development	$180,000
	Total Cost	$610,000
Planning Report	Land Use Inventories	$130,000
	Analyses and Forecasts	$290,000
	Pollution Assessments	$120,000
$1.20M	Recommendations	$290,000
	Planning Report Development	$370,000
	Total Cost	$1,200,000
Total RWQMPU Cost		**$3,120,000**

Source: SEWRPC

Total Estimated Cost: $3.12 million

Figure 6.1
Water Quality Technical Report Timeline

Work Element	Year One												Year Two												Year Three											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Project Management																																				
PM and AC meetings	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Inventories																																				
Surface Water Quality Data	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																		
Groundwater Quality Data							■	■	■																												
Land Use Data															■	■	■	■	■																		
Emerging Contaminants													■	■																							
Analyses																																				
Surface Water Quality Trends																■	■	■	■	■	■	■	■	■	■	■	■									
Groundwater Quality Trends																			■	■	■	■														
Report Development																																				
Summarize Findings in Technical Report																												■	■	■	■	■	■	■	■	■

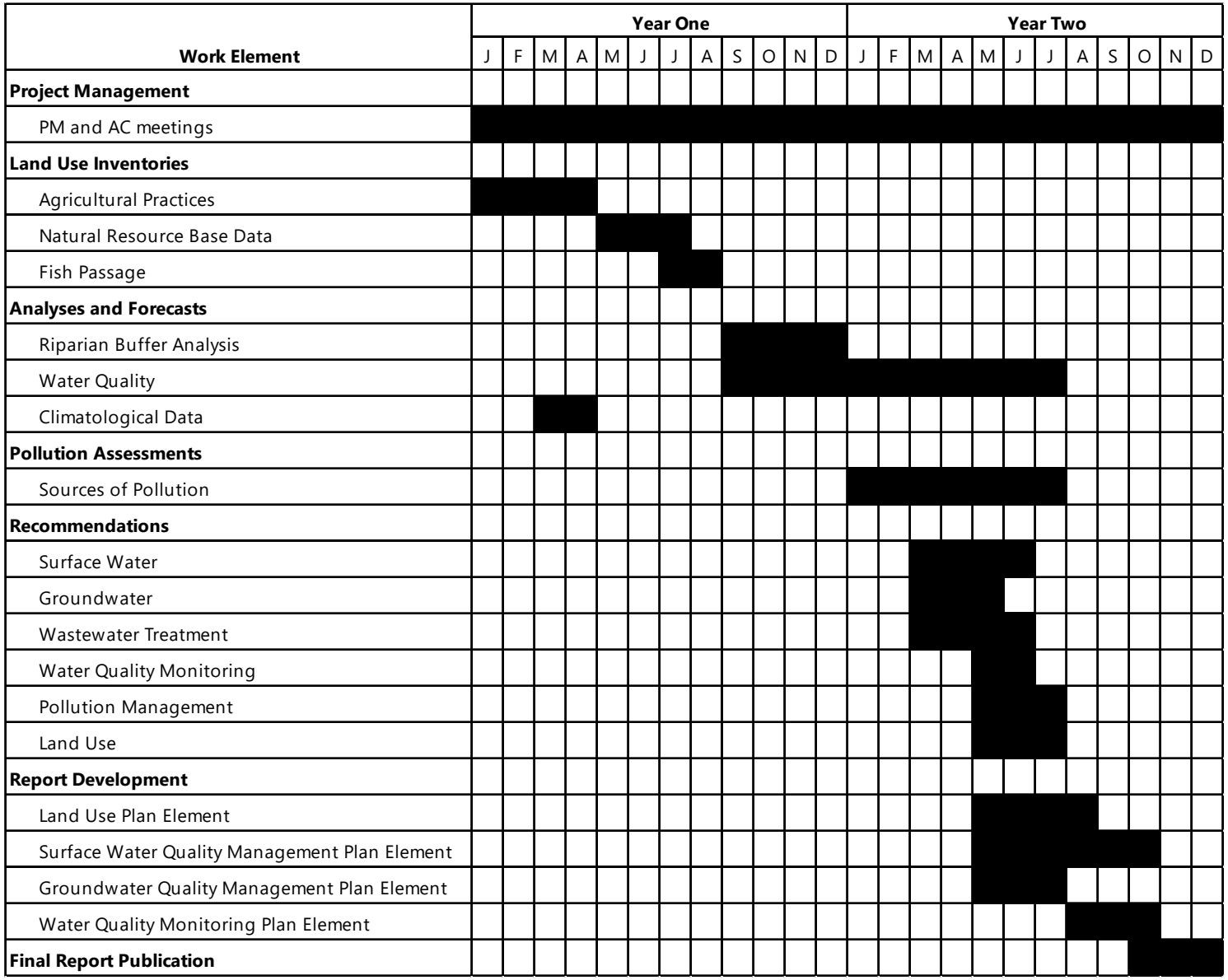
Source: SEWRPC

Figure 6.2
Wastewater Technical Report Timeline

Work Element	Year One												Year Two											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Project Management																								
PM and AC meetings	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Inventories																								
Plant Discharge Permits and Variances	■	■	■	■																				
Interviews with Plant Operators				■	■	■	■																	
Dicharge Pollutants Data								■	■	■	■													
Private Onsite Wastewater Treatment Areas									■	■														
Sanitary Sewer Service Areas								■	■															
Analyses																								
Wastewater Treatment Processes											■	■	■	■										
Wastewater Treatment Plant Conditions														■	■	■	■							
Discharge Pollutants																	■	■	■					
Cost Estimates																	■	■	■					
Report Development																								
Summarize Findings in Technical Report																		■	■	■	■	■	■	■

Source: SEWRPC

Figure 6.3
Regional Water Quality Management Plan Update Planning Report Timeline



Source: SEWRPC

Chapter Six Cont.

6.2 – Cost Allocation



Table 6.2
RWQMPU Funding Strategy

WW Inventory

WQ Inventory

Planning Report

Entity	Year 1	Year 2	Year 3	Year 4	Year 5	Total
SEWRPC 1/3	$145,000	$245,000	$245,000	$200,000	$200,000	$1,035,000
WDNR[a] 1/3	$145,000	$245,000	$245,000	$200,000	$200,000	$1,035,000
Public WWTPs	$50,000	$150,000	$150,000	$100,000	$100,000	$550,000
MS4 Communities[b]	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
Grants and Other Partners	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
Total	$440,000	$740,000	$740,000	$600,000	$600,000	$3,120,000

Note: Assumes the Water Quality Inventory work is completed in Years 1 to 3, the Wastewater Inventory work is done in Years 2 to 3, and the Planning Report work is completed in Years 4 to 5. Costs assume work is completed from 2028 to 2032.

[a] *This would be in addition to the annual allocation to the Commission for water quality work in the Region.*

[b] *MS4 communities that are not also responsible for public wastewater treatment plants.*

Source: SEWRPC

Chapter 6 – Cost Allocation

➢ Other Possible Funding Sources

- USEPA Great Lakes Restoration Initiative (GLRI)
- Fund for Lake Michigan
- Lake and river-oriented groups
- Other grants?

Next Steps

- Any Additional Comments on Prospectus by 11/25/26
- No additional TAC meetings
- Prospectus finished December 2026

Meeting agendas, presentations, and summary notes along with draft prospectus text is posted on our website

www.sewrpc.org/Regional-Planning/Water-Quality

- 2027 Pursue funding opportunities for RWQMPU
- Form Advisory Committee

Thank You

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