

MINUTES

SEWRPC ADVISORY COMMITTEE ON REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE FOR THE GREATER MILWAUKEE WATERSHEDS

DATE: April 18, 2007

TIME: 1:30 p.m.

PLACE: City of Mequon City Hall
Upper Level Council Chambers
11333 N. Cedarburg Road
Mequon, Wisconsin

Committee Members Present

Daniel S. Schmidt, Chairman
Michael G. Hahn, Secretary

Martin A. Aquino
(for Jeffrey J. Mantes)
John R. Behrens

John M. Bennett
Thomas J. Bunker
Marsha B. Burzynski
(for James L. McNelly)
Andrew A. Holschbach

Judy Jooss (for Diane M. Georgetta)
James F. Lubner

Christopher Magruder
(for Kevin L. Shafer)
Charles S. Melching

J. Matthew Moroney

Cheryl Nenn
Jeffrey S. Nettesheim
Thomas A. Wiza

Staff Members and Guests

Joseph E. Boxhorn

Troy E. Deibert
Ronald J. Printz

SEWRPC Commissioner
Chief Environmental Engineer, Southeastern
Wisconsin Regional Planning Commission
Environmental Manager, Environmental Engineering,
City of Milwaukee
Commissioner-Secretary, Silver Lake Protection and
Rehabilitation District
City Engineer, City of Franklin
Representative, City of Racine Water and Wastewater Utility
Regional Water Resources Planner, Wisconsin
Department of Natural Resources
Director, Ozaukee County Planning, Resources,
and Land Management Department
Town and Country Resource Conservation and Development, Inc.
Sea Grant Advisory Services Specialist,
University of Wisconsin Sea Grant Institute
Community Environmental Liaison, Milwaukee
Metropolitan Sewerage District
Associate Professor, Civil & Environmental
Engineering, Marquette University
Executive Director, Metropolitan Builders Association
of Greater Milwaukee
Riverkeeper/Project Director, Friends of Milwaukee's Rivers
Director of Utilities, Village of Menomonee Falls
Director of Engineering and Public Works, City of Cedarburg

Senior Planner, Southeastern Wisconsin Regional
Planning Commission
Water Resources Engineer, HNTB Corporation
Principal Engineer, Southeastern Wisconsin Regional
Planning Commission

WELCOME AND INTRODUCTIONS

Mr. Schmidt thanked the Advisory Committee members for attending this meeting. He indicated that roll call would be accomplished with a sign-in sheet circulated by SEWRPC staff.

APPROVAL OF MINUTES OF THE MEETING OF MARCH 20, 2007

Mr. Schmidt asked Mr. Hahn to review the highlights of the minutes of the March 20, 2007, meeting of the Committee.

Mr. Hahn noted that WDNR staff provided additional comments on the preliminary draft of Chapter XI, "Groundwater Quality Conditions and Sources of Pollution in the Study Area," of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*. These comments are addressed beginning on page 15 of the minutes. He said that information on several topics such as pesticides and volatile organic compounds was added to the draft of the chapter based on data obtained from WDNR groundwater databases. In addition, information on WDNR resources providing information on groundwater contamination was added.

Mr. Hahn indicated that the minutes contained two inserts: Exhibit A, a new section entitled **MMSD SYSTEM OPERATION OPPORTUNITIES** which was added to Chapter X, "Recommended Water Quality Management Plan," of SEWRPC Planning Report No. 50, *A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds* and Exhibit B, a revision of the section entitled **RECOMMENDED REGIONAL WATER QUALITY MANAGEMENT PLAN** of the same chapter.

Mr. Hahn reviewed Exhibit A. He noted that MMSD is able to vary the volume reserved in the Inline Storage System (ISS) for sanitary sewer inflow. Exhibit A presents an analysis of four operating options for the volume reserved for sanitary sewer inflow (VRSSI) and concludes that use of a variable VRSSI operating strategy holds promise for achieving more effective operation of the ISS.

Mr. Bunker requested that language be added to the text to state that using a variable VRSSI operating strategy would allow for utilization of the full ISS volume, where applicable.

[Secretary's Note: The last sentence in the first paragraph on page 1 of Exhibit A was revised as follows (In this Secretary's Note, and in subsequent Notes, unless indicated otherwise revised and added text is indicated in bold letters for clarification only. The report text will not be bold.)

"However, it is possible to maximize the effectiveness of the ISS **and more fully utilize the capacity of the ISS** by varying the volume for individual events, and MMSD currently operates the ISS using a variable VRSSI."]

Mr. Lubner commented that the discussion of ISS operating strategy was all predicated on volumes. He continued that minimizing loadings of BOD should be a major consideration in this operation and asked whether considerations of loads could be worked into the discussion of operating strategy. Mr. Hahn responded that the models do assign BOD concentrations to overflows. Mr. Printz added that the concentrations in SSOs and CSOs are different. Mr. Melching commented that the models assumed constant concentrations in CSOs and SSOs because time series data were not available. He continued that because of this, it is more appropriate to evaluate these options based on volume alone. He noted that additional sampling could be conducted over the course of an event to see how pollutant concentrations vary over time. These data could be used to refine the models. Mr. Bunker said that, during an SSO or CSO event, the "first flush" is more concentrated than later discharges, but

getting a time distribution of overflows is difficult. Mr. Hahn stated that more explanation of the issue of pollutant loads in CSOs and SSOs will be added to the text.

[Secretary's Note: The following footnote was added at the end of the last sentence of the second full paragraph on page 2 of Exhibit A:

“The analysis of operational strategies for the ISS was conducted on the basis of volumes of CSOs and SSOs. Loads of pollutants delivered to waterbodies in the study area during SSO and/or CSO events were estimated by applying average pollutant concentrations characteristic of SSOs or CSOs to the overflow volumes. In that way, total pollutant loads were adequately estimated. The variation in load over time during a given overflow event was not represented.”]

Ms. Nenn asked whether the five-year level of protection (LOP) was finalized. She noted that the first secretary's note on page 11 of the minutes indicates that all SSOs are illegal and she expressed concern that saying a five-year LOP will meet regulations is not correct. Mr. Hahn responded that the working assumption is that five-year LOP is satisfactory, but that it will not be final until the WDNR has reviewed and approved the MMSD facilities plan. He noted that the facilities plan examined the difference between a five-year and a 10-year LOP and found that there would be a large additional cost, but little benefit to water quality if a 10-year LOP were to be achieved. He concluded by saying that good planning practice would not dictate recommending a higher level of control of SSOs given the relatively large water quality benefits of controlling nonpoint pollution sources relative to providing additional controls on point sources.

Mr. Hahn reviewed Exhibit B. He noted that the overall recommendation has not changed from that presented at the last Committee meeting, but that it includes a series of steps to be taken to arrive at a final recommendation regarding capacity upgrades at MMSD's South Shore wastewater treatment plant. He continued that these steps may ultimately show that expansion of the South Shore treatment plant is not needed. He noted that if expansion of the plant was needed, then the recommendation presented at the last meeting of the Committee would be followed.

Ms. Nenn noted that the USEPA had released two draft reports regarding the potential impacts of global climate change on combined sewer overflow mitigation and on the cost of implementing water quality-based effluent limits on sewage treatment plants. She suggested that they should be examined and addressed. Mr. Hahn replied that the SEWRPC staff was aware of those reports and he noted that the issue of global climate change had been raised early in the planning process. He said that a discussion of global climate change was added to Chapter II of PR No. 50 and that it was concluded that, over the relatively short time frame of this plan, the changes in weather are likely to be small.

[Secretary's Note: The draft reports were reviewed by the SEWRPC staff. It was concluded that the time frames addressed by projections in the draft reports (2060-2099) are well beyond the time frame of this plan. The following subsection was added following the second paragraph on page 44 of the revised draft of Chapter X of PR No. 50 that was reviewed at the March 20, 2007, committee meeting:

“Global Climate Change

Recent projections from global climate models suggest that patterns and frequency of precipitation in the Great Lakes area may change over the course of the next century. Should such changes occur, it is possible that they will cause alterations in stream hydrology and potentially affect sewerage systems and the capacities needed for wastewater treatment. It is recommended that future updates of this plan consider precipitation patterns and frequency and streamflow data and compare those data to the historical record.”]

Mr. Melching asked whether the last item on page 5 of the minutes was missing a word. Mr. Hahn replied that this item may be one recommendation of a series of bulleted recommendations, but indicated that he would check.

[Secretary's Note: The item in question is one of a series of bulleted recommendations and it was not changed.]

Mr. Bunker suggested that the second bullet point on page 4 of Exhibit B could recommend blending even if physical-chemical treatment capacity with chemical flocculation was added at the South Shore treatment plant since a more extreme event than was used in the analysis may always come along.

[Secretary's Note: Mr. Bunker's comment regarding blending during an extreme event is well taken; however, the recommendation will not be revised, since blending under such conditions would be a specific plant operation decision to be made based on specific conditions at that time.]

Mr. Schmidt then asked if the Committee had any further additions or revisions to the minutes of the March 20, 2007, meeting.

There being no further additions or revisions, the minutes were approved as revised, on a motion by Ms. Jooss, seconded by Mr. Bunker, and carried unanimously.

CONSIDERATION OF THE PRELIMINARY DRAFT OF THE "COST ANALYSIS" AND "ABILITY OF THE RECOMMENDED WATER QUALITY MANAGEMENT PLAN TO MEET ADOPTED OBJECTIVES AND STANDARDS," SECTIONS OF CHAPTER X, "RECOMMENDED WATER QUALITY MANAGEMENT PLAN," OF SEWRPC PLANNING REPORT NO. 50 (PR NO. 50), A REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE FOR THE GREATER MILWAUKEE WATERSHEDS

Mr. Schmidt asked Mr. Hahn to review the preliminary draft of the chapter, beginning with the **COST ANALYSIS** section.

Mr. Hahn explained that the packet of materials distributed to the Committee at the meeting is a slight revision of the material provided to the Committee on April 14, 2007. He indicated that Tables X-2, X-3a, and X-4; Figures X-1 through X-6; and Map M-6 had been revised, while Tables X-3 and M-6 and the insert on the ability of the recommended water quality management plan to meet adopted objectives and standards were unchanged. He noted that the costs of the plan were segregated into two categories: one category consisting of the new costs of the recommended plan and a second category consisting of the costs of existing programs, committed elements, and programs to meet regulatory requirements. He explained that the total cost of the recommended plan is the sum of these two categories. Mr. Hahn then asked Mr. Printz to review Tables X-2 through X-4.

Mr. Printz began the review of Table X-2. He noted that no new costs were assigned to the land use elements of the recommended plan. He indicated that the costs assigned on the first page of the table for the Village of Kewaskum wastewater treatment plant facilities plan were for implementation of the plan. Mr. Hahn stated that this would be clarified in the table.

[Secretary's Note: Component number 3 of the point source pollution abatement plan subelement on the first page of Table X-2 was revised to read:

"Implementation of the Village of Kewaskum WWTP Facilities Plan"]

Mr. Melching expressed concern about including the costs of the concrete channel renovation and rehabilitation component of the instream water quality measures plan subelement as a cost of the water quality management plan on the fourth page of Table X-2, explaining that this was more of a habitat improvement or flood control

measure than a water quality measure. There followed some discussion of the issue of the effects of watercourse measures on instream water quality. Mr. Hahn noted that the presence of concrete lining affects water temperature and can result in supersaturation of dissolved oxygen. He also said that habitat improvement is within the goals and objectives of the plan. Ms. Nenn commented that concrete lining removal affects the fishery and that the plan must meet water use objectives as well as water chemistry criteria. Ms. Burzynski noted that the goals and objectives of the plan go beyond water quality and that habitat improvements are appropriate to include.

Mr. Behrens noted that the costs listed in Tables X-2 and X-4 were expressed as thousands of dollars while the costs listed in Tables X-3 and X-3a were expressed as millions of dollars and stated that the difference in units was confusing. Mr. Hahn responded that these four tables would be revised to make the units consistent.

[Secretary's Note: Tables X-3 and X-3a were revised to express units as thousands of dollars.]

Mr. Bennett asked whether MMSD was eliminating physical-chemical treatment as a recommendation at the South Shore plant. Mr. Hahn said that they were not because MMSD must meet regulations and permit conditions, while the regional water quality management plan update had the flexibility to recommend the most logical approach to improving water quality in a cost-effective manner.

Mr. Bunker noted that Table X-2 includes \$22 million for disconnecting residential roof drains from sanitary and combined sewers. He commented that municipalities cannot work on private property and that this is generally paid for by the homeowner. Mr. Bennett noted that, as a part of pilot projects, MMSD has been paying for this in some instances. Mr. Hahn responded that Chapter XI of PR-50 will assign costs of plan components to various parties.

Mr. Printz began the review of Table X-3. He explained that this table represents the costs of MMSD facilities, programs, operations, and policies to be implemented. He pointed out that the third component under the wet weather control plan facilities element which calls for increased treatment capacity at the South Shore wastewater treatment plant shows a range of costs and that this range was not carried forward into Table X-2 because the regional water quality management plan update does not recommend increased capacity, pending additional evaluation of population trends and study of the existing plant capacity. He also noted that there is currently uncertainty regarding the need for some other components, pending evaluations, and that cost ranges are indicated for those components. He said that the costs assigned to these components under the regional water quality management plan update reflect the higher costs.

Mr. Melching asked that the second component under the plan element for existing MMSD facilities on Table X-3 be reworded to indicate that the assigned costs are for the force main and not just for preliminary engineering. Mr. Printz responded that this would be done.

[Secretary's Note: Component number 2 of the "Plan for Existing Milwaukee Metropolitan Sewerage District Facilities" category on the first page of Table X-3 was revised to read:

"Additional Force Main"]

Mr. Melching asked why the costs of the sixth and ninth components of the interim biosolids management plan element of Table X-3 are listed as \$0.0 million. Mr. Printz responded that this was an error. He continued that the costs for these components should be shown as a double dash to reflect no or minimal costs.

[Secretary's Note: The capital costs of components number 6 and 9 of the interim biosolids management plan element on the first page of Table X-3 were changed to double dashes.]

Mr. Bennett asked whether there was a footnote explaining the meaning of the double dashes. Mr. Hahn responded that this is a convention used to indicate no assigned cost or no information. He stated that footnotes could be added to these tables explaining the convention.

[Secretary's Note: Footnote "a" in Table X-2 was expanded to add the following:

"In general, where not qualified by another footnote, double dashes indicate that either it is not appropriate to assign a cost to a component, a cost is already incurred under another program or plan, or it is not possible to reasonably estimate the cost of a component because it is affected by future actions whose scope cannot be determined at this time."

Footnote "a" in Tables X-3 and X-3a was expanded to add the following:

"In general, where not qualified by another footnote, double dashes indicate that either it is not appropriate to assign a cost to a component, a cost is already incurred under another program or plan, or a cost was not provided in the MMSD 2020 facilities plan."

The following footnote "d" in Table X-4 was added to the annual operation and maintenance cost column for "research and implementation projects" and the "subtotal" for that category:

"No annual operation and maintenance cost for this component."]

Mr. Printz reviewed Table X-3a. He explained that this table represents the costs of facilities, programs, operations and policies currently included in MMSD's budget or plans. He noted that the costs of many of these components are expected to be minimal and to be absorbed into MMSD's budget.

Mr. Printz then began the review of Table X-4. He explained that this table represents the costs of existing programs, committed programs, and regulatory mandates.

Ms. Nenn asked whether the costs in Table X-4 were only costs to MMSD. She noted that the full cost of the river skimmer boat operation should be listed here given that the City of Milwaukee contributes funding to its operation. Mr. Printz replied that these costs were for the entire study area, independent of who would pay the costs. He noted that the line item for the skimmer boat operation was for the full cost.

Ms. Burzynski asked whether the lack of a component for implementation of agricultural performance standards from NR 151 in Table X-4 was due to there not being a committed cost for this. Mr. Printz replied that this was not included because the implementation requirement is subject to the availability of cost share funding.

Mr. Hahn reviewed the **ABILITY OF THE RECOMMENDED WATER QUALITY MANAGEMENT PLAN TO MEET ADOPTED OBJECTIVES AND STANDARDS** section. He pointed out that the objectives are given in Chapter VII of PR No. 50 which was previously reviewed by the Committee. He explained that the analysis was done by calculating summary statistics and compliance statistics for water quality parameters that have a quantifiable regulatory or planning standard. He said that statistics were set forth for the existing condition, the revised 2020 baseline condition, and the recommended plan condition. He noted that these results were summarized in Figures X-1 through X-6 and Maps M-1 through M-6. In addition, he continued, summary statistics were also calculated for total suspended solids and copper. He noted that the comparisons also included an "extreme measures" condition. He explained that this is intended as a check on the recommended plan to determine whether the point of diminishing returns regarding water quality improvement has been reached. He indicated that the text does not reflect the results for the estuary, outer harbor, and Lake Michigan nearshore area because statistics have only recently been completed for these areas. He stated that discussion of these areas would be added to the text.

[Secretary's Note: The following footnote was added at the end of the first sentence in the first paragraph on page 2 of the insert:

“In the Milwaukee outer harbor and nearshore Lake Michigan area, compliance with standards was evaluated through comparison of modeled water quality results with the standards for the fish and aquatic life water use objective with full recreational use.”

The following sentences were added to the end of the first paragraph on page 6 of the insert:

“In the estuary, the majority of assessment points would be expected to achieve 85 percent compliance, or better, under all four conditions. All assessment points in the outer harbor and nearshore Lake Michigan area would be expected to achieve 85 percent compliance or better under all four conditions.”

The third paragraph on page 6 of the insert was revised as follows. (This paragraph appears in bold letters in the document. Added text is indicated by shading.):

“Overall, in all riverine reaches, a low degree of compliance with this standard would be expected under all conditions considered. However, a high degree of compliance would be expected in the estuary, outer harbor, and nearshore Lake Michigan area.”

The following paragraph was added after the second paragraph following the first bullet point on page 6 of the insert:

“In the estuary, the majority of assessment points would be expected to achieve 85 percent compliance, or better, under revised 2020 baseline and recommended plan conditions. All assessment points would be expected to achieve 85 percent compliance, or better, under extreme measures conditions. All assessment points in the outer harbor and nearshore Lake Michigan area would be expected to achieve at least 85 percent compliance under all four conditions.”

The sixth paragraph on page 6 of the insert was revised as follows. (This paragraph appears in bold letters in the document. Added text is indicated by shading.):

Overall, in all riverine reaches, a low degree of compliance with this standard would be expected under all conditions considered. However, a relatively high degree of compliance would be expected in the estuary and a high degree of compliance would be expected in the outer harbor, and nearshore Lake Michigan area.”

The following sentence was added to the end of the last full paragraph of page 6 of the insert:

“In the estuary, outer harbor, and nearshore Lake Michigan area, all assessment points would be expected to achieve 85 percent compliance, or better, under all four conditions.”

The following sentence was added at the end of the first partial paragraph on page 7 of the insert:

“A high degree of compliance would be expected in the estuary, outer harbor, and nearshore Lake Michigan area under all conditions considered.”

The following sentence was added to the end of the first full paragraph of page 7 of the insert:

“In the estuary, outer harbor, and nearshore Lake Michigan area, all assessment points would be expected to achieve 85 percent compliance, or better, under all four conditions.”

The following sentence was added at the end of the second full paragraph on page 7 of the insert:

“A high degree of compliance would be expected in the estuary, outer harbor, and nearshore Lake Michigan area under all conditions considered.”

The first sentence of the first paragraph following the second bullet point on page 7 was revised to read:

“In general, 85 percent compliance with this standard, **or better**, would be expected under existing, revised 2020 baseline, recommended plan, and extreme measures conditions at the assessment points in the Menomonee, Milwaukee, and Root River watersheds, **as well as the estuary, outer harbor, and nearshore Lake Michigan area.**”

The following paragraph was added after the first partial paragraph on page 8 of the insert:

“In the estuary, the majority of assessment points would be expected to achieve 85 percent compliance, or better, under existing and revised 2020 baseline conditions. All assessment points would be expected to achieve 85 percent compliance, or better, under recommended plan and extreme measures conditions. All assessment points in the outer harbor and nearshore Lake Michigan area would be expected to achieve at least 85 percent compliance under all four conditions.”

The following sentence was added at the end of the first full paragraph on page 8 of the insert:

“A high degree of compliance would be expected in the estuary, outer harbor, and nearshore Lake Michigan area.”]

Mr. Bunker asked how the level of compliance with standards was determined. Mr. Hahn replied that since the basis for listing a stream on the 303(d) impaired waters list is noncompliance with standards 15 percent of the time or more, compliance with standards 85 percent of the time or more was used to indicate that an assessment point was substantially in compliance with the standard. Ms. Burzynski commented that she was not certain whether the assumption of 85 percent compliance was correct. She said that she would provide additional information to be incorporated into the text.

[Secretary’s Note: Pending clarification by WDNR of the procedures for placing a stream on the 303(d) impaired waters list, the first sentence in the first paragraph of the *Compliance with Adopted Water Quality Standards* subsection on page 5 of the insert, and the word “Thus” at the beginning of the second sentence, were both deleted.]

Mr. Bunker requested that a table be added to the chapter defining the water quality standards. Mr. Hahn replied that this would be done.

[Secretary’s Note: Table X-5 setting forth applicable water use objectives and water quality standards was added to Chapter X and is attached herein as Exhibit A. The following sentence was added after the first sentence of the first paragraph on page 2 of the insert:

“The applicable water quality standards and criteria supporting the designated water use objectives are summarized in Table X-5.”]

Mr. Melching noted that variance standards are applied to the inner harbor and that there had been earlier discussion of comparing conditions in the outer harbor to variance standards rather than the more stringent fish and aquatic life standards. He asked whether conditions in the outer harbor were compared to the variance standards. Mr. Hahn replied that the fish and aquatic life standards were applied for the outer harbor and nearshore area.

[Secretary’s Note: The following note was added to Map M-6 to address Mr. Melching’s comment::

“In the Milwaukee outer harbor and nearshore Lake Michigan area, compliance with standards was evaluated through comparison of modeled water quality results with the standards for fish and aquatic life water use objectives with full recreational use.”]

Mr. Bunker commented that Figures X-1 through X-6 were confusing, especially on casual inspection. He asked whether they could be revised. Mr. Hahn replied that cumulative graphs had been prepared that will be clearer and will be included; however, because the original graphs were quite useful for some analyses, they will be retained.

[Secretary’s Note: Figures X-1a through X-6a were added to Chapter X. Those figures, along with Figures X-1 through X-6, are attached as Exhibit B. The second to last sentence in the first paragraph of page 2 of the insert was changed to read:

“Figures X-1 through **X-6a** provide summaries of the degree to which the recommended plan achieves regulatory or planning water quality standards for various pollutants.”

The third full paragraph on page 5 of the insert was revised to read:

“The data on compliance with standards as set forth in Tables M-1 through M-6 were summarized in Figures X-1 through **X-6a**. For a given pollutant and standard, **a pair of figures indicate the degree of compliance with applicable standards among the existing, revised 2020 baseline, recommended plan, and extreme measures conditions** for each watershed in the study area, **the Milwaukee harbor estuary, the outer harbor, and the nearshore Lake Michigan area. The first figure in each pair presents a set of three graphical comparisons. These** comparisons consist of:”

The last sentence in the last full paragraph on page 5 of the insert was deleted. The following text was added after the last full paragraph on page 5 of the insert:

“The second figure in each pair presents a pair of graphical comparisons of cumulative levels of compliance for each of the conditions indicated above. The two graphical comparisons consist of:

- The percent of assessment points achieving or exceeding 85 percent compliance with the standard over the 10-year water quality simulation period.
- The percent of assessment points achieving or exceeding 70 percent compliance with the standard over the 10-year water quality simulation period.

The assessments in Figures X-1 through X-6a are evaluated below.”

The last bullet point on the bottom of page 5 of the insert was revised to read:

“Figures X-1 and X-1a: Achievement of the Single Sample Fecal Coliform Bacteria Standard Assessed on an Annual Basis”

The first bullet point on page 6 of the insert was revised to read:

“Figures X-2 and X-2a: Achievement of the Geometric Mean Fecal Coliform Bacteria Standard Assessed on an Annual Basis”

The second bullet point on page 6 of the insert was revised to read:

“Figures X-3 and X-3a: Achievement of the Single Sample Fecal Coliform Bacteria Standard Assessed on a May to September Basis”

The first bullet point on page 7 of the insert was revised to read:

“Figures X-4 and X-4a: Achievement of the Geometric Mean Fecal Coliform Bacteria Standard Assessed on a May to September Basis”

The second bullet point on page 7 of the insert was revised to read:

“Figures X-5 and X-5a: Achievement of the Dissolved Oxygen Standard”

The third bullet point on page 7 of the insert was revised to read:

“Figures X-6 and X-6a: Achievement of the Recommended Total Phosphorus Standard”]

Mr. Hahn noted that the *Evaluation of Water Quality Modeling Analysis Data Relative to “Auxiliary Uses” With More-Stringent Water Quality Standards* subsection would be provided at a later date.

[Secretary’s Note: That subsection, which is to be inserted on page 8 of the insert entitled **ABILITY OF THE RECOMMENDED WATER QUALITY MANAGEMENT PLAN TO MEET ADOPTED OBJECTIVES AND STANDARDS**, will be provided to the Committee prior to the June 13, 2007, meeting.]

In reference to the subsection on the risk-based approach to refining water quality standards on page 11 of the insert, Ms. Burzynski commented that the standard should be based on surface water rather than stormwater runoff. She suggested revising the subsection to reflect this.

[Secretary’s Note: The first sentence of the second paragraph of page 11 of the insert was revised to read:

“A risk-based approach to establishing water quality standards could also be taken and would represent an improved approach to assigning water quality standards and criteria that are consistent with the threat to human and ecological health.”]

A motion to approve preliminary draft Chapter X, “Recommended Water Quality Management Plan,” of SEWRPC Planning Report No. 50, *A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds*, as amended, was made by Mr. Moroney, seconded by Mr. Bennett, and carried unanimously by the Committee.

Mr. Hahn noted that the next agenda item was a preview of the implementation plan. Because of the length of the meeting, Mr. Hahn asked if the Committee would prefer to consider the implementation plan at the next meeting. The Committee agreed.

OLD BUSINESS

There was no old business.

NEW BUSINESS

There was no new business.

DETERMINATION OF NEXT MEETING DATE AND LOCATION

The next meeting of the Advisory Committee was scheduled for Wednesday, June 13, 2007, from 1:30 to 3:30 p.m. at the Mequon City Hall in the upstairs Council Chambers.

ADJOURNMENT

The April 18, 2007, meeting of the Advisory Committee on the regional water quality management plan update was adjourned at 3:42 p.m. on a motion by Mr. Moroney, seconded by Mr. Holschbach and carried unanimously by the Committee.

ADDITIONAL COMMENTS ON PRELIMINARY DRAFT CHAPTER X, "RECOMMENDED WATER QUALITY MANAGEMENT PLAN," AND APPENDIX O OF SEWRPC PR NO. 50 AS PROVIDED BY MR. CHARLES S. MELCHING AND MR. THOMAS WIZA

Mr. Wiza suggested that a note be added on Figures X-1 through X-6, referring to the water quality standards set forth in tables M-1 through M-6 of Appendix M.

[Secretary's Note: The following note was added to Figures X-1 through X-6a:

"The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report."]

Mr. Melching noted several typographical errors and minor clarifications to Appendix O, "Recommended Inland Lake Management Measures." The appendix was revised to reflect those comments.

In addition, Mr. Melcher provided written comments on Appendix O. Those comments are attached as Exhibit C.

Comment 1 in Exhibit C relates to the description of the lakes of the study area as generally being "meso-eutrophic to eutrophic in nature" (last sentence of the first paragraph on page 1 of Appendix O).

[Secretary's Note: The trophic state designation reflects a continuum from oligotrophic to hypertrophic. The term meso-eutrophic was used here to indicate a lake that is somewhat more highly enriched than would be considered typical of a mesotrophic lake, but not so highly enriched as to be considered eutrophic. Following discussion of this question with Mr. Melching, it was decided to substitute "mesotrophic" for "meso-eutrophic" in the last sentence of the first paragraph on page 1 of Appendix O.]

Comment 2 in Exhibit C notes the exclusion of the Kelly lakes from the list of major lakes on page 1 of the appendix and asks that a brief description of the Kelly Lakes be included on page 2.

[Secretary's Note: The list of lakes on page 1 is limited to major lakes, which SEWRPC has traditionally designated as lakes of 50 acres or more in size. The Kelly Lakes are mentioned in the

second and third full paragraphs on page 2, and they are described in more detail on pages 9 and 10. No additional mention of those lakes is considered to be necessary.]

[Secretary's Note: In response to Comment 3 in Exhibit C, the following revision was made to the first sentence of the second paragraph on page 3:

“As shown on Map O-1, within the Milwaukee River watershed in Washington County, the following major and minor lakes were included in the classification system: ...”]

Comment 4 questions the recommendation regarding nonpoint source pollution reduction goals as set forth in the first paragraph of the **Setting Goals** subsection on page 10. The comment notes that the pollution reductions recommended under the WDNR priority watershed planning program are characterized as “refinements” of the load reductions recommended under the initial regional water quality management plan.

[Secretary's Note: The fourth through sixth sentences of that paragraph were deleted and replaced with the following:

The initial regional water quality management plan set forth specific watershed-based management measures recommended for implementation in the areas directly tributary to the major lakes within the Southeastern Wisconsin Region. In several cases, these recommendations were refined through the priority watershed nonpoint source pollution abatement planning process. In many of those refined plans, the nonpoint source pollution reduction goals were slightly higher or lower than those established during the initial regional water quality management planning program. **The pollutant reductions recommended under the priority watershed study generally applied to total suspended solids and, in some instances, phosphorus and/or bacteria. It is recommended that 1) the priority watershed pollutant reductions as enumerated herein be achieved for the applicable pollutants and 2) the reductions recommended under the initial regional water quality management plan be achieved for other nonpoint source pollutants.**

CLARIFYING REVISIONS TO PRELIMINARY DRAFT CHAPTER X OF SEWRPC PR NO. 50 ADDED BY THE COMMISSION STAFF FOLLOWING THE MEETING

[Secretary's Note: The following sentence was added after the first sentence in the third paragraph of the Riparian Buffers subsection on page 27 of the version of the draft chapter that was reviewed by the Committee at its March 20, 2007, meeting. The maps referenced in the sentence are attached as Exhibit D.

“Stream reaches for which the establishment or expansion of riparian buffers are to be considered are indicated on Maps X-11a through X-11c.”]

[Secretary's Note: The following revision was made to the fourth sentence in the Conversion of Cropland and Pasture to Wetlands and Prairies subsection on page 28 of the version of the draft chapter that was reviewed by the Committee at its March 20, 2007, meeting. The map referenced in the sentence is attached as Exhibit E.

“Those lands, **as identified on Map X-11d**, should be given first consideration when identifying more marginally productive lands to be converted to wetlands or prairies.”]

[Secretary's Note: The subsection entitled Residential Roof Drain Disconnection from Sanitary and Combined Sewers and Infiltration of Roof Runoff on page 35 of the version of the draft chapter that

was reviewed by the Committee at its March 20, 2007, meeting was revised as follows to clarify the scope of the recommendation:

“Residential Roof Drain Disconnection and Infiltration of Roof Runoff

In an effort to reduce clearwater flows in the separate and combined sewer systems in the study area, it is recommended that programs be implemented to achieve a practical level of disconnection of the residential roof drains that are currently connected to sanitary and combined sewers. **It is also recommended that roof drains that are not directly connected to sanitary or combined sewers, but which discharge to impervious areas be redirected to pervious areas where feasible.** The number and location of the roof drains which are to be disconnected should be determined with technical advice and guidance from municipalities and residents to consider impacts on private and public sewer infiltration and inflow, residence foundation and basement structural considerations, and icing conditions. It is recommended that consideration be given to directing those roof drains which are to be disconnected to rain barrels and/or rain gardens, with the runoff from those roofs ultimately being infiltrated. The benefits of infiltration of roof runoff were represented in the water quality modeling analyses and are reflected in the water quality results set forth in Appendix M.”]

When the chapter was proofread, it was found that there was some redundant text on page 54 of the version of the draft chapter that was reviewed by the Committee at its March 20, 2007, meeting.

[Secretary’s Note: This was addressed through the following revisions: 1) deleting the second sentence in the first paragraph after the bulleted item, 2) deleting the words “That disinfection would be provided” at the beginning of the third sentence of the next paragraph was deleted, and 3) joining the second and third sentences of that paragraph. The revised text reads as follows:

“Each of the options described above requires 1) additional influent screening and grit removal, 2) ultraviolet disinfection, and 3) additional effluent pumping and an outfall expansion.

Each of the three options, when combined with the other components of the recommended MMSD 2020 facilities plan, would achieve the same five-year LOP against sanitary sewer overflows and each would maintain the same level of protection against basement backups. Also, each of the options would include ultraviolet disinfection for either the effluent from the physical-chemical treatment process or for the flow diverted around secondary treatment prior to recombination with disinfected flow from the secondary treatment units. Ultraviolet disinfection of the effluent from either physical-chemical treatment or of the diverted flow would provide a level of control of fecal coliform bacteria that would meet existing permit limits.”]

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Exhibit A

Table X-5

APPLICABLE WATER USE OBJECTIVES AND WATER QUALITY STANDARDS (CRITERIA) AND GUIDELINES FOR LAKES AND STREAMS WITHIN THE REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE STUDY AREA

Water Quality Parameter	Combinations of Water Use Objectives Adopted for Planning Purposes ^a						Source
	Coldwater Community	Warmwater Sportfish and Forage Fish Communities	Limited Forage Fish Community (variance category)	Limited Aquatic Life (variance category)	Special Variance Category A ^b	Special Variance Category B ^c	
Recreational use	Full	Full	Full	Full	Limited	Limited	
Maximum Temperature (°F) ^d	Background	89.0	89.0	--	89.0 ^e	89.0	NR 102.04 (4) ^f
Dissolved Oxygen (mg/l) ^d	6.0 minimum 7.0 minimum during spawning	5.0 minimum	3.0 minimum	1.0 minimum	2.0 minimum	2.0 minimum	NR 102.04 (4) NR 104.02 (3)
pH Range (S.U.)	6.0-9.0	6.0-9.0	6.0-9.0	6.0-9.0	6.0-9.0 ^e	6.0-9.0 ^e	NR 102.04 (4) ^g NR 104.02 (3)
Fecal Coliform (MFFCC) ^h							NR 102.04 (5) NR 104.06 (2)
Mean	200	200	200	200	1,000	1,000	
Maximum	400	400	400	400	2,000	--	
Ammonia Nitrogen (mg/l)	-- ⁱ	-- ⁱ	-- ⁱ	-- ⁱ	-- ⁱ	-- ⁱ	NR 105 Tables 2c and 4b
Total Phosphorus (mg/l)							Regional water quality management plan ^j
Maximum for streams	0.1	0.1	0.1	0.1	0.1 ^e	0.1 ^e	
Maximum for lakes during spring turnover	0.02	0.02	0.02	0.02	--	--	
Chloride (mg/l)	1,000 maximum	1,000 maximum	1,000 maximum	1,000 maximum	1,000 maximum ^e	1,000 maximum ^e	Regional water quality management plan

^aNR 102.04(1) All waters shall meet the following minimum standards at all times and under all flow conditions: substances that will cause objectionable deposits on the shore or in the bed of a body of water, floating or submerged debris, oil, scum, or other material, and material producing color, odor, taste, or unsightliness shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life.

^bAs set forth in Chapter NR 104.06(2)(a) of the Wisconsin Administrative Code.

^cAs set forth in Chapter NR 104.06(2)(b) of the Wisconsin Administrative Code.

^dDissolved oxygen and temperature standards apply to continuous streams and the upper layers of stratified lakes and to unstratified lakes; the dissolved oxygen standard does not apply to the hypolimnion of stratified inland lakes. However, trends in the period of anaerobic conditions in the hypolimnion of deep inland lakes should be considered important to the maintenance of their natural water quality.

^eNot specifically addressed within the Wisconsin Administrative Code. For planning purposes only, these values are considered to apply.

^fNR 102.04(4) There shall be no temperature changes that may adversely affect aquatic life. Natural daily and seasonal temperature fluctuations shall be maintained. The maximum temperature rise at the edge of the mixing zone above the natural temperature shall not exceed 5°F for streams. There shall be no significant artificial increases in temperature where natural trout reproduction is to be maintained.

^gThe pH shall be within the stated range with no change greater than 0.5 unit outside the estimated natural seasonal maximum and minimum.

^hNR 102.04(5)(a) The membrane filter fecal coliform count may not exceed 200 per 100 ml as a geometric mean based on not less than five samples per month, nor exceed 400 per 100 ml in more than ten percent of all samples during any month.

ⁱJ.E. McKee and M.W. Wolf, Water Quality Criteria, 2nd edition, California State Water Quality Control Board, Sacramento, California, 1963. The standards for ammonia nitrogen are set forth in Table IV-8.

^jU.S. Environmental Protection Agency, Quality Criteria for Water, EPA-440/9-76-023, 1976.

Source: Wisconsin Department of Natural Resources and SEWRPC.

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Exhibit B

SEWRPC Planning Report No. 50

**A REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE
FOR THE GREATER MILWAUKEE WATERSHEDS**

Chapter X

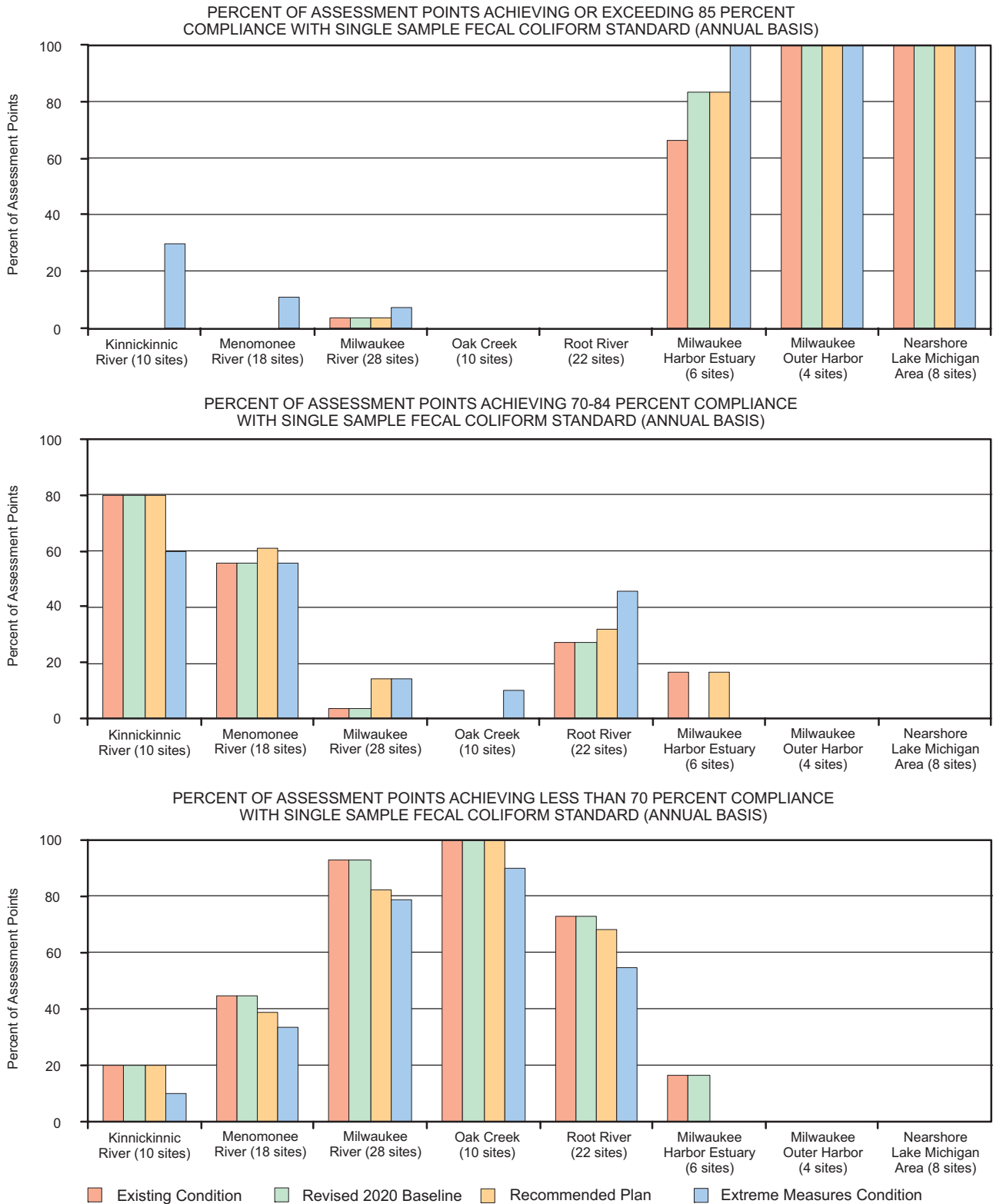
**RECOMMENDED WATER QUALITY
MANAGEMENT PLAN**

FIGURES

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Figure X-1

ACHIEVEMENT OF THE SINGLE SAMPLE FECAL COLIFORM BACTERIA STANDARD ASSESSED ON AN ANNUAL BASIS

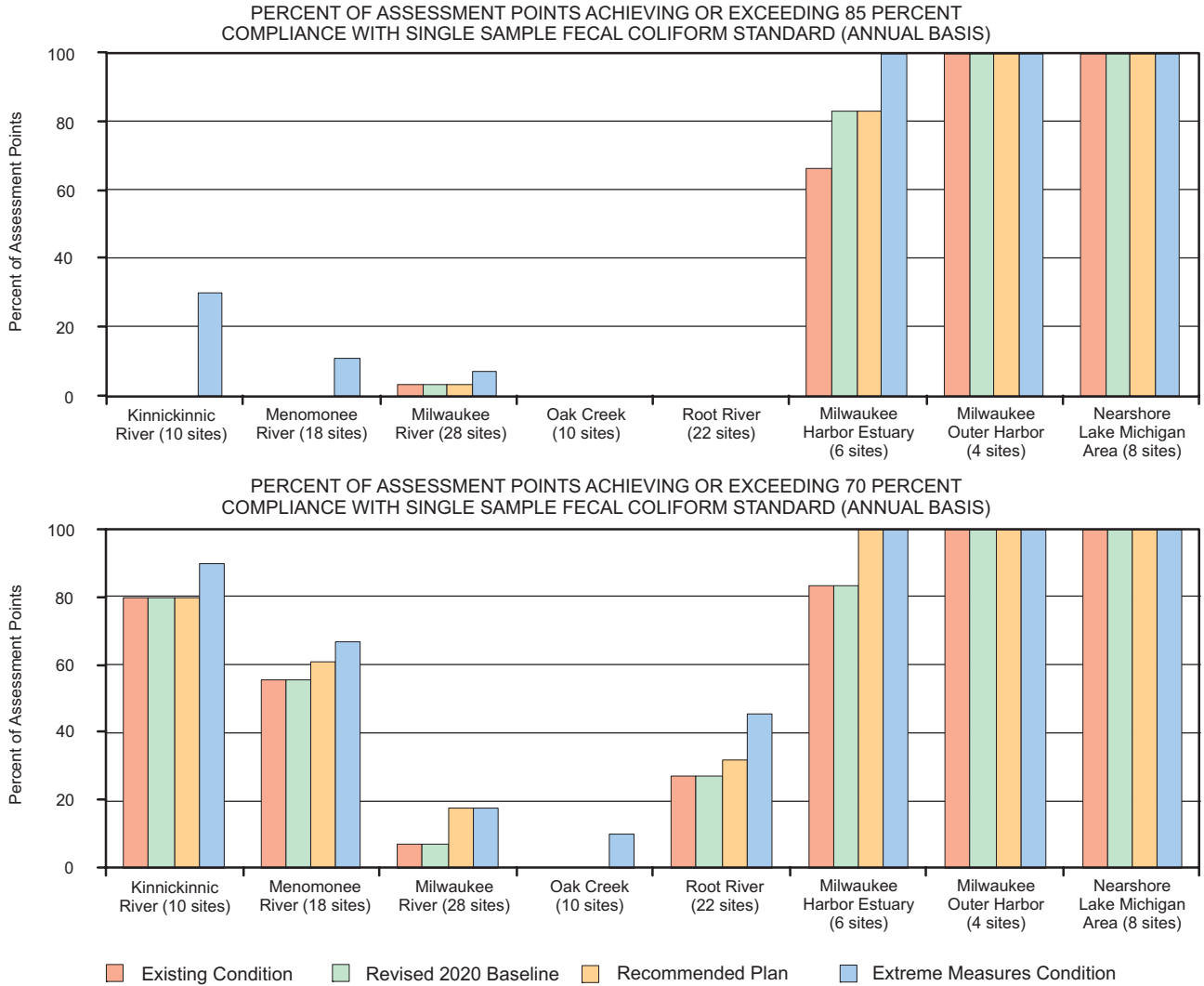


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc., and SEWRPC.

Figure X-1a

ACHIEVEMENT OF THE SINGLE SAMPLE FECAL COLIFORM BACTERIA STANDARD ASSESSED ON AN ANNUAL BASIS

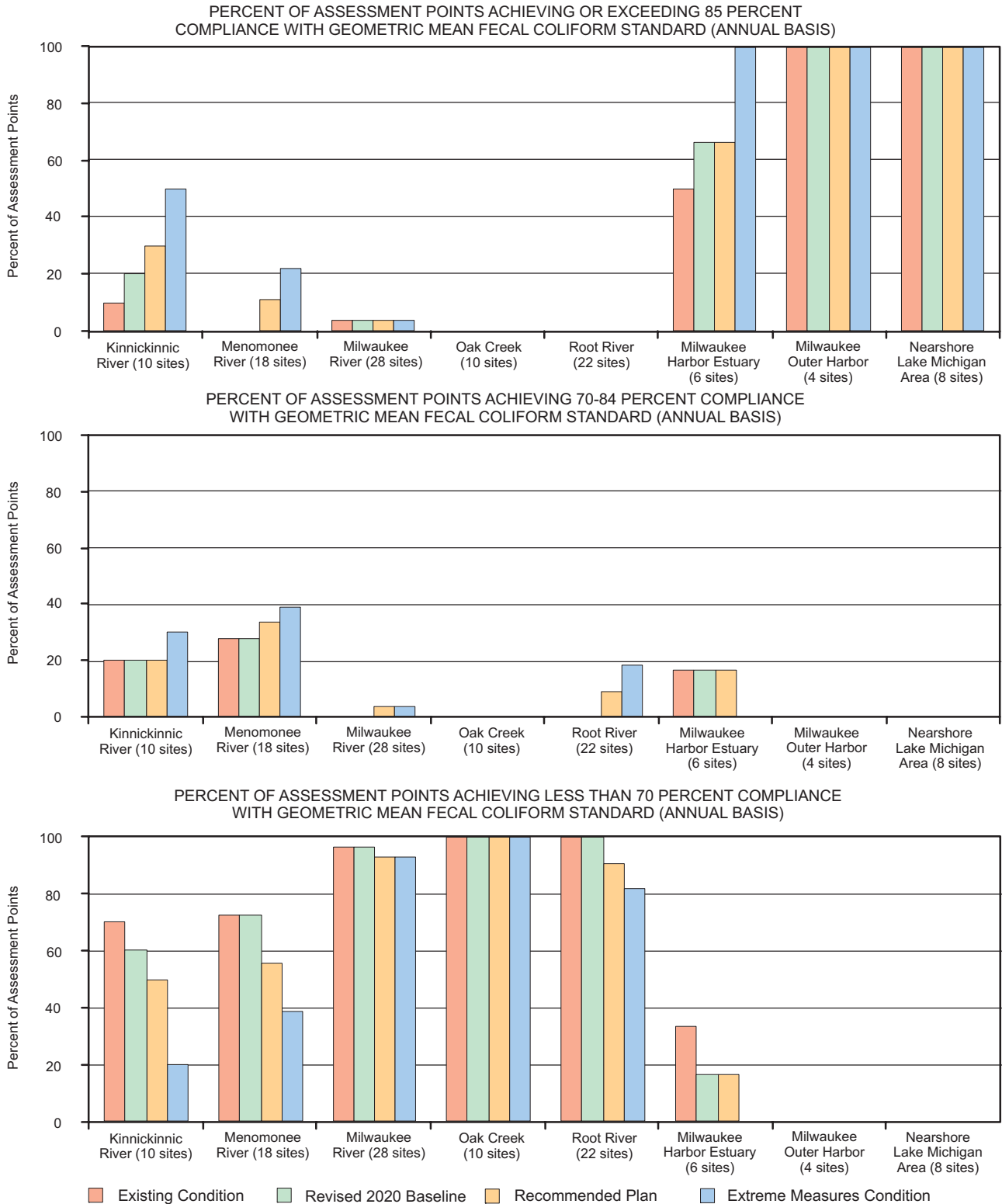


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-2

ACHIEVEMENT OF THE GEOMETRIC MEAN FECAL COLIFORM BACTERIA STANDARD ASSESSED ON AN ANNUAL BASIS

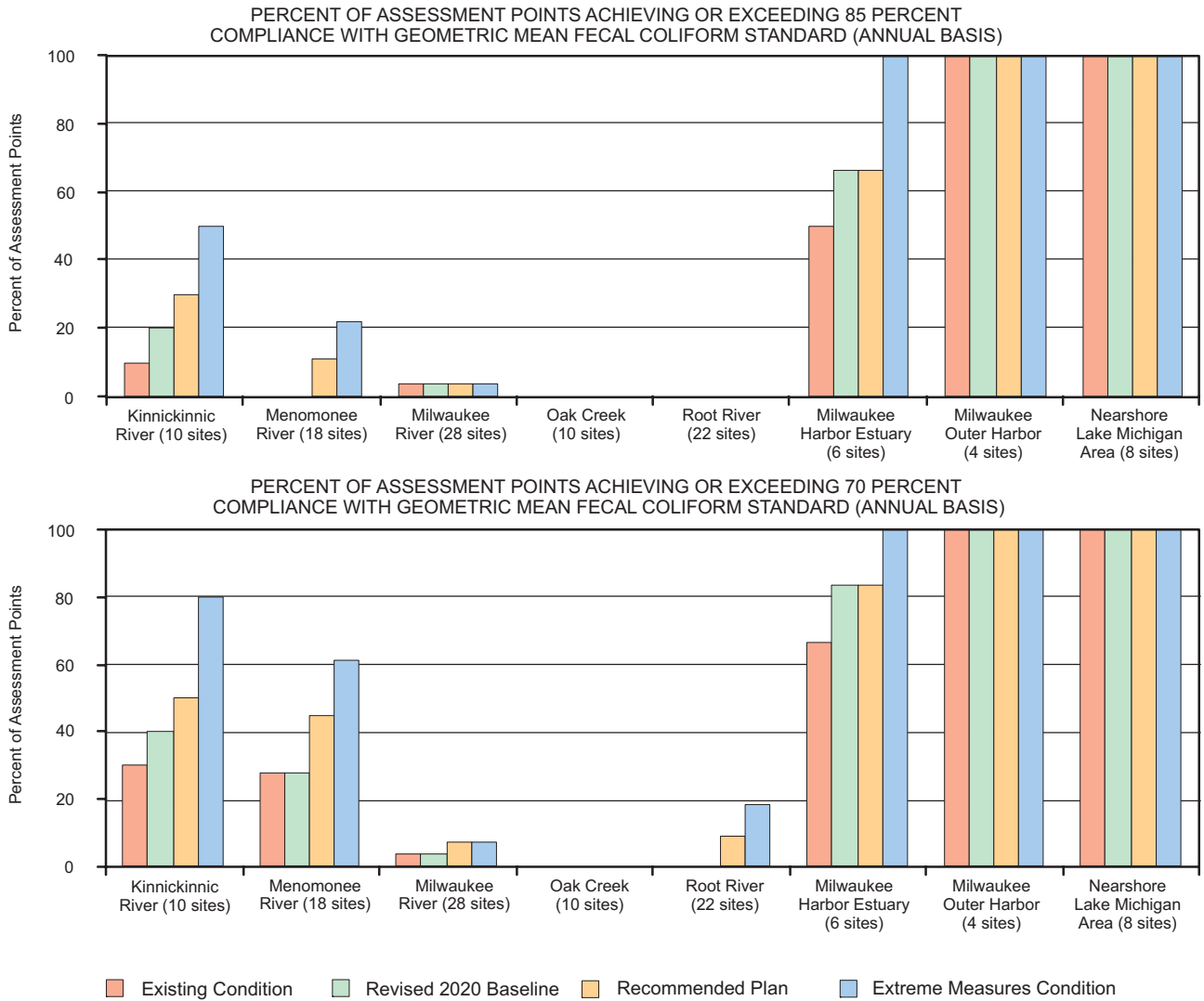


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc., and SEWRPC.

Figure X-2a

ACHIEVEMENT OF THE GEOMETRIC MEAN FECAL COLIFORM BACTERIA STANDARD ASSESSED ON AN ANNUAL BASIS

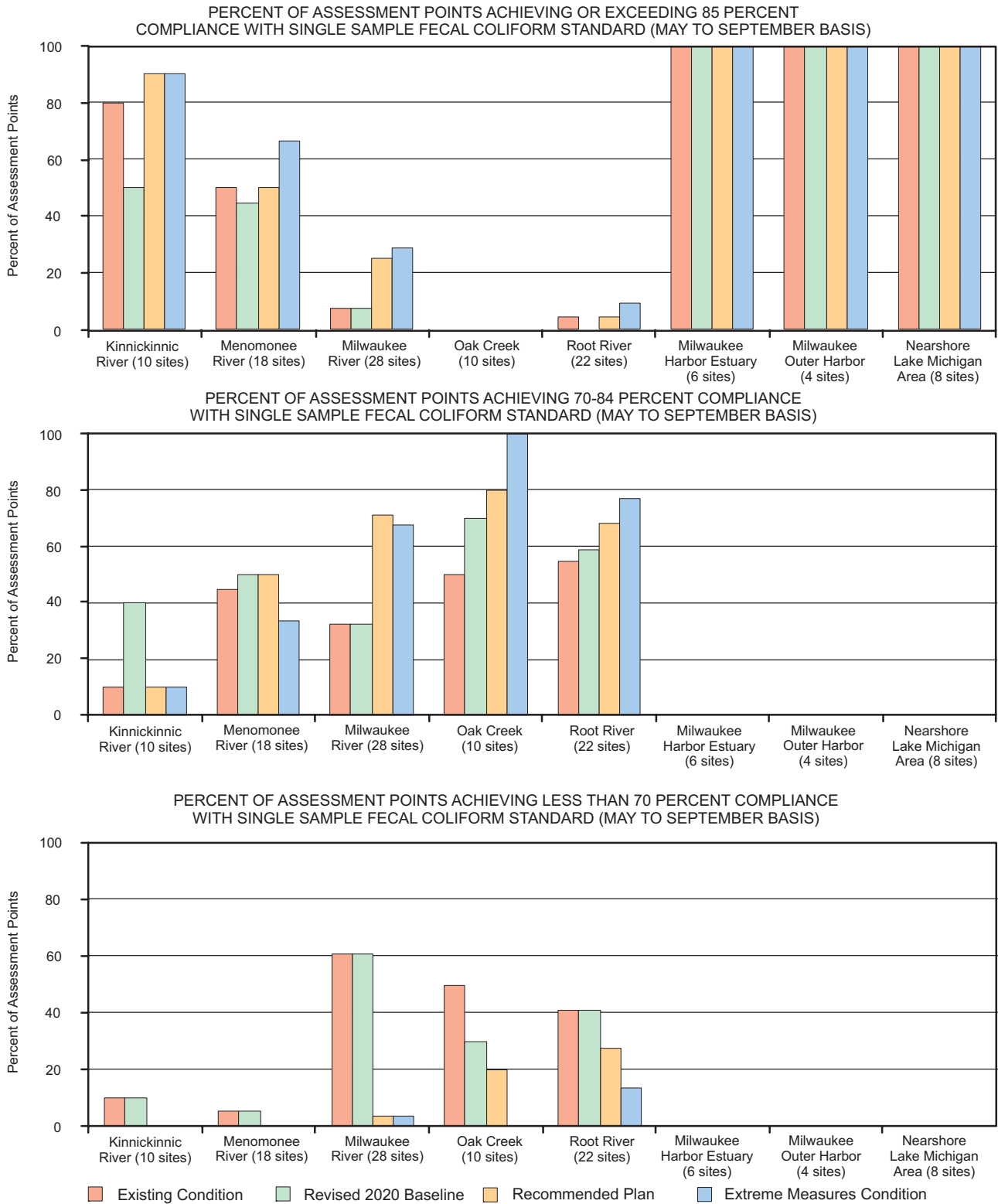


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-3

ACHIEVEMENT OF THE SINGLE SAMPLE FECAL COLIFORM BACTERIA STANDARD ASSESSED ON A MAY TO SEPTEMBER BASIS

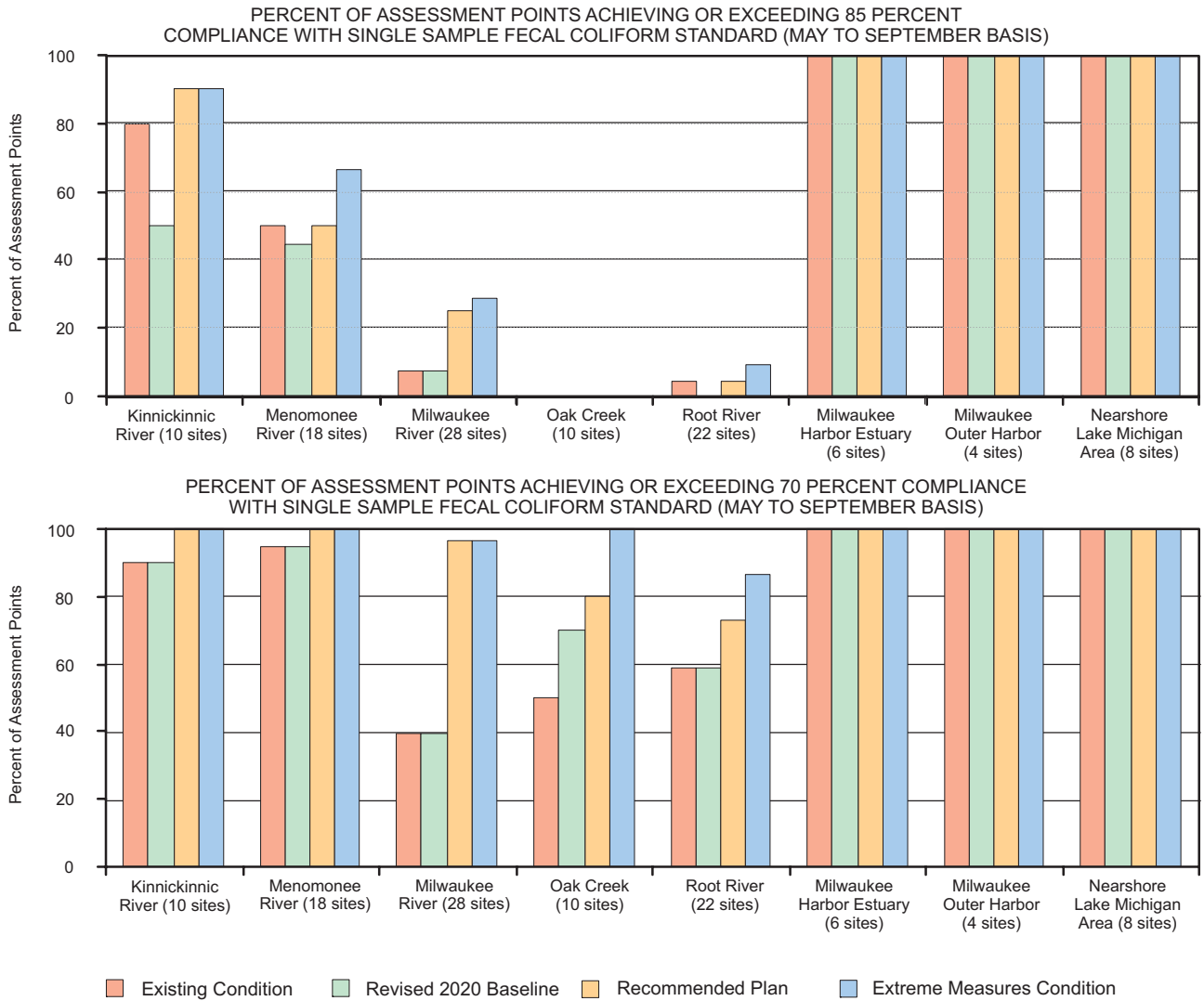


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-3a

ACHIEVEMENT OF THE SINGLE SAMPLE FECAL COLIFORM BACTERIA STANDARD ASSESSED ON A MAY TO SEPTEMBER BASIS

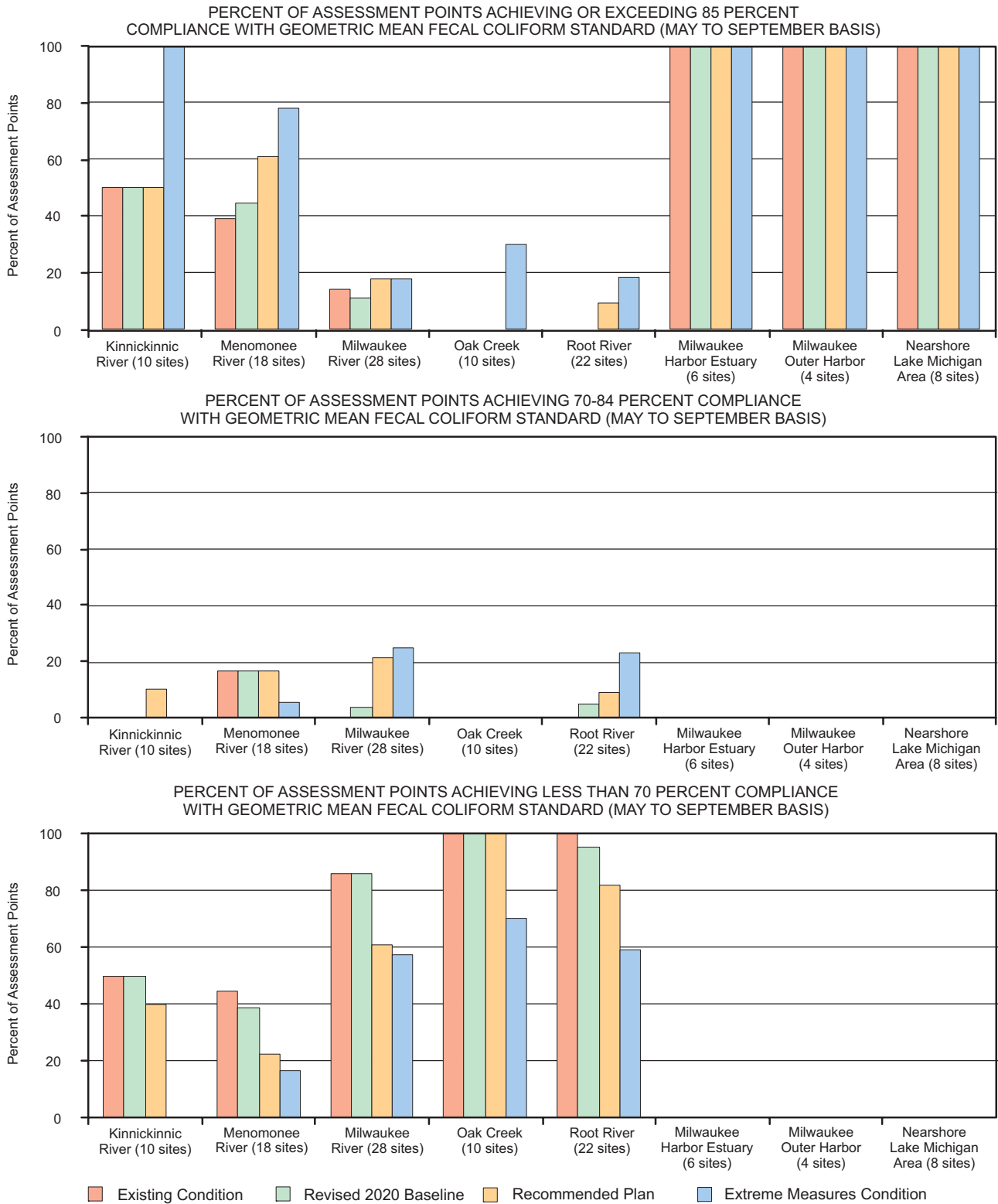


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-4

ACHIEVEMENT OF THE GEOMETRIC MEAN FECAL COLIFORM BACTERIA STANDARD ASSESSED ON A MAY TO SEPTEMBER BASIS

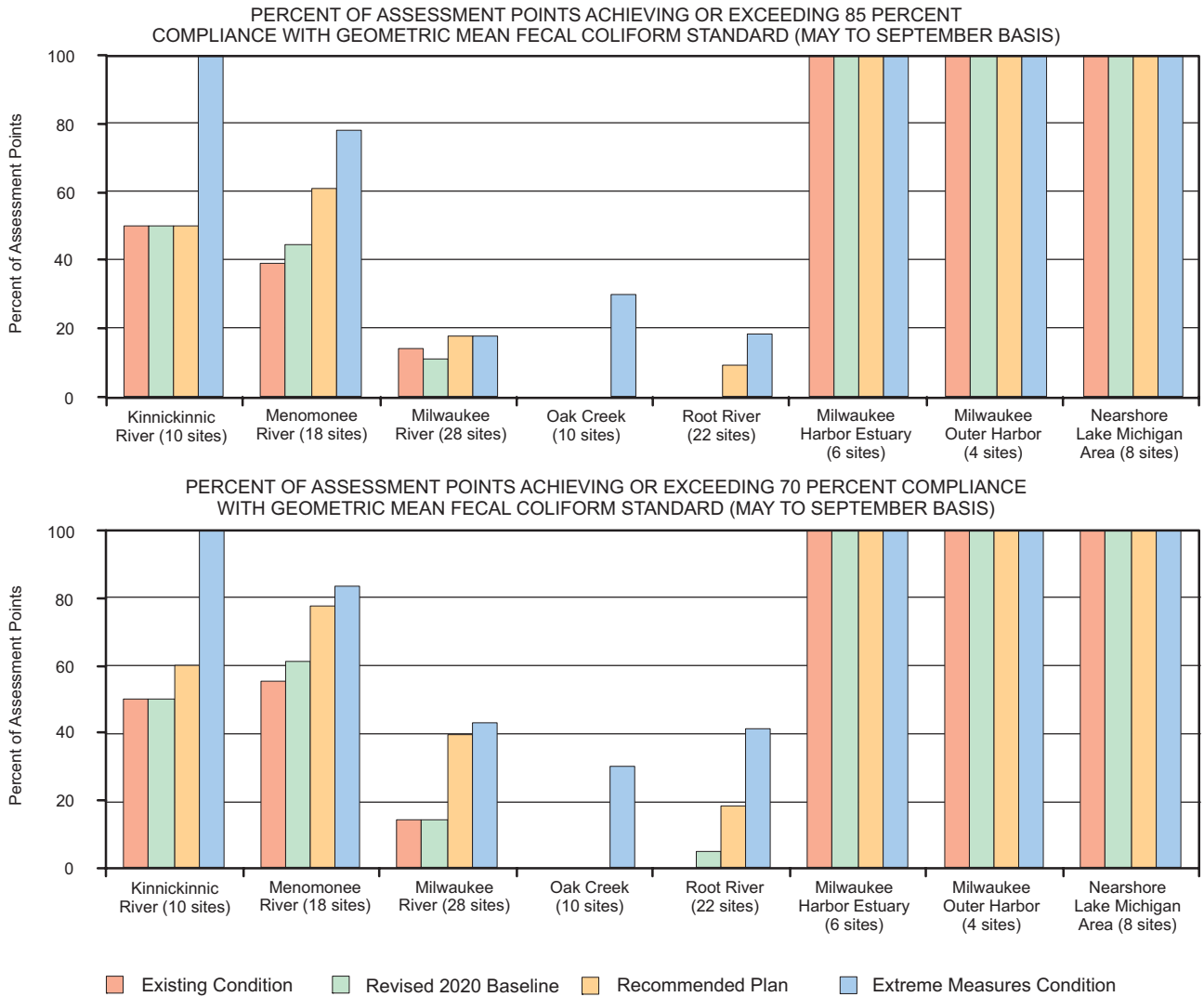


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-4a

ACHIEVEMENT OF THE GEOMETRIC MEAN FECAL COLIFORM BACTERIA STANDARD ASSESSED ON A MAY TO SEPTEMBER BASIS

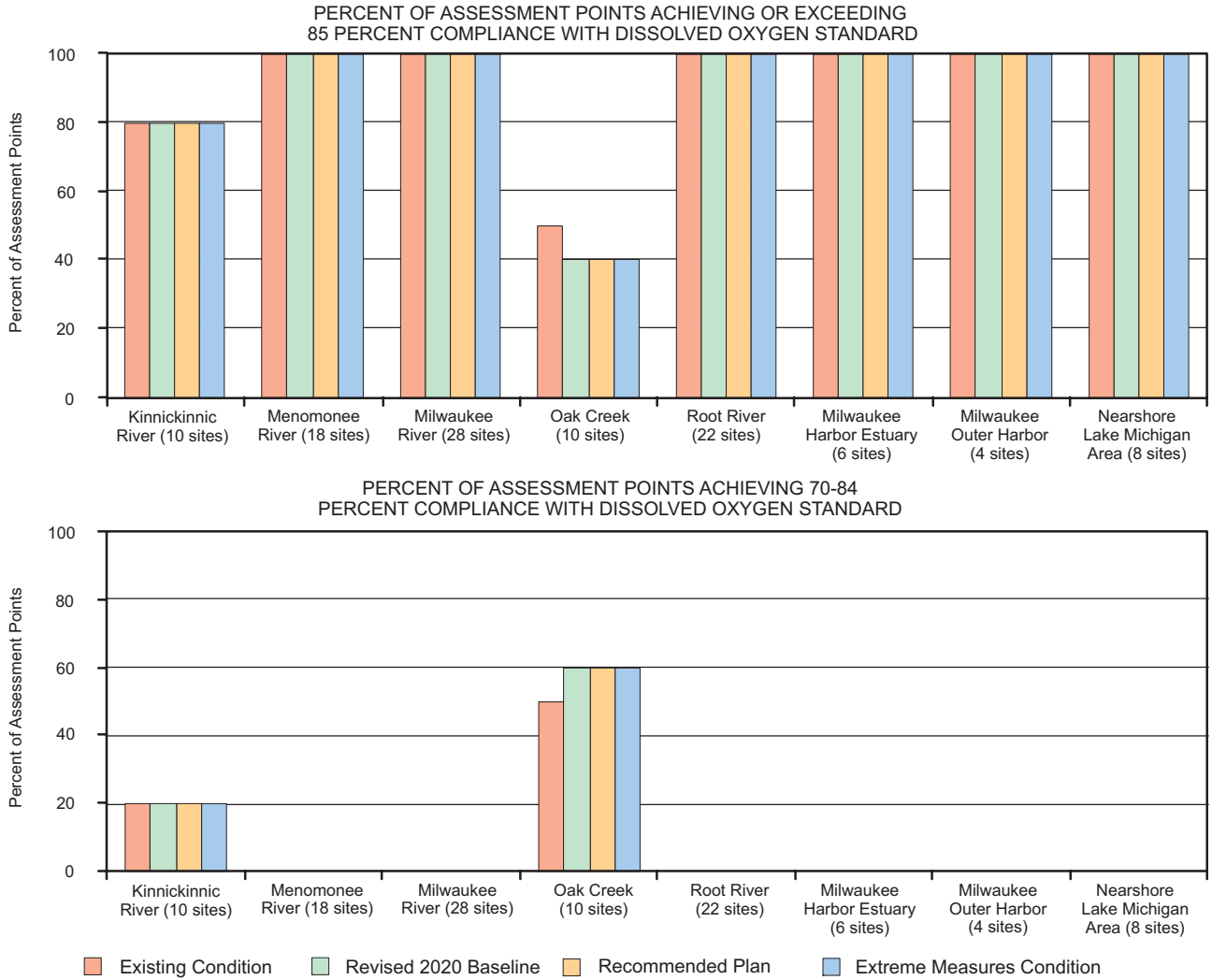


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc., and SEWRPC.

Figure X-5

ACHIEVEMENT OF THE DISSOLVED OXYGEN STANDARD

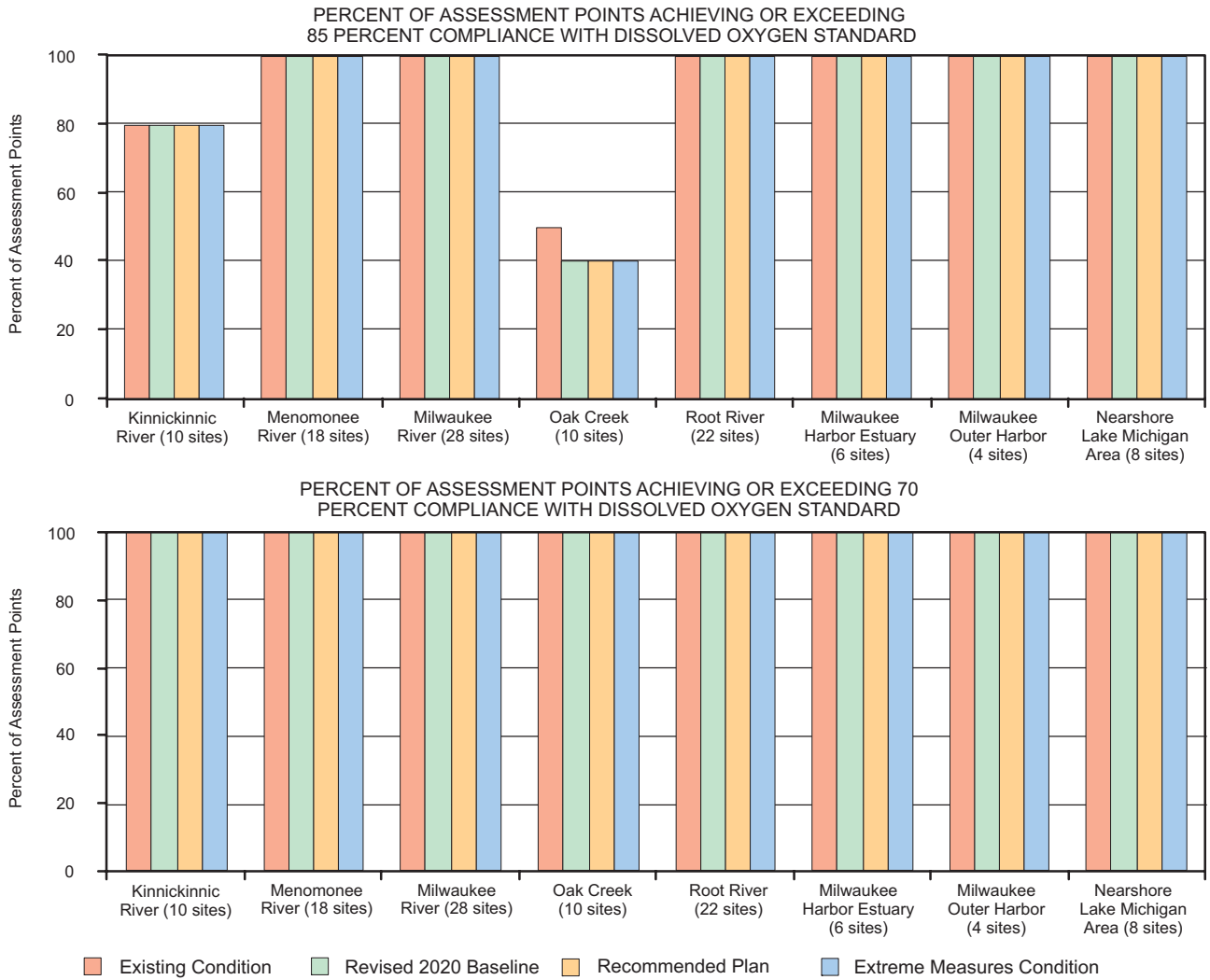


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-5a

ACHIEVEMENT OF THE DISSOLVED OXYGEN STANDARD



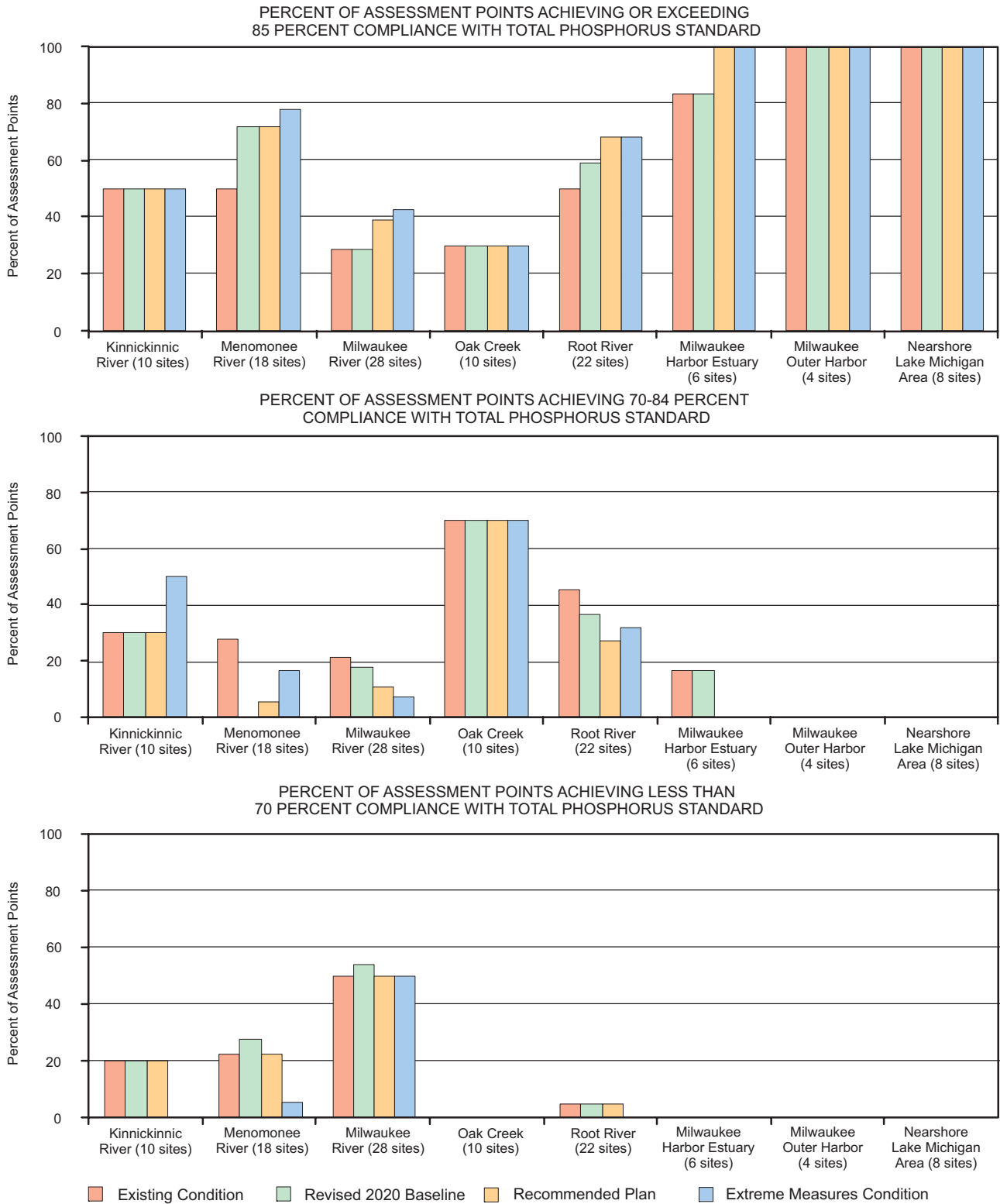
NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc., and SEWRPC.

Figure X-6

ACHIEVEMENT OF THE RECOMMENDED TOTAL PHOSPHORUS PLANNING STANDARD

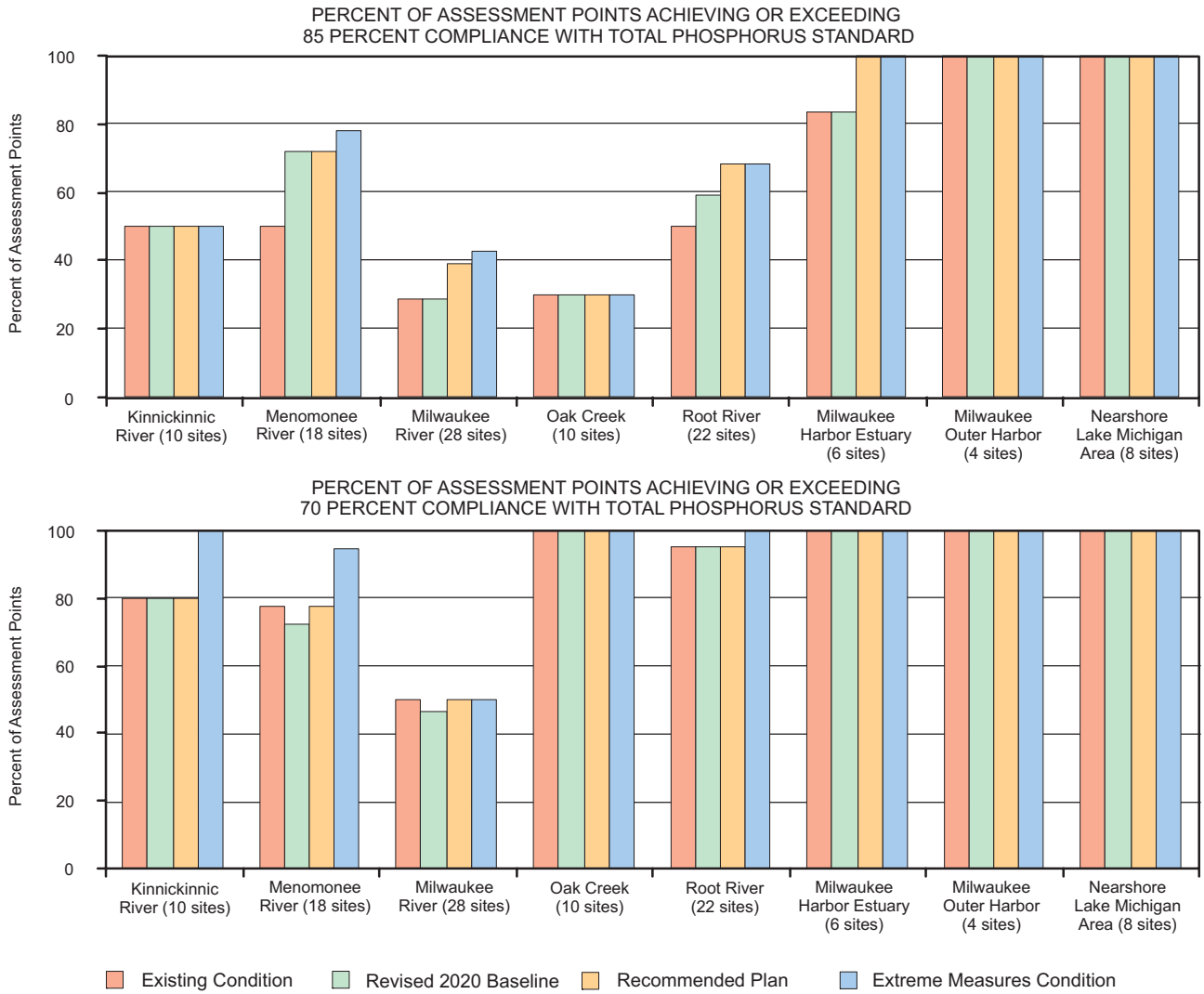


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc.; and SEWRPC.

Figure X-6a

ACHIEVEMENT OF THE RECOMMENDED TOTAL PHOSPHORUS PLANNING STANDARD

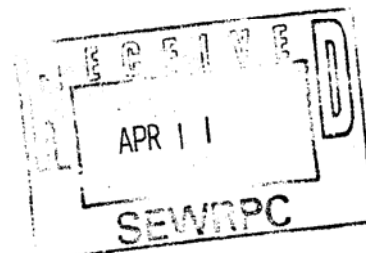


NOTE: The numerical water quality standards that were applied to assess compliance are set forth in Tables M-1 through M-6 of Appendix M of this report.

Source: Brown and Caldwell; HydroQual, Inc.; Tetra Tech, Inc., and SEWRPC.

MARQUETTE
UNIVERSITY

April 10, 2007



Mr. Michael Hahn
SEWRPC
P.O. Box 1607
Waukesha, WI 53187-1607

Dear Mike:

Please find enclosed some editorial suggestions with respect to the revised Chapter X and Appendix O of SEWRPC Planning Report No. 50. In addition to these editorial suggestions I have a few questions as listed in the following.

- 1) On page 1, reference is given to meso-eutrophic lakes. I have heard of mesotrophic and eutrophic lakes (and these are shown in Figure O-1), but I have never heard of a meso-eutrophic lake. Should this read mesotrophic?
- 2) On page 2, the Kelly Lakes are mentioned, but these are not included in the list of important lakes on page 1. Later it is mentioned that the Kelly Lakes are important smaller lakes. Some brief description of the Kelly Lakes should be given on page 2.
- 3) Shouldn't there be a citation of Map O-1 on page 3?
- 4) On page 10, when setting goals the larger nonpoint source load reduction targets from the original regional water quality management plan or the priority watershed nonpoint source pollution abatement planning process are selected as the goals. However, it is stated throughout the document that the priority watershed nonpoint source pollution abatement planning process **refined** the estimates from the original regional water quality management plan. If the later estimates are **refined**, why don't we use them as the targets? Be prepared to discuss this at the next Committee meeting.

I look forward to the next meeting.

Sincerely,

Charles S. Melching, Ph.D., P.E.
Associate Professor



5TH INTERNATIONAL CONFERENCE ON DIFFUSE POLLUTION AND WATERSHED MANAGEMENT
MILWAUKEE, JUNE 10-15, 2001

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Exhibit D

SEWRPC Planning Report No. 50

**A REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE
FOR THE GREATER MILWAUKEE WATERSHEDS**

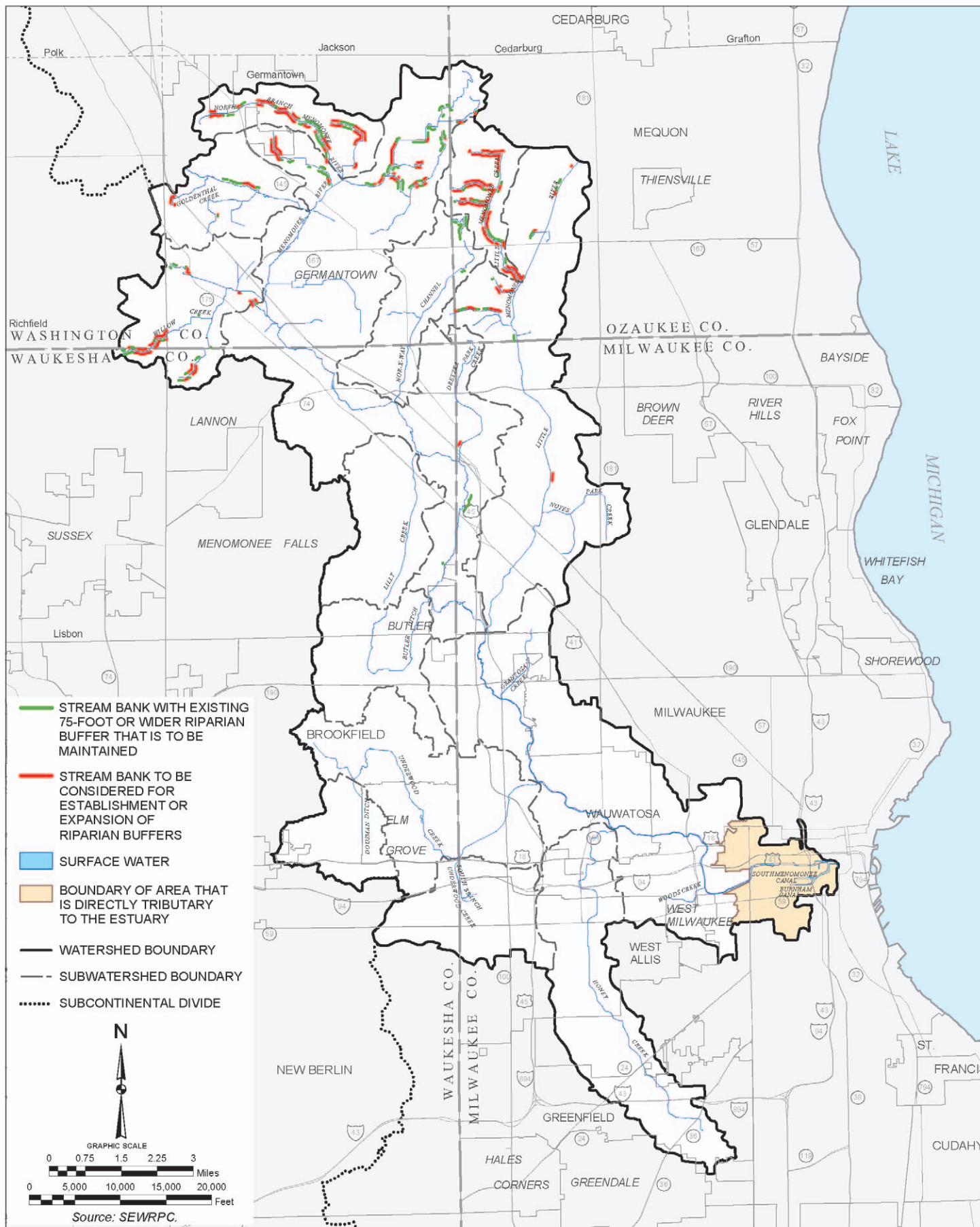
Chapter X

**RECOMMENDED WATER QUALITY
MANAGEMENT PLAN**

MAPS X-11a through X-11c

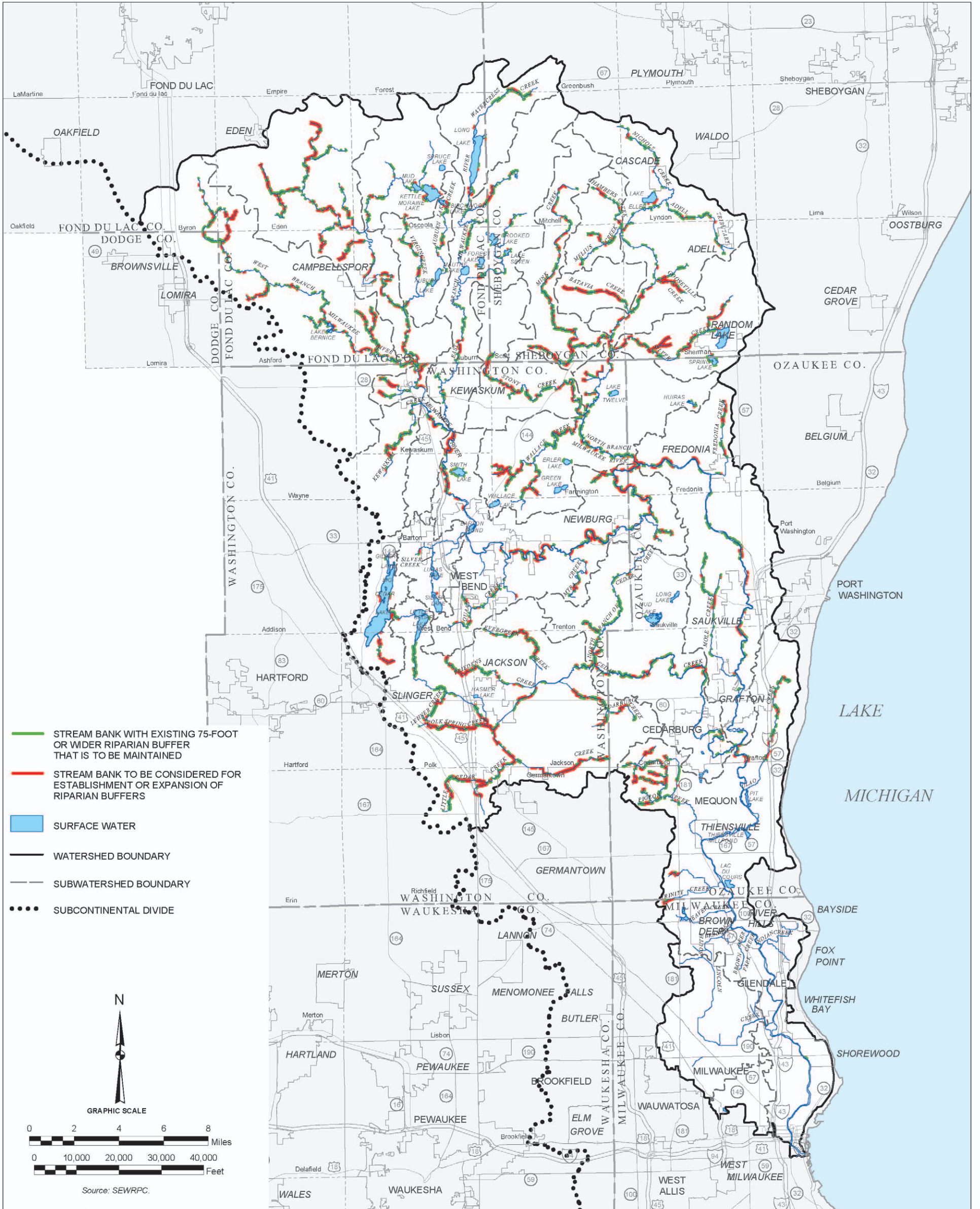
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MENOMONEE RIVER WATERSHED: STREAM REACHES FOR WHICH ESTABLISHMENT OR EXPANSION OF RIPARIAN BUFFERS ARE TO BE CONSIDERED



Map X-11b

MILWAUKEE RIVER WATERSHED: STREAM REACHES FOR WHICH ESTABLISHMENT OR EXPANSION OF RIPARIAN BUFFERS ARE TO BE CONSIDERED



PRELIMINARY DRAFT

ROOT RIVER WATERSHED: STREAM REACHES FOR WHICH ESTABLISHMENT OR EXPANSION OF RIPARIAN BUFFERS ARE TO BE CONSIDERED

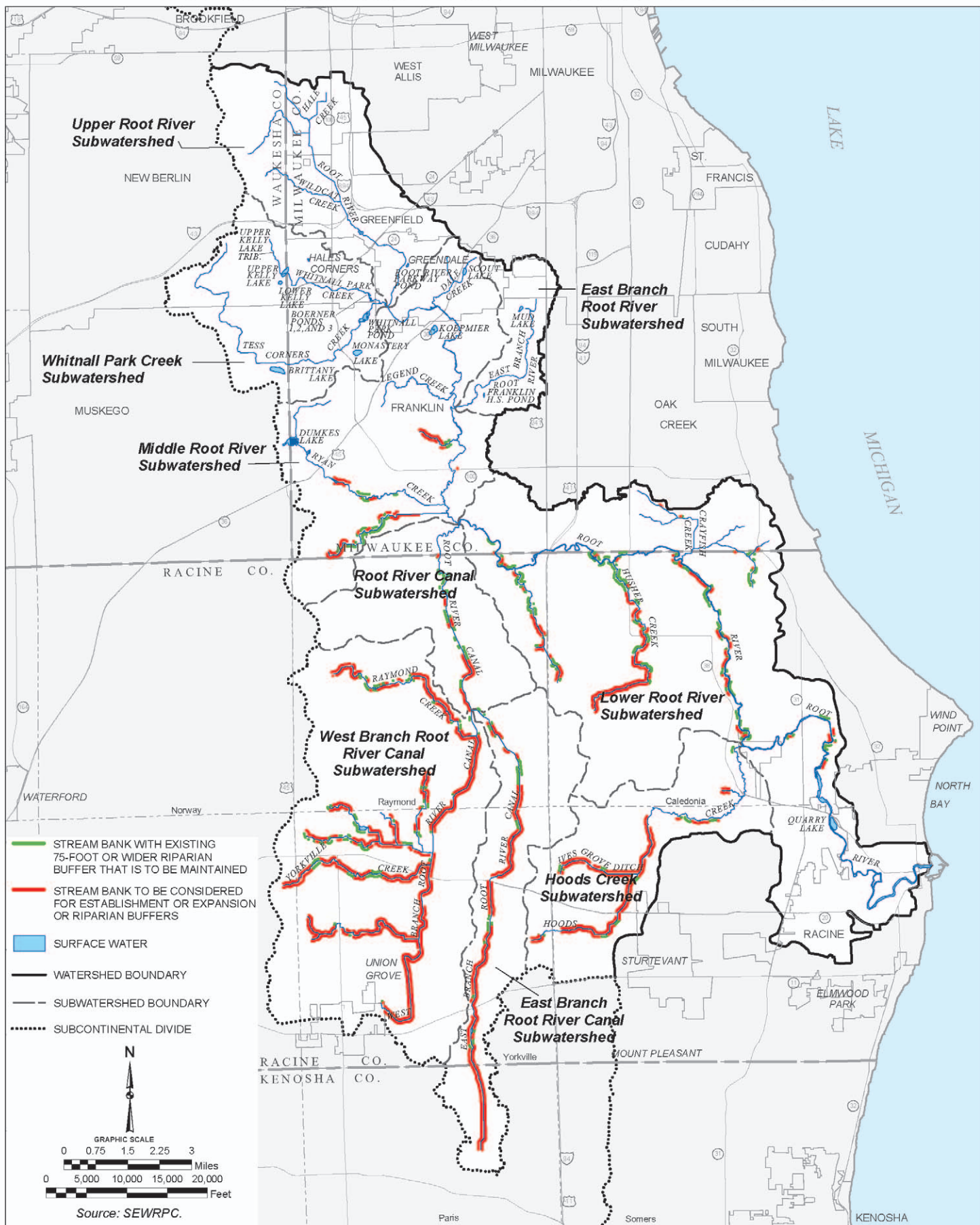


Exhibit E

SEWRPC Planning Report No. 50

**A REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE
FOR THE GREATER MILWAUKEE WATERSHEDS**

Chapter X

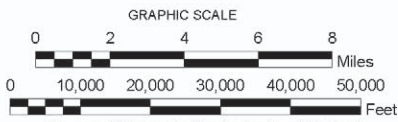
**RECOMMENDED WATER QUALITY
MANAGEMENT PLAN**

MAP X-11d

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POTENTIAL PRAIRIE OR WETLAND RESTORATION AREAS

- CANDIDATE PRAIRIE OR WETLAND RESTORATION AREA
- SURFACE WATER
- STUDY AREA BOUNDARY



Source: Wisconsin Geological and Natural History Survey and SEWRPC.

PRELIMINARY DRAFT

