

Issues Relative to a Potential Root River Watershed Restoration Plan

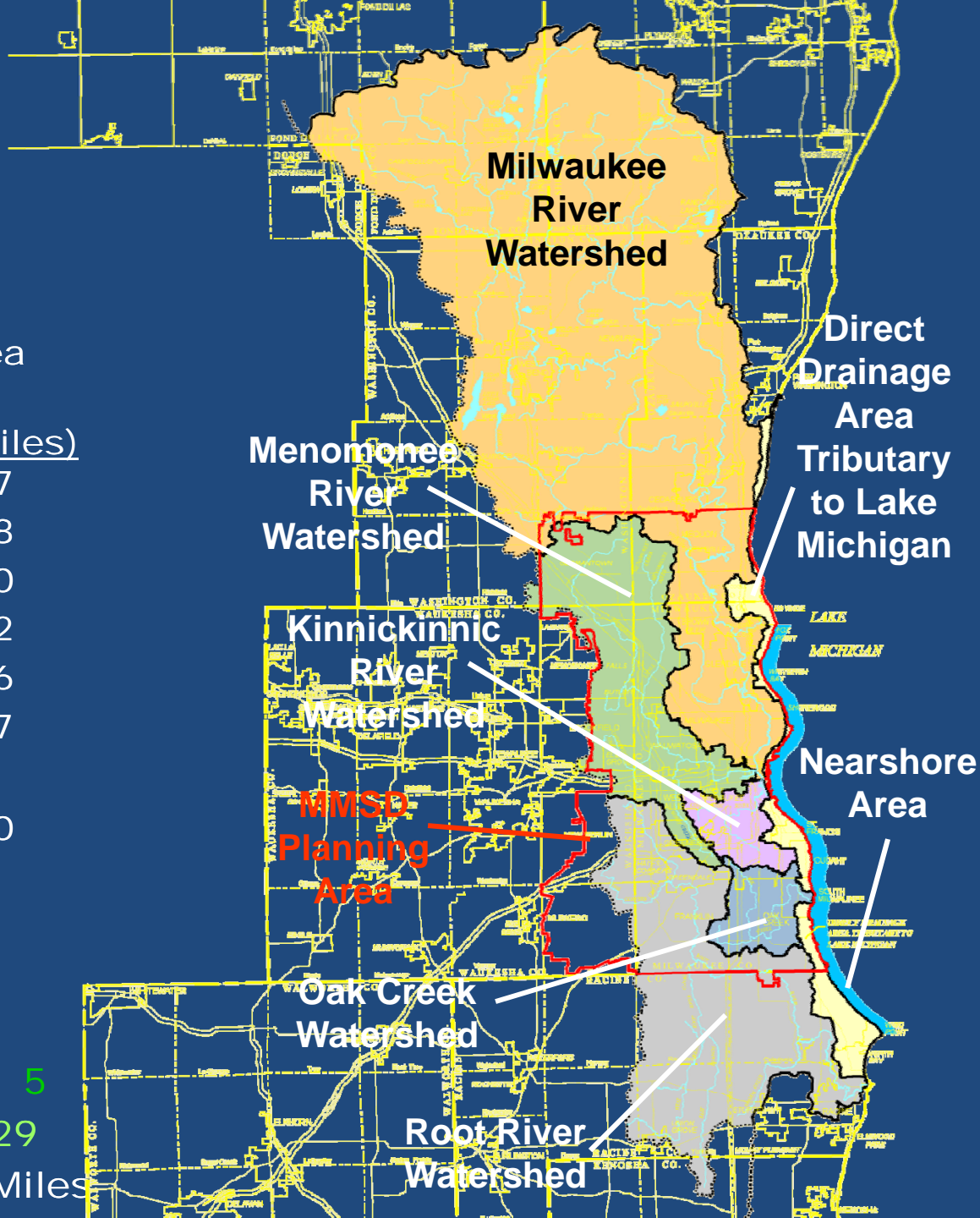
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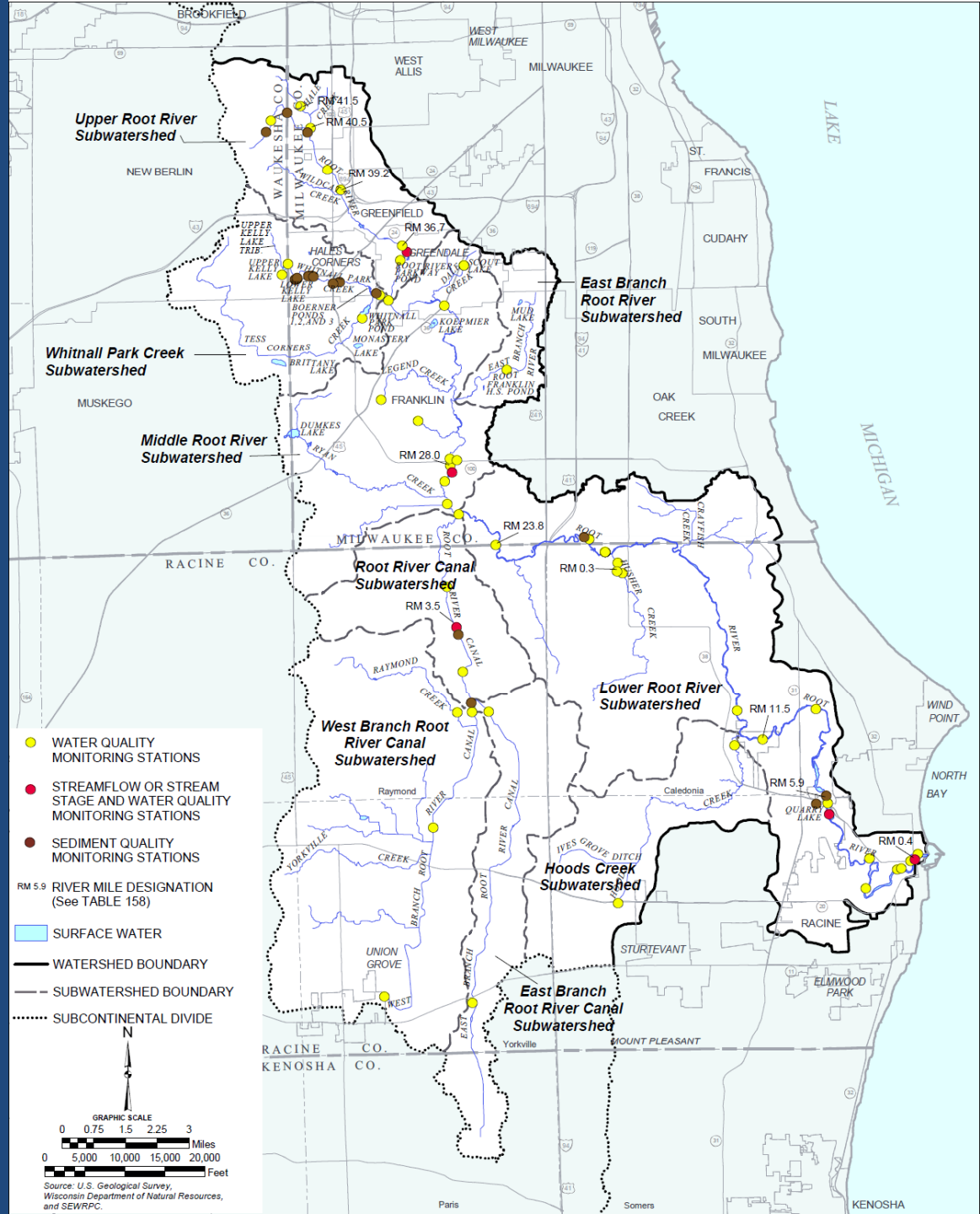
REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE/ MMSD FACILITIES PLAN

Planning and Study Area Characteristics

Regional Water Quality Management Plan Study Area	
<u>Watershed</u>	<u>Area (square miles)</u>
Kinnickinnic River	24.7
Menomonee River	135.8
Milwaukee River	700.0
Oak Creek	28.2
Root River	197.6
Lake Michigan Direct Drainage Area	40.7
Total	1,127.0
Number of Counties	9
Number of Municipalities	88
MMSD Planning Area	
Number of Counties	5
Number of Municipalities	29
Total Area	411 Square Miles



Root River Watershed



Major Issues in the Root River Watershed



Major Issues in the Root River Watershed

- Impairments related to low dissolved oxygen
 - Upper portions of the mainstem
 - Below Horlick Dam
 - Root River Canal
 - West Branch of the Root River Canal
 - Nonpoint source pollution related to phosphorus and sediment

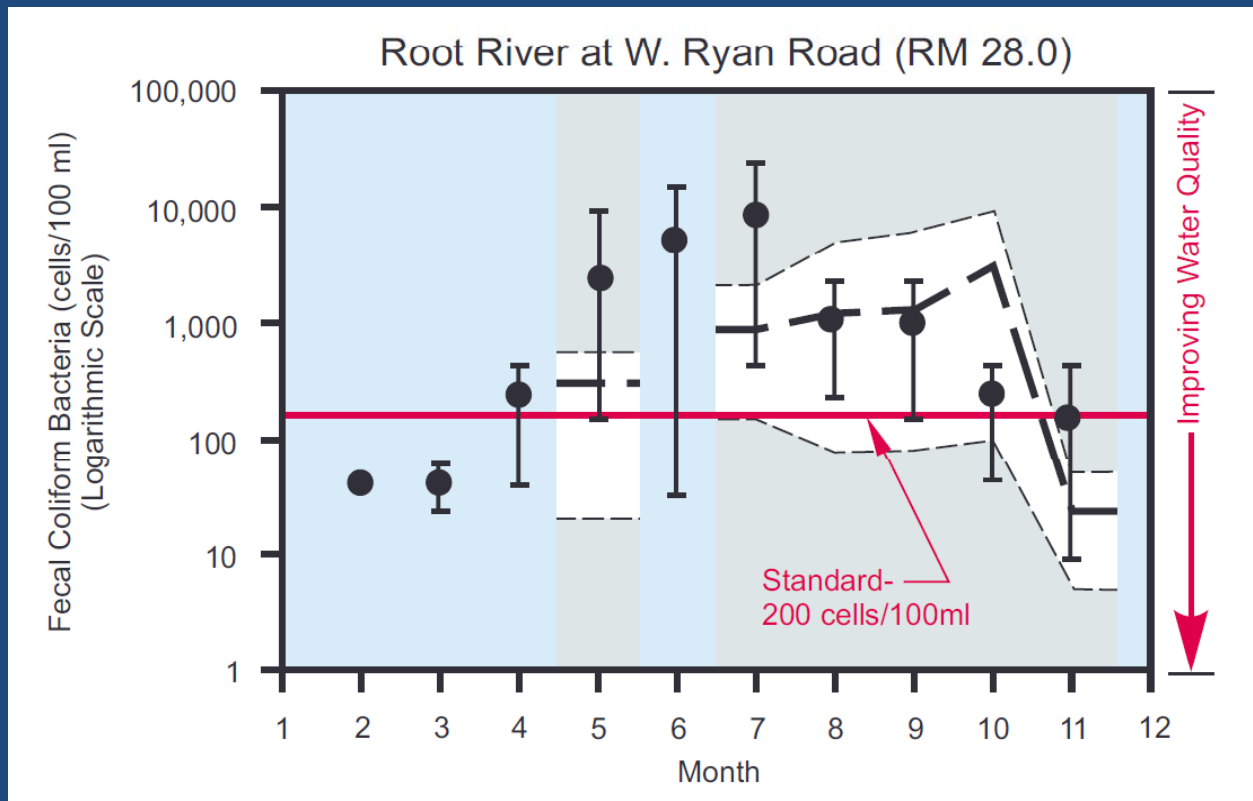
Major Issues in the Root River Watershed

- Impairments due to fish consumption advisories
 - Below Horlick Dam
 - Lake Michigan related



Major Issues in the Root River Watershed

- High bacteria concentrations
 - Especially during the May-September swim season



Major Issues in the Root River Watershed

- Poor quality fishery upstream from Horlick Dam



Major Issues in the Root River Watershed

- Poor quality fishery upstream from Horlick Dam

Disconnection from
Lake Michigan



Internal fragmentation
due to passage barriers

Major Issues in the Root River Watershed

- Poor quality fishery upstream from Horlick Dam

Channelization

Poor Habitat Quality



Major Issues in the Root River Watershed

- Fragmentation of terrestrial habitat
- Streambed and streambank erosion
 - Assessed in Milwaukee County and City of Racine



Major Issues in the Root River Watershed

- Access to the river



Major Issues in the Root River Watershed

- Invasive Species



Reed canary grass



Buckthorn



Purple loosestrife

Plan Features to Consider



Outline of Potential Features

- Start with RWQMPS recommendations
- Inventory recent activities
- Select focus issues
- Focused characterization of watershed
- Identify targets
- Identify actions & prioritize
- Monitor and evaluate
- Subsequent planning

Plan Features to Consider

- Use recommendations of the 2007 SEWRPC regional water quality management plan update for the greater Milwaukee watersheds as the starting point
 - Summarize recommendations related to the Root River Watershed
 - Evaluate implementation since 2007
 - Describe strategies by implementation status
 - Existing regulatory
 - In various stages of implementation
 - Recommended, but not implemented

Plan Features to Consider

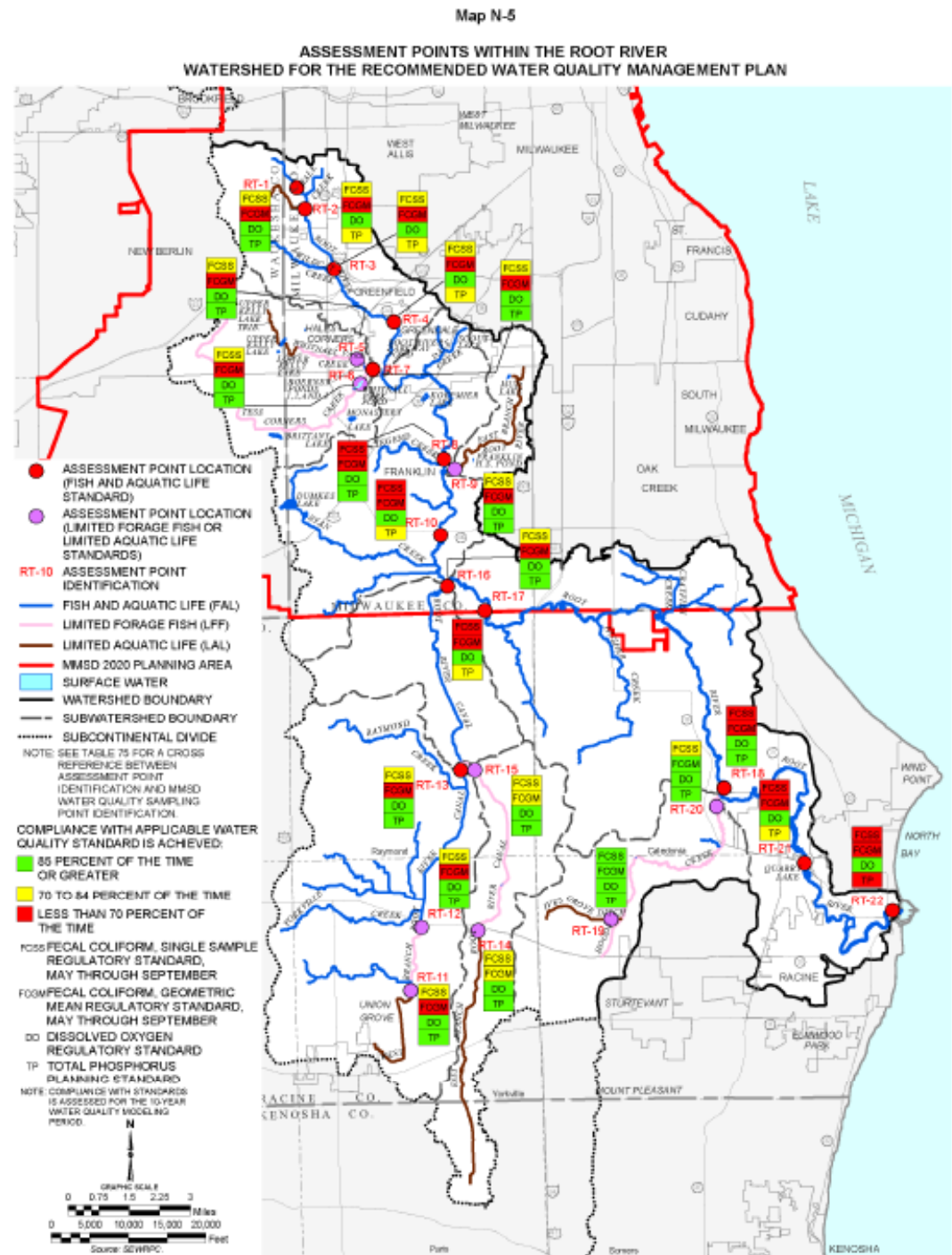
- Inventory and integrate recent and ongoing projects, programs, and initiatives
 - Root-Pike WIN, MMSD, and others
- Identify a set of focus issues to address over a relatively short time frame
 - Five-year time frame (?)
 - Focus issues from Southeastern Wisconsin Watershed Trust, Inc. Menomonee and Kinnickinnic Watershed Restoration Plans
 - Bacteria
 - Nutrients
 - Habitat/aesthetics

Plan Features to Consider

- Characterize the watershed concentrating on features related to the focus issues
 - Analyze based on some geographical subdivision
 - *e.g.* Assessment point areas
 - Summarize in ways that permit comparisons
- For each focus issue, identify a series of targets to be achieved by the end of the plan period

Example of geographical subdivisions:

The assessment points used in the modeling for analyzing performance of the RWQMPU recommended plan



Plan Features to Consider

- Characterize the watershed concentrating on features related to the focus issues
 - Analyze based on some geographical subdivision
 - *e.g.* Assessment point areas
 - Summarize in ways that permit comparisons
- For each focus issue, identify a series of targets to be achieved by the end of the plan period

Plan Features to Consider

- For each target, identify actions to be taken
 - Prioritize actions by assessment point area
 - Identify land uses each action addresses
 - Identify methods to evaluate progress
 - Methods assessing implementation of actions
 - Methods assessing achieving of targets
 - Methods assessing improvement in the focus issue
- Identify actions needed to be completed to achieve the full potential of other identified actions → **Foundation Actions**

Plan Features to Consider

- Present additional actions beyond those in the regional water quality management plan update
 - Describe these by implementation status
 - Describe and prioritize through a similar process to the RWQMPS recommended actions
- Update potential funding sources and identify potential sources for each target/action

Plan Features to Consider

- Monitoring and evaluation of implementation and effectiveness
 - Use methods identified relative to targets and actions
 - Formal review at the end of five-year plan period
 - Possible interim review halfway through
- Subsequent planning effort for after plan expiration
 - Develop the focus of that plan based, in part, on the monitoring and evaluation of the previous plan

Some questions to consider

1. What should the focus issues be?
2. What features should be considered for inclusion in the plan?