MINUTES

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

DATE: December 14, 2005

TIME: 9:30 a.m.

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

Committee Members Present

Daniel S. Schmidt, Chairman	Administrator, Village of Kewaskum, SEWRPC Commissioner
Michael G. Hahn, Secretary	Chief Environmental Engineer, Southeastern Wisconsin Regional Planning Commission
Martin A. Aquino (for Jeffrey Mantes)	Environmental Manager, Environmental Engineering, City of Milwaukee
John R. Behrens	Commissioner-Secretary, Silver Lake Protection and Rehabilitation District
James Lubner	Sea Grant Advisory Services Specialist, UW Sea Grant Institute
Scott Mathie (for Matthew Moroney)	Metropolitan Builders Association of Greater Milwaukee
Paul E. Mueller	Administrator, Washington County Planning and Parks Department
Cheryl Nenn	Riverkeeper/Project Director, Friends of Milwaukee's Rivers
Jeffrey S. Nettesheim	Senior Utility Engineer, Village of Menomonee Falls
Stephen Poloncsik (for Peter G. Swenson)	Senior Staff Engineer, U.S. Environmental Protection Agency
Kevin L. Shafer	Executive Director, Milwaukee Metropolitan Sewerage District
Thomas A. Wiza	Director of Engineering and Public Works, City of Cedarburg

Staff Members and Guests

Robert P. Biebel	Special Projects Environmental Engineer, Southeastern Wisconsin Regional Planning Commission
Joseph E. Boxhorn	Senior Planner, Southeastern Wisconsin Regional Planning Commission
Troy E. Deibert (for William Krill)	Water Resources Engineer, HNTB Corporation
Thomas M. Slawski	Principal Planner, 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 Commission staff.

APPROVAL OF MINUTES OF THE MEETING OF OCTOBER 12, 2005

Mr. Schmidt asked if there were any additions or revisions to be made to the minutes of the October 12, 2005, meeting of the Committee.

Mr. Lubner provided clarification of his comments that were reported in the first full paragraph on page 7 of the minutes. He noted that phosphorus levels "have been increasing in the **upper** reaches of the estuary" (change indicated in bold type).

[Secretary's Note: In response to Mr. Lubner's comment, the additions to Technical Report Chapters V and VI that are set forth in the second Secretary's Note on page 10 of the October 12, 2005, meeting minutes were revised to include the following sentence after the second sentence of each insert:

"In addition, researchers at the University of Wisconsin-Milwaukee/University of Wisconsin System Great Lakes WATER Institute have found that phosphorus concentrations have been increasing in the upper reaches of the estuary."]

There being no further additions or revisions, the minutes were approved, as amended, on a motion by Mr. Lubner, seconded by Mr. Shafer, and carried unanimously.

CONSIDERATION OF CHAPTER VIII, "SURFACE WATER QUALITY CONDITIONS AND SOURCES OF POLLUTION IN THE OAK CREEK WATERSHED," OF SEWRPC TECHNICAL REPORT NO. 39, *WATER QUALITY CONDITIONS AND SOURCES OF POLLUTION IN THE GREATER MILWAUKEE WATERSHEDS*

Mr. Schmidt asked Mr. Hahn to review the preliminary draft of the chapter.

Mr. Hahn began by providing a brief summary of the status of the preparation and review of the chapters of Technical Report No. 39. He noted that TR No. 39 Chapters V (Kinnickinnic River watershed) and VI (Menomonee River watershed) would be available on the Commission web site soon, once committee comments were incorporated .

[Secretary's Note: The attached Exhibit A is the chapter status summary that was presented.]

Mr. Hahn then explained that the chapter will be presented in separate sections by Mr. Boxhorn, Mr. Slawski, and himself.

Mr. Boxhorn began summarizing the introduction, description of the watershed, land use, quantity and quality of surface water, and toxicity conditions sections of the chapter.

Regarding the fourth paragraph on page 3, Mr. Mathie asked what was meant by the term "new development." Mr. Boxhorn replied that it was used to distinguish new development from redevelopment or in-fill.

Mr. Krohn asked that the fifth paragraph on page 3 be revised to include percent changes in population and households.

[Secretary's Note: That paragraph was revised to read as follows (Note: Bold text is used to include additional text in this Secretary's note and subsequent notes in these minutes):

"The changes in land use reflect changes in population and population distribution within the watershed. Several trends are apparent in the data. Over the long term the number of persons living in the watershed has increased. From 1970 through 1990, the population in the watershed increased from 38,162 to 43,301, **representing an additional 5,139 persons, or a 13 percent increase**. Over the same time period the number of households increased from 10,456 to 16,526, **an increase of about 6,070, or 58 percent**. Between 1990 and 2000, the size of the population in the watershed **grew** more quickly, increasing

by 7,732 to a **total of** 51,033 persons, **which is an increase of 18 percent**. During **that** decade of increasing population numbers, the number of households in the watershed increased by 4,425 units to 20,951, **which is an increase of about 27 percent**."]

Mr. Boxhorn noted that the dissolved oxygen limits that indicate poorer water quality on Figure VIII-11 were added for the first time in this chapter and will also be added to similar figures in Chapters V (Kinnickinnic River watershed) and VI (Menomonee River watershed), which have already been reviewed by the Committee.

Mr. Krohn asked that it be determined whether the City of South Milwaukee Water Utility adds orthophosphate or polyphosphate to treated water and that the last sentence of the first partial paragraph on page 27 be revised accordingly. Mr. Biebel said that the Commission staff would check and make the appropriate revision. Mr. Lubner asked if there were significant noncontact cooling water discharges in the watershed.

[Secretary's Note: The last two sentences in the first partial paragraph on page 27 were deleted and replaced with the following:

"The City of Greenfield is a retail customer of the Milwaukee Water Works, so its municipal water also contains orthophosphate. In addition, the water utilities of the Cities of Cudahy and South Milwaukee both add polyphosphate to their municipal water supply for the same purpose as the City of Milwaukee. The water utilities of the Cities of Franklin and Oak Creek do not treat their municipal water with orthophosphate or polyphosphate. As of 2003, there were no permitted noncontact cooling water dischargers to Oak Creek in the Cities of Cudahy, Franklin, or Greenfield; there was one in Milwaukee, and there were two in South Milwaukee. There was also one discharger in the City of Oak Creek operating under an individual permit. Based on the foregoing, it is concluded that orthophosphate or polyphosphate in cooling water discharges represents a relatively small contribution of phosphorus to the streams of the watershed."]

Mr. Mathie said that Figure VIII-20 on page 30 did not seem to support the conclusion on page 29 that all monitoring stations along Oak Creek show significant increasing trends in copper concentrations. Mr. Boxhorn replied that, as shown in Table C-4 of Appendix C, statistical analysis of the data verifies that copper concentrations are increasing over time.

Mr. Mathie asked if references could be provided for the WDNR sampling studies referred to in the **Toxic Contaminants in Aquatic Organisms** section on pages 33 and 34 and he suggested that the data were too old to be representative of existing conditions. Mr. Behrens asked why more-recent data were not available. Mr. Biebel said that an explanation would be added explaining the age of the data.

[Secretary's Note: The following sentence was added after the second sentence in the paragraph on page 33:

"While not from the 1998 through 2001 baseline period, these toxicity data represent the most recent available data."]

Mr. Boxhorn noted that the earlier data on pesticides were for unfiltered samples, but the 2004 data were for filtered samples, which measure only the dissolved fraction. He also noted that, for those pollutants for which there are water quality standards or guidelines, only more-recent data from 1998 through 2004 are used for evaluation of compliance with the standards or guidelines. Mr. Slawski added that the sampling schedule is determined by the WDNR. Mr. Krohn elaborated that WDNR fish toxicologists provide a list of sample sites; sampling is done randomly, rotating between locations with emphasis on areas with health advisories; and the amount of sampling is limited by budget constraints. Mr. Lubner asked if the sampling frequency by the WDNR was related to the amount of subsistence fishing on waterbodies, for example, on Oak Creek below the dam in the City of South Milwaukee. Mr. Krohn replied that the subsistence fishing data as represented by the creel census is

specific to Lake Michigan fish and covers the stream reach below the dam. Ms. Nenn asked if any local university data were available, and she noted that Friends of Milwaukee's Rivers participated in a national mercury study that included the Milwaukee River and that those data were provided to the WDNR. Mr. Slawski responded that the Commission staff had obtained data from all known sources.

Mr. Slawski then began a summary of the biological conditions, channel conditions, and habitat and riparian corridor condition sections for the Oak Creek watershed.

Mr. Mathie asked if the doubling of the number of recorded fish species which has occurred since 1993 was considered to be good or bad. Mr. Slawski said that it was a positive development that is indicative of increased diversity, but that the increase had a minimal effect on the Index of Biotic Integrity (IBI) and until the numbers of fish increase, great improvement cannot be claimed. Mr. Mathie asked if Mr. Slawski was suggesting that a decrease had occurred in native species, but there was an overall increase in the total number of species sampled. Mr. Slawski referred to Figure VIII-26 on page 39 and he said that there has been a minor increase in native species, but that intermediate tolerance species account for most of the increase. He reiterated that it is difficult to characterize the increase in the number of species as an overall improvement because of the small number of samples taken.

Mr. Mathie noted that the second paragraph on page 36 describes how the dam on Oak Creek limits the fishery and he asked if there were other factors that also harm the fishery. Mr. Slawski said that the dam inhibits fish migration and that drop structures, culverts, and bridges also obstruct fish from reaching feeding grounds, rearing areas, and spawning sites. He also cited water quality, toxicity, and stream channelization as other factors that negatively impact the fishery.

With reference to the last paragraph on page 37, Mr. Mathie asked that clarification be made regarding urbanization being a cause of habitat degradation. Ms. Nenn noted that there was considerable description of the impacts of urbanization on pages 37 through 41 and she said that there is a clear tie between imperviousness in a tributary area. Mr. Hahn said that some of the general description of the effects of urbanization on the water resource had been moved to Chapter II of the Technical Report.

[Secretary's Note: Exhibit A of the minutes of the October 12, 2005, Advisory Committee meeting is the subsection on the effects of urbanization and agriculture on instream biological communities which was added to Chapter II.]

[Secretary's Note: The first sentence in the last partial paragraph on page 37 was moved to page 41 and inserted after the bulleted list as a concluding sentence to that list. Similar revisions were made to Chapter V (Kinnickinnic River watershed, move from page 42 to 45) and Chapter VI (Menomonee River watershed, move from page 46 to 48).]

Ms. Nenn mentioned a River Alliance report on dams, and she asked about the purpose of the dam on Oak Creek in the City of South Milwaukee. Mr. Biebel replied that the dam maintained a pond that was considered an aesthetic amenity. He noted that the SEWRPC Oak Creek watershed study initially recommended removal of the dam, but that recommendation was changed following comment at the public hearing on the plan. He said that the watershed study had an option for providing an artificial unconnected pond, and he added that the costs of dam removal were high because of sediment removal issues. Mr. Lubner said that the pond created by the dam is managed like a park pond and stocked with fish.

Regarding the River Alliance data on dams, Mr. Slawski said that the Commission staff was incorporating the data and also was working with the River Alliance to update the Alliance inventory.

Mr. Krohn stated that Mr. Craig Helker of the WDNR staff said that the reference to eight drop structures in the watershed was correct, but he noted that three additional structures have been removed since 2000. Mr. Slawski said the drop structure inventory would be coordinated with Mr. Helker.

[Secretary's Note: The last sentence in the **Dams** subsection on page 49 was edited as follows and the sentence indicated in bold text was added:

"**Three other drop structures have been taken out since 2000. Drop** structures can disrupt sediment transport and limit aquatic organism passage in these systems, which serve to fragment these populations reducing overall abundance and diversity."]

Mr. Behrens said that there were no data provided on the mean width of streams and he felt that this information would be helpful to readers not familiar with the streams of the watershed. Mr. Slawski replied that such information does not exist on a level that the Commission staff can interpret. He noted that the WDNR baseline monitoring data, which include detailed physical dimension data, were limited to only three sites in the entire watershed. Mr. Lubner and Mr. Behrens suggested that a note on stream widths could be added to Map VIII-13, which shows riparian corridor widths. Mr. Wiza said that the photographs in Figure VIII-31 give an unfamiliar reader a good sense of channel conditions.

[Secretary's Note: The SEWRPC staff will compile stream width data from existing available sources and limited field investigations and will insert that information in each of the watershed chapters.]

Mr. Lubner said that Figure VIII-26 implies that dissolved oxygen tolerant fishes and native fishes are mutually exclusive. Mr. Slawski said that those are the main elements of the IBI breakout, but some native species, such as Creek Chub, are dissolved oxygen tolerant. Mr. Lubner suggested adding a note to Figure VIII-26 stating that the two groups are not mutually exclusive. Mr. Slawski said that he will review this figure and may separate the data into two figures.

Mr. Mathie said that the reference on page 41 regarding the effects of agricultural land use on instream biological conditions was the first such reference in the report and he asked that it be included in other pertinent watersheds. Mr. Hahn replied that the minutes of the October 12, 2005, meeting included such a reference in the addition to be made to Chapter II (Exhibit A of the minutes). Mr. Mathie also asked that the first full paragraph on page 41 be reviewed to recognize the anticipated future positive effect on stream conditions of implementation of the standards and requirements of Chapters NR 151 "Runoff Management," and Chapter NR 216, "Storm Water Discharge Permits," of the *Wisconsin Administrative Code.*

[Secretary's Note: The following was added at the end of the first full paragraph on page 41 of Chapter VIII (The same sentence was also added at the end of the insert to page 45 of Chapter V (Kinnickinnic River watershed) that is described on pages 3 and 4 of the October 12, 2005, meeting minutes):

"The standards and requirements of Chapter NR 151 "Runoff Management," and Chapter NR 216, "Storm Water Discharge Permits," of the *Wisconsin Administrative Code* are intended to mitigate the impacts of existing and new urban development and agricultural activities on surface water resources through control of peak flows in the channel-forming range, promotion of increased baseflow through infiltration of stormwater runoff, and reduction in sediment loads to streams and lakes. The implementation of those rules is intended to mitigate, or improve, water quality and instream/inlake habitat conditions."]

[Secretary's Note: A paragraph similar to that on page 41 of Chapter VIII would also be appropriate in Chapter VI (Menomonee River watershed). The October 12, 2005, meeting minutes include

the addition of a similar paragraph in Chapter V (Kinnickinnic River watershed), but, because that watershed is essentially entirely urban, the agricultural component is not pertinent. The first two full paragraphs on page 38 of Chapter VI were deleted and replaced with the following:

"Chapter II of this report includes a description of the correlation between urbanization in a watershed and the quality of the aquatic biological resources. The amount of imperviousness in a watershed that is directly connected to the stormwater drainage system can be used as a surrogate for the combined impacts of urbanization in the absence of mitigation. Urban land use in the Menomonee River watershed increased from about 21 percent urban land in 1950 (5 to 10 percent imperviousness) to 42 percent in 1963 (approximately 10 to 15 percent imperviousness), and it currently has about 63 percent urban land overall (approximately 20 percent imperviousness). That level of imperviousness is beyond the threshold level of 10 percent at which previously cited studies indicate that negative biological impacts have been observed. As also described in Chapter II of this report, studies have indicated that the amount of agricultural land in a watershed can also be correlated with negative instream biological conditions. Agricultural land use has predominated in the extreme upper portions of the Menomonee River watershed, whereas the lower portions of the watershed have been dominated by urban development. Despite the increase in urban development from 1950 to the present the quality of the fishery has not significantly changed. However, poor to very poor IBI scores are observed throughout this watershed. Based upon the amount of agricultural and urban lands in the watershed and, in the past, a lack of measures to mitigate the adverse effects of those land uses, the IBI scores are not surprising. The standards and requirements of Chapter NR 151 "Runoff Management," and Chapter NR 216, "Storm Water Discharge Permits," of the *Wisconsin Administrative Code* are intended to mitigate the impacts of existing and new urban development and agricultural activities on surface water resources through control of peak flows in the channel-forming range, promotion of increased baseflow through infiltration of stormwater runoff, and reduction in sediment loads to streams and lakes. The implementation of those rules is intended to mitigate, or improve, water quality and instream/inlake habitat conditions."]

Noting the reference to "urbanization" on page 43, Mr. Mathie asked that the term be defined at its first mention in each watershed chapter.

[Secretary's Note: That is accomplished through the reference to the description in Chapter II which is made in the first full paragraph on page 41 and has been added to the previously reviewed watershed chapters in TR No. 39.]

Mr. Lubner said that the right-hand graph in Figure VIII-30 could be clarified by adding an arrow indicating improving conditions, since improvement on that graph occurs in the opposite direction of improvement on the adjacent graph.

[Secretary's Note: Such an arrow was added to Figure VIII-30.]

Mr. Mathie cited the first full sentence in the first partial paragraph on page 44 and asked why conclusions were being drawn using data that "you are not secure with." He suggested that the qualifying sentences be placed first in the paragraph. He also asked what Wisconsin researchers were being referred to in the first full paragraph on page 44. Finally, he said that the evaluation of macroinvertebrate conditions should include reference to the relatively recent NR 151 and 216 standards and regulations. Mr. Slawski and several members of the Committee noted that a specific footnote is included to identify the Wisconsin researchers. Mr. Biebel said that a reference to the new regulations would be added.

[Secretary's Note: Upon further review of the paragraph that begins on the bottom of page 43 and continues onto page 44, the Commission staff concluded that the paragraph as originally drafted is very clear as to the limitations of the data and that the conclusion are adequately qualified. Besides the addition of the following sentence to the end of the paragraph, no modifications to the paragraph are necessary:

"As noted above, implementation of the standards and requirements of Chapter NR 151 and Chapter NR 216 of the *Wisconsin Administrative Code* are intended to mitigate the impacts of existing and new urban development and agricultural activities on surface water resources. Such implementation could have a positive effect on macroinvertebrates."]

Mr. Mathie said that the fourth sentence in the **Synthesis** subsection on page 44 should be reworded to clarify the meaning.

[Secretary's Note: That sentence was revised as follows:

"Since water quality has either not improved or **has** generally been decreasing in the watershed for most constituents, water quality and habitat **are** potentially the most important factors limiting both the fishery and macroinvertebrate community."]

Ms. Nenn asked that the number of samples indicated on Figure VIII-30 on page 45, and on similar figures throughout the chapter, be color-coded to better indicate which sample numbers correspond to which time periods.

[Secretary's Note: Those changes were made.]

Mr. Mathie referred to the last sentence of the third full paragraph on page 46 related to sediment and the impacts of urbanization on streamflow and volume. He noted that current regulations require that stormwater management and construction erosion control practices accompany new development, mitigating the impacts of new development on streamflow rates and volumes and on sediment in runoff. Mr. Mueller stated that the effectiveness of those regulations was highly dependent upon the level of monitoring and enforcement.

[Secretary's Note: The following sentence was added at the end of the third paragraph on page 46 and also at the end of the fourth full paragraph on page 49 of Chapter V (Kinnickinnic River watershed) and the second full paragraph on page 55 of Chapter VI (Menomonee River watershed):

"The impacts of development on streamflow rates and volumes can be mitigated to some degree by properly installed and maintained stormwater management practices. Some level of control is required by current regulations. The effectiveness of such regulations is, in part, dependent upon the level of compliance with, and enforcement of, the regulations."]

Mr. Lubner noted that although it is stated on page 49 that there is only one dam in the watershed, Map VII-10 on page 52 shows two dams. Mr. Slawski said that the upstream dam shown on Map VIII-10 is actually a drop structure and the map will be corrected. He also said that Map VIII-9 on page 50 will be revised to show the River Mile locations from Figure VIII-31 on page 51.

Mr. Mathie pointed out that in the last paragraph on page 55, there was a missing reference to a table in Chapter II. Mr. Hahn explained that the back reference came about because a buffer strip figure that was originally proposed to be included in Chapter II had been eliminated at the request of the Metropolitan Builders Association and it was replaced by a buffer width table from the watershed chapters of TR No. 39. He noted that the reference should be to "Table II-5."

[Secretary's Note: The report revisions regarding buffer widths are documented on pages 4 and 5 of the October 12, 2005, meeting minutes that were approved by the Committee at the beginning of the December 14, 2005, meeting.]

Mr. Behrens asked that the line identifying Oak Creek be extended to Lake Michigan on all maps in this chapter and that similar changes be made, as appropriate in the other watershed chapters.

[Secretary's Note: Those changes were made.]

Ms. Nenn said that she could not distinguish the color differences between the NA-2 and NA-3 designations on Map VIII-12 on page 56.

[Secretary's Note: The colors will be changed.]

Mr. Mathie asked that the dates of promulgation of NR 216 and NR 151 be added where they are referred to on pages 62 and 64, respectively.

[Secretary's Note: The following paragraph was inserted before the first paragraph in the *Regulation of Urban Nonpoint Source Pollution through the Wisconsin Pollutant Discharge Elimination System Permit Program* subsection of Chapter V (page 65), Chapter VI (page 81), and Chapter VIII (page 62):

"Chapter NR 216, "Storm Water Discharge Permits," of the *Wisconsin Administrative Code* establishes the requirements for the stormwater discharge permitting program for industries, municipalities, and construction sites. The rule was promulgated in November of 1994."]

[Secretary's Note: The first sentence in the *Chapter NR 151 of the Wisconsin Administrative Code* subsection was revised as follows in Chapters V and VI as well as on page 64 of Chapter VIII:

"Chapter NR 151, "Runoff Management," of the *Wisconsin Administrative Code***, which was promulgated in September 2002,** establishes performance standards for the control of nonpoint source pollution from agricultural lands, nonagricultural (urban) lands, and transportation facilities."]

Mr. Hahn then began a review of the sources of water pollution, achievement of water use objectives, and summary sections of the chapter. He noted that a new subsection had been added on Chapter NR 151 of the *Wisconsin Administrative Code* and that such a subsection would be included in all watershed chapters in TR No. 39.

Ms. Nenn asked if the industrial stormwater discharge permits listed in Appendix G were for discharges from pipes or overland flow. Mr. Hahn replied that they could be from either, but they were all considered nonpoint sources of pollution.

Mr. Biebel said that the title and legend of Map VIII-17 on page 70 would be revised to refer to "**Urban** Areas Developed…."

Mr. Krohn noted that Mr. Craig Helker of the WDNR staff forwarded to the SEWRPC staff sediment data for three cores taken from the mill pond on the main stem of Oak Creek.

[Secretary's Note: Those data will be reviewed and incorporated in the chapter as appropriate.]

Mr. Mueller pointed out that Figure VIII-33 on page 81 used a logarithmic scale. He asked that, consistent with the convention employed elsewhere in the report, a notation be added to the Figure, indicating the use of a logarithmic scale.

[Secretary's Note: All figures with logarithmic scales will be reviewed to ensure that the use of such scale is clearly indicated.]

Mr. Mueller also noted that the scales of some graphs do not start at zero, and he asked that, either they be revised to start at zero, or that they start at zero with breaklines added to avoid making the axis in question too long.

[Secretary's Note: The figures that do not start at zero are consistent with SEWRPC graphic standards. The SEWRPC staff considered this matter further following the meeting and decided that such graphs clearly represent the data and no revision would be made.]

Mr. Krohn asked that the two graphs shown in Figure VIII-30 on page 45 be made consistent so that the improvement in water quality occurs in the same direction on each graph.

[Secretary's Note: This situation occurs because a decreasing Hilsenhoff Biotic Index (HBI) indicates an improvement in water quality. If either vertical scale in the figure were reversed, a situation would occur in which the numerical scale increased from the top of the graph to the bottom, rather than the standard convention. The improvement in water quality with decreasing HBI is clearly indicated on that graph. Once again, the SEWRPC staff considered this matter further following the meeting and decided that the graphs will not be revised.]

Mr. Krohn said that he had no general problem with the conclusions of the fisheries subsection, but he pointed out that anadromous fish, such as salmon and trout, can get into Oak Creek at certain times during the year, and as a result, at those times the fishery in the lower reach is more representative of the Lake Michigan fishery than the Oak Creek fishery.

[Secretary's Note: The presence of such fish in the estuary near Lake Michigan And their migration between the Lake and the Creek is addressed on page 36.]

Mr. Wiza inquired as to whether there would be any elaboration on the sources of fecal coliform. Mr. Hahn replied that there had not been a definitive determination of specific sources, but that some additional description was warranted. Mr. Biebel said the sources would have to be defined for the alternatives analysis.

A motion to approve preliminary draft Chapter VIII, "Surface Water Quality Conditions and Sources of Pollution in the Oak Creek Watershed," as amended, was made by Mr. Wiza, seconded by Mr. Behrens, and was carried unanimously by the Committee.

CONSIDERATION OF REVISED APPENDIX VII-1, "OBJECTIVES, PRINCIPLES, AND STANDARDS," OF SEWRPC PLANNING REPORT NO. 50, *A REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE FOR THE GREATER MILWAUKEE WATERSHEDS*

Mr. Schmidt asked Mr. Biebel to review the revised preliminary draft of the appendix.

Mr. Biebel noted that the Appendix was previously reviewed by the Regional Water Quality Management Plan Update (RWQMPU) Advisory Committee about one year ago, and that, since that time, the Regional Land Use Plan Advisory Committee had made substantial changes. He also said that, unless the RWQMPU Advisory Committee had significant concerns with the Appendix as currently drafted, the SEWRPC staff would prefer that

this version of the principles, objectives, and standards remain the same as those adopted by the Regional Land Use Plan Advisory Committee.

Mr. Poloncsik asked if the ongoing Regional Water Supply Planning program would result in significant changes to the principles, objectives, and standards. Mr. Biebel replied that major changes would be unlikely because the water supply plan principles, objectives, and standards would be very specific to water supply planning and aquifer protection. He did note that there would be some common elements between the principles, objectives, and standards of both plans.

Mr. Biebel noted that the words "in quantities" should be deleted from Water Quality Management Objective No. 3, Standard No. 7 (page 12) and that Water Quality Management Objective No. 4, Standard No. 1 (page 13) should be revised to read as follows (changes in bold):

1. The soil erosion rate on individual cropland fields should not exceed the T-value;[f] **nor should** sediment delivery to waterbodies **exceed** one ton per acre per year (as determined by the Natural Resources Conservation Service Revised Universal Soil Loss Equation).

Mr. Lubner asked why part of Water Quality Management Objective No. 1, Standard No. 7 on page 10, regarding withholding sanitary sewer service from new units in a service area until previously served units are developed and all existing units are served, was deleted. Mr. Biebel said that was deleted upon review that concluded that the requirement was unreasonable and impractical. He noted that it does not reflect what actually happens in practice. Mr. Lubner and Mr. Mueller both objected to the proposed deletion of the last part of Standard No. 7. Mr. Mueller moved to preserve the original wording and the motion was seconded by Mr. Lubner.

Mr. Schmidt asked if there was any discussion of the motion. Mr. Biebel reiterated the reasons for proposing the change in the standard and he noted that as presently worded, the standard would not allow additions to a sanitary sewer service area until every undeveloped subdivision in the existing area was fully developed. He stated that this precise a control on land available for sewer service was not realistic. Mr. Nettesheim stated that, under the scenario presented by the unrevised standard, development outside the planned service area could occur with onsite treatment systems. He added that it would be impractical to follow the standard as originally proposed prior to the currently-proposed deletion.

Mr. Biebel said that the SEWRPC staff would revise the standard to address the issue raised by Mr. Lubner and Mr. Mueller. Mr. Mueller then withdrew his motion, pending revision of the standard. Mr. Schmidt noted that the second must also be withdrawn in order for the motion to be removed from consideration by the Committee. Mr. Lubner withdrew his second.

[Secretary's Note: It is proposed that Water Quality Management Objective No. 1, Standard No. 7 of Appendix VII-1 of PR No. 50 be revised as follows:

"7. The timing of the extension of sanitary sewerage facilities should, insofar as possible, seek to promote urban development in a series of complete neighborhood units. To achieve this, communities should encourage the provision of service to existing development and the development of new areas that have been included within the currently adopted sewer service area before adding new areas to a given municipal sewer service area."]

Regarding Table VII-1A, Ms. Nenn asked if the fourth bullet point under the "GENERAL DEVELOPMENT GUIDELINES" note on page 8 related to any environmental corridor. Mr. Biebel replied that it did and he explained that before this proposed change residential development was permitted at a density of one dwelling unit per five acres of upland primary environmental corridor. He noted that the SEWRPC staff found that that approach tends to disturb more than 10 percent of the corridor. Mr. Biebel concluded that the proposed revision allows different uses to be accommodated in a manner consistent with the limits on residential development. Mr.

Mathie said that the Metropolitan Builders Association (MBA) had suggested such an approach to minimize the overall impact on corridors and to promote conservation development. Mr. Biebel added that the MBA originally proposed a 20 percent limit on disturbance of the corridor.

Mr. Lubner noted that Standards No. 3, 4, and 6 under Water Quality Management Objective No. 2 on page 11 each contained the phrase "should be avoided," and he suggested that that wording be strengthened.

[Secretary's Note: The SEWRPC staff considered this matter further following the meeting and concluded that the phrase conveyed the appropriate degree of limitation on the subject activities and it was decided that the text would not be revised.]

Mr. Biebel said that Outdoor Recreation Objective No. 2, Standard No. 1 should terminate after the word "objective" on the third line.

A motion to approve preliminary draft Appendix VII-1 "Objectives, Principles, and Standards," of PR No. 50, as amended, was made by Mr. Lubner, seconded by Ms. Nenn, and was carried unanimously by the Committee.

UPDATE ON STATUS OF WATER QUALITY MODELING

Mr. Schmidt asked Mr. Hahn to update the Committee on the status of the modeling.

Mr. Hahn called the Committee's attention to the status table that they were provided (attached as Exhibit B) and he reviewed the shaded items in that table.

CLEAN RIVERS/CLEAN LAKES III CONFERENCE ON MARCH 2, 2006, AT THE ITALIAN COMMUNITY CENTER IN MILWAUKEE

Mr. Schmidt then asked Mr. Hahn to update the Committee on the upcoming planning conference. Mr. Hahn said that reminder cards were sent and that each committee member should have received one. He said that the conference agenda was nearing completion, and that it focuses on the SEWRPC/MMSD planning process and includes presentations on water quality data and preliminary plan alternatives.

RESPONSES TO COMMENTS FROM MR. KROHN AND MR. WILLIAM WAWRZYN OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES STAFF

[Secretary's Note: Subsequent to the meeting, Mr. Krohn provided one additional comment on Plan Structure Objective No. 3, Standard No. 3 in Appendix VII-1 of Chapter VII of PR No. 50, and Ms. Burzynski provided additional written comments from Mr. Wawrzyn on Chapter VIII (Oak Creek watershed) of TR No. 39. A summary of these revisions is provided below.]

[Secretary's Note: Mr. Krohn asked that minor revisions be made to clarify Plan Structure Objective No. 3, Standard No. 3. That standard was revised as follows:

"1. Evaluate the potential economic development and workforce impacts of major water quality protection and improvement projects from the standpoints of ~~both of~~ costs or hardships borne and of opportunities stemming from quality of life improvements and relative competitiveness of the study area as a place to reside or site business."]

[Secretary's Note: Mr. Wawrzyn asked that the source of the nonpoint source loads in the continuous simulation model (LSPC) be described.

Response: The planning report will have a "Water Resource Simulation Models and Analytic Methods" chapter that will include detailed information on the models, including a description of the point and nonpoint source modeling procedures.]

[Secretary's Note: Mr. Wawrzyn asked that phosphate phosphorus loads from noncontact cooling water be provided on a subwatershed basis.

Response: Significant increases in instream phosphorus concentrations over time were observed in the Kinnickinnic and Menomonee River watersheds, but not in the Oak Creek and Root River watersheds. The planning report will have a "Sources of Water Pollution" chapter that will synthesize the information presented in the technical report watershed chapters and when that chapter is written, the SEWRPC staff will consider further investigation of the relative phosphorus contribution due to noncontact cooling water discharges. An expanded section on the possible connection between orthophosphate in noncontact cooling water and phosphorus loads to streams in parts of the planning area was added to the appropriate watershed chapters of the Technical Report as documented on page 10 of the minutes of the October 12, 2005, Advisory Committee meeting.]

[Secretary's Note: Mr. Wawrzyn asked if it is correct that the LSPC model only accounts for nonpoint source pollution loads delivered to the streams from the land surface and does not model streambank erosion and streambed scour as a source of additional sediment.

Response: The LSPC model accounts for the delivery of sediment from the land surface to the streams and the transport of that sediment within the streams. Erosion and scour from the in-place streambed and streambanks cannot be modeled with LSPC.]

[Secretary's Note: Mr. Wawrzyn suggested an alternative approach to presenting the point and nonpoint source load information found in Tables VIII-18 through VIII-23 in the Oak Creek chapter and also set forth in the other watershed chapters. He suggested listing the subwatersheds in order of increasing unit area (pounds per acre per year) nonpoint source load and adding that information to the individual pollutant tables to give the reader a sense of where funds would most effectively be spent to reduce nonpoint source pollution loads.

Response: As Mr. Wawrzyn noted, it is important to determine which subwatersheds have the highest unit area loads. As the load tables are presently formatted, that information can be extracted from the "per acre pollutant load" summary tables in each watershed chapter, for example, Table VIII-17 in the Oak Creek chapter. A ranking similar to what he describes will be done as part of the process of developing the specifics of the alternative plans, which will be presented in PR No. 50. It is important to note that, because the LSPC model represents the effects of instream processes on pollutant concentrations throughout the stream system, the modeling team has the ability to refine the decision-making process beyond consideration of loads to the streams. That ability will also be applied in the development of the alternative plans and the recommended plan.]

[Secretary's Note: Mr. Wawrzyn noted that only rural nonpoint source loads are indicated in certain subwatersheds, such as Little Menomonee Creek (TR No. 39, Chapter VI). He notes that the subwatershed has minimal urban land use, but he points out that there is a significant transportation corridor (STH 167) and a small, unincorporated area in the headwaters at Freistadt Road in that subwatershed.

Response: The LSPC model accounts for urban and rural nonpoint sources based on detailed existing and planned land use information. Because the loads are based on the land

cover associated with the urban and rural land uses in a subwatershed, the loads from urban and rural sources are correctly determined, regardless of the characterization of the subwatershed as urban and/or rural. To estimate the relative pollutant contributions of rural and urban land uses, the subbasins that comprise each subwatershed were assigned either an "urban" or "rural" designation for the purpose of developing the load tables. Under that approach, if a subwatershed is comprised of subbasins that are all predominantly rural, as is the case for several subwatersheds in the Menomonee River watershed, but none in the Kinnickinnic and Oak Creek watersheds, the entire subwatershed would be categorized as "rural" in the load tables.]

RESPONSES TO COMMENTS FROM MR. SHAFER OF THE MMSD

[Secretary's Note: In a December 16, 2006, letter to Mr. Hahn, Mr. Shafer noted that the legend for Map VIII-15 refers to a "MMSD Combined Sanitary Sewer Service Area." He asked that we consider changing this to read "City of Milwaukee Combined Sanitary Sewer Service Area" to more accurately reflect ownership of the sanitary sewers. Upon further consideration, it was decided to omit that legend item and the corresponding feature on the map entirely.]

RESPONSES TO COMMENTS FROM MR. JOHN BENNETT OF THE CITY OF FRANKLIN

[Secretary's Note: In a December 16, 2006, letter to Mr. Biebel, Mr. Bennett noted that the was unable to attend the December 14, 2005, meeting due to a schedule conflict, but that he had one comment related to the nonpoint source pollution section of Chapter VIII. He asked that wet detention basins designed to control nonpoint source pollution be addressed in the Chapter and he provided a map showing the location of such basins in the City of Franklin. The City of Franklin has a comprehensive, current inventory and map of their detention basins. While all permitted communities provided such information in their discharge permit application the degree of completeness and currency of that information is likely to vary greatly by community. Communities throughout the regional water quality management plan update study area that have not yet been required to obtain permits may or may not have inventories. About one year ago, the SEWRPC staff contacted all communities outside the MMSD planning area, requesting information on local stormwater management systems. About 40 percent of those communities responded in some form. Considering the foregoing, it is unlikely that an adequate, comprehensive map of stormwater detention basins in each of the watersheds of the study could be assembled. Thus, such maps will not be prepared. However, to address Mr. Bennett's comment, the last sentence of the fourth paragraph on page 67 was revised as follows. The same revision was made in Chapter V (Kinnickinnic River watershed, page 71), Chapter VI (Menomonee River watershed, page 86), and Chapter IX (Root River watershed, page 97).

"As part of their permit application, each community prepared maps **showing both** the stormwater outfalls that are part of the municipal separate stormwater system **and significant structural stormwater controls, including detention basins and major infiltration devices, if any."]**

DETERMINATION OF NEXT MEETING DATE AND LOCATION

The next two meetings of the Advisory Committee were tentatively scheduled for January 25, 2006, to review the Root River watershed Chapter of TR No. 39 and February 22, 2006, to review the Milwaukee River watershed chapter. Both meetings were scheduled to begin at 1:30 p.m. at the Mequon City Hall in the upstairs Council Chambers.

ADJOURNMENT

The December 14, 2005, meeting of the Advisory Committee on the regional water quality management plan update was adjourned at 11:57 a.m. on a motion by Mr. Shafer, seconded by Mr. Nettesheim, and carried unanimously by the Committee.

* * *

#114955 V1 - RWQMP UPDATE MINUTES 12/14/05
300-4001
MGH/pk
01/20/06

Exhibit A

SEWRPC Technical Report No. 39

WATER QUALITY CONDITIONS AND SOURCES OF POLLUTION IN THE GREATER MILWAUKEE WATERSHEDS

Status of Chapters
01/04/06

Chapter I—Introduction	**(Reviewed 05/25/05 – on website)**
Chapter II—Water Quality Definitions and Issues	**(Reviewed 05/25/05 – on website)**
Chapter III—Data Sources and Methods of Analysis	**(Reviewed 05/25/05 – on website)**
Chapter IV—Water Use Objectives and Water Quality Standards	**(Reviewed 05/25/05 – on website)**
Chapter V—Surface Water Quality Conditions and Sources of Pollution in the Kinnickinnic River Watershed	**(Reviewed 10/12/05)**
Chapter VI—Surface Water Quality Conditions and Sources of Pollution in the Menomonee River Watershed	**(Reviewed 08/03/05)**
Chapter VII—Surface Water Quality Conditions and Sources of Pollution in the Milwaukee River Watershed	(Under preparation. To be presented at February 2006 Advisory Committee meeting)
Chapter VIII—Surface Water Quality Conditions and Sources of Pollution in the Oak Creek Watershed	(Presented at 12/14/05 Advisory Committee meeting)
Chapter IX—Surface Water Quality Conditions and Sources of Pollution in the Root River Watershed	(Under preparation. To be presented at January 25, 2006 Advisory Committee meeting)
Chapter X—Surface Water Quality Conditions and Sources of Pollution in the Milwaukee Harbor Estuary and Adjacent Nearshore Lake Michigan Areas	
Chapter XI—Groundwater Quality Conditions and Sources of Pollution in the Study Area	
Chapter XII—Summary and Conclusions	

#108089 V1 - TR-39 STATUS OF CHAPTERS
300-1000
MGH/pk

#114280 V1 - RWQMPU MODEL STATUS NOTES - 12/14/05 TAC MTG
MGH/RJP/pk

Exhibit B

RWQMPU/2020 FP
WATER QUALITY MODELING STATUS
12/13/2005

(TASKS COMPLETED SINCE STAFF REPORT AT AUGUST 3, 2005 ADVISORY COMMITTEE MEETING ARE SHADED)

Watershed	Task 1 Model Structure	Task 2 Model Data Sets	Task 3 Hydrology Calibration	Task 4 Quality Calibration	Task 5 Integrate with Estuary/Lake	Task 6 Production Runs	Task 7 Document Results	Comments
Kinnickinnic River	Completed	Completed	Completed	Completed	Underway	Underway		Initial SEWRPC review of Task 1 and Task 2 complete SEWRPC review of reach definition memo complete Corrections requested based on Task 2 review have been addressed Final Task 1 memo approved by SEWRPC Second SEWRPC review of hydrology calibration memo complete Initial SEWRPC review of water quality calibration memo complete Preliminary existing condition pollutant loads provided to SEWRPC
Menomonee River	Completed	Completed	Completed	Completed	Underway	Underway		Initial SEWRPC review of Task 1 and Task 2 complete SEWRPC review of reach definition memo complete Corrections requested based on Task 1 and 2 review have been addressed Final Task 1 memo approved by SEWRPC Second SEWRPC review of hydrology calibration memo complete Second SEWRPC review of water quality calibration memo complete Preliminary existing condition pollutant loads provided to SEWRPC
Milwaukee River	Completed	Completed	Completed	Underway				Model structure has been agreed upon. Tetra Tech has completed dataset SEWRPC completed development of precipitation and temperature datasets to use for calibration Initial SEWRPC review of model input complete Second SEWRPC review of hydrology calibration memo complete
Oak Creek	Completed	Completed	Completed	Completed	Underway	Underway		SEWRPC review of reach definition memo complete Corrections requested based on Task 2 review have been addressed Final Task 1 memo approved by SEWRPC Second SEWRPC review of hydrology calibration memo complete. Second SEWRPC review of water quality calibration memo complete. Preliminary existing condition pollutant loads provided to SEWRPC
Root River (upper)	Completed	Completed	Underway	Underway				Initial SEWRPC review of Task 1 and Task 2 complete No reach definition memo submitted Corrections requested based on Task 1 and 2 review have been addressed Final Task 1 memo approved by SEWRPC

Watershed	Task 1 Model Structure	Task 2 Model Data Sets	Task 3 Hydrology Calibration	Task 4 Quality Calibration	Task 5 Integrate with Estuary/Lake	Task 6 Production Runs	Task 7 Document Results	Comments
Root River (lower)	Completed	Completed	Underway	Underway				Model structure has been agreed upon. Tetra Tech has completed dataset SEWRPC completed development of precipitation and temperature datasets for use in calibration Initial SEWRPC review of model input complete (entire watershed)
Harbor Estuary and Lake Michigan Nearshore	Completed	Completed	Completed	Underway	Not Applicable			Model grid system refined Second SEWRPC review of hydrodynamic model calibration memo completed.