

MINUTES

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

DATE: March 28, 2006

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	Administrator, Village of Kewaskum, SEWRPC Commissioner
Michael G. Hahn, Secretary	Chief Environmental Engineer, Southeastern Wisconsin Regional Planning Commission
Julie A. Anderson	Director, Racine County Division of Planning and Development
Martin A. Aquino (for Jeffrey J. Mantes)	Environmental Manager, Environmental Engineering, City of Milwaukee
Michael J. Ballweg	Crops and Soils Agent, University of Wisconsin-Extension, Sheboygan County
John R. Behrens	Commissioner-Secretary, Silver Lake Protection and Rehabilitation District
Sharon L. Gayan (for Charles J. Krohn)	Basin Supervisor, Wisconsin Department of Natural Resources
Shannon K. Haydin	Director of Planning and Resources, Sheboygan County
Andrew A. Holschbach	Director, Ozaukee County Planning, Resources, and Land Management Department
Judy Jooss (for Diane M. Georgetta)	Town and Country Resource Conservation and Development, Inc.
William A. Kappel	Director of Public Works, City of Wauwatosa
James F. Lubner	Sea Grant Advisory Services Specialist, University of Wisconsin Sea Grant Institute
Matthew Moroney	Executive Director, Metropolitan Builders Association of Greater Milwaukee
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

Joseph E. Boxhorn	Senior Planner, Southeastern Wisconsin Regional Planning Commission
Troy E. Deibert (for William Krill)	Water Resources Engineer, HNTB Corporation
Patricia Galle	Government Affairs Associate, Metropolitan Builders Association of Greater Milwaukee
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 JANUARY 25, 2006

Mr. Schmidt asked if there were any additions or revisions to be made to the minutes of the January 25, 2006, meeting of the Committee.

Ms. Joos noted there was one typographical error on page 3 of the minutes. The last word in the last sentence of the second last paragraph on that page should be “lakes.”

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

CONSIDERATION OF CHAPTER VII, “SURFACE WATER QUALITY CONDITIONS AND SOURCES OF POLLUTION IN THE MILWAUKEE RIVER 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 also thanked the committee for their efforts in reviewing draft chapters and their thoughtful comments and he noted their invaluable role in the planning process. He then provided a brief summary of the status of the preparation and review of the chapters of Technical Report No. 39 and Planning Report No. 50, *A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds* and a summary of the status of the water quality modeling.

[Secretary’s Note: The attached Exhibits A, B, and C are the status summaries that were presented.]

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

[Secretary’s Note: Prior to the meeting, Mr. Lubner provided the Commission staff with a digital file noting typographical errors in the chapter.]

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.

Mr. Lubner noted that the land use percentages stated on page 2 were expressed to two decimal places, and he suggested rounding them to the nearest integer to better reflect the accuracy of the data. Mr. Wiza noted that it may be preferable to round to the nearest 0.1 percent in order to properly account for land uses with small areal coverages of less than 1 percent.

[Secretary’s Note: The land use percentages in this chapter, and all other chapters of the Technical report were revised to be rounded to the nearest 0.1 percent.]

Ms. Nenn pointed out that the word “increased” in the third sentence of the fourth full paragraph on page 2 should actually be “decreased.”

Regarding Map VII-6 on page 15, Ms. Nenn asked if the colors used to designate “streamflow or stream stage and water quality monitoring stations” and “sediment quality monitoring stations” could be changed to contrast more in order to avoid confusion of the two designations.

[Secretary’s Note: The map was revised to use more-contrasting colors for those station designations.]

Mr. Slawski noted that the presentation scheme for the “Water and Sediment Quality Monitoring Stations “ map (Map VII-6) was changed for this chapter to simply distinguish between water quality, streamflow or stage and water quality, and sediment quality monitoring stations. Similar maps in previous chapters had also indicated data sources (e.g. USGS, USEPA, WDNR, MMSD, and municipalities). He said that the previous format made it difficult to plot multiple station categories at the same, or nearby, location. He also said that the previously presented maps would be changed in Chapters V (Kinnickinnic River watershed), VI (Menomonee River watershed), VIII (Oak Creek watershed), and IX (Root River watershed).

Referring to Figure VII-4 on page 21, Mr. Lubner noted that the labels in the legend for the box plots were misaligned.

[Secretary’s Note: The legend was corrected as suggested.]

Mr. Lubner suggested that the water temperatures set forth on page 32 and elsewhere in the chapter be consistently expressed to the nearest 0.1 degree Celsius.

[Secretary’s Note: Those changes were made and will also be made in Chapters V, VI, VIII, and IX of the Technical Report.]

Mr. Boxhorn said that the title of Figure VII-28 on page 51 would be corrected to read “Nitrate Concentrations...”, rather than “Total Nitrate Concentrations....”

Ms. Jooss asked if information could be provided on the sources of the pharmaceuticals and personal care products (PPCP) that are described on pages 62 and 63. Mr. Boxhorn replied that there are insufficient data to make a meaningful connection between the presence of a PPCP and its source within the study area. He said that some more-detailed information on PPCP was presented in Chapter II. Ms. Jooss asked if a back reference to Chapter II could be added.

[Secretary’s Note: In response to these comments, the following sentence was added at the end of the first partial paragraph on page 63:

“Additional information on pharmaceuticals and personal care products, including general descriptions of possible sources of these pollutants, is set forth in Chapter II of this report.”]

Mr. Moroney noted that the sources of pollutants were not consistently identified in the chapter, and he asked how the Commission staff determined whether to indicate a possible source of a pollutant.

[Secretary’s Note: The Commission staff will consider this issue and attempt to consistently indicate possible sources of given pollutants in cases where such sources are known or can be inferred with a reasonable degree of confidence.]

Mr. Boxhorn pointed out that, because of the large number of lakes and ponds in the Milwaukee River watershed compared to the other watersheds in the study area, this chapter includes an expanded subsection on the **Water Quality of Lakes and Ponds**.

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

He noted that, as indicated on page 76 of the draft chapter, the section on TOXICITY CONDITIONS OF THE MILWAUKEE RIVER was not included in the draft and that it would be presented to the Committee at a subsequent meeting.

Mr. Slawski called the Committee member's attention to the following new features presented for the first time in this chapter:

- Table VII-13 on pages 81 and 82, "Fish Stocking of Fry, Fingerling, and Juvenile Fishes in Stream Reaches and Lakes/Ponds in the Milwaukee River Watershed: 1982-2004." The Commission staff was able to prepare this table because of the large amount of data available for this watershed. Although such information is also available for the other watersheds, it is not nearly as extensive in any of the other watersheds and is almost exclusively limited to stocking of rainbow trout. Thus, similar tables will not be added in the chapters for the other watersheds, but a description of the stocking efforts will be added to the text in each of the chapters, where appropriate.
- Maps VII-7 and VII-8 (pages 84 and 85) set forth fisheries sample locations and conditions for the time periods 1900-1997 and 1998-2004, respectively. Maps VII-11 and VII-12 (pages 107 and 108) show macroinvertebrate sample locations and conditions for the time periods 1979-1997 and 1998-2004, respectively. The 1998-2004 time period (or 1998-2001, depending on the availability of data) has been adopted as the "baseline period" for the data analyses presented in the Technical Report. In previously reviewed chapters, the data presented in these two pairs of maps were shown on single maps, one for fisheries and one for macroinvertebrates. The new presentation format was made based on comments during the January 25, 2006, Committee meeting. Similar maps will be included in Chapters V, VI, VIII, and IX of the report.
- A subsection titled ***Influence of Dams/Dam Removal*** begins on page 93. This section is unique to the Milwaukee River watershed, owing to the relatively large number of dams and to the removal of some significant dams in recent years.

Regarding Table VII-16 on page, 114, Mr. Lubner inquired as to why there was an "Other Insects" category.

[Secretary's Note: The Commission staff will revise Table VII-16 by combining the Crustacea and Other Insects categories into one category entitled "Insects".]

Mr. Slawski said that the Commission staff intended to field verify the existence of about 40 dams that could not be verified through examination of digital orthophotographs. He also noted that data obtained from the Wisconsin River Alliance had been used in developing the database on dams.

Mr. Wiza said that the existence of a dam in the Milwaukee River mainstem immediately south of the Village of Fredonia is questionable.

[Secretary's Note: That location will be checked during the field reconnaissance.]

Next, Mr. Hahn began a summary of the sources of water pollution in the Milwaukee River watershed.

He noted that, as indicated on page 135, the section on **SUMMARY AND STATUS OF ELEMENTS OF THE REGIONAL WATER QUALITY MANAGEMENT PLAN IN THE MILWAUKEE RIVER WATERSHED** would be provided to the Committee at a later meeting.

Mr. Wiza said that WPDES Number 34 in Table VII-21 on page 142 should refer to the “Dorchester Lift station,” rather than “Manhole at Dorchester Drive.” That change was made.

Mr. Ballweg asked why concentrated animal feeding operations (CAFOs) were listed on page 157 in the *Livestock Operations* subsection describing sources of rural nonpoint source pollution. Mr. Hahn replied that a description of CAFOs was provided in an effort to characterize all possible sources of pollution. Ms. Gayan said that CAFOs are livestock operations with more than 1,000 animals and that they are issued Wisconsin Pollutant Discharge Elimination System (WPDES) permits. Mr. Ballweg said he thought that the inclusion of CAFOs in this particular subsection places them out of context and he suggested describing them along in the context of the WPDES permit program. Ms. Gayan suggested that additional description of the natures of CAFOs be added to clarify the matter.

[Secretary’s Note: The WPDES permit program is not described at any single location within the chapter. It is mentioned as appropriate in the point and nonpoint source subsections of the **SOURCES OF WATER POLLUTION SECTION**. Thus, in response to the comments from the Committee, it was decided to include additional information on CAFOs on page 157 in the *Livestock Operations* subsection. The following revisions and additions were made:

- The third sentence in the last paragraph on page 157 was made the beginning of a paragraph.
- The following was added at the end of the new paragraph:

“Concentrated animal feeding operations are defined as livestock and poultry operations with more than 1,000 animal units. Animal units are calculated for each different type and size class of livestock and poultry. For example, facilities with 1,000 beef cattle, 700 milking cows, or 200,000 chickens each would be considered to have the equivalent of 1,000 animal units. Concentrated animal feeding operations are regulated by the State of Wisconsin under the WPDES permit program.”

The two changes listed above will also be made in Chapter IX (Root River watershed).]

Mr. Behrens asked if the currency date could be added to the information on animal operations that is set forth in the last paragraph on page 157.

[Secretary’s Note: The first sentence was revised to read as follows. Added text here and elsewhere in these minutes is indicated in bold. A similar addition will be made in Chapters IX.

“Based on data from 2002, animal operations in the Milwaukee River watershed ... The two changes listed above will also be made in Chapter IX”]

Mr. Ballweg questioned the use of the adjective “excessive” in the *Crop Production* subsection at the top of page 161. Mr. Lubner suggested substituting “excess”, since the sentence is describing potential adverse effects of runoff from cropland.

[Secretary’s Note: The sentence was revised to read as follows. Similar revisions will be made to the corresponding subsections in Chapters VI, VIII, and IX of the Technical Report.

“In the absence of mitigating measures, runoff from cropland can have an adverse effect on water quality within the Milwaukee River watershed by contributing **excess** sediments, nutrients, and organic matter, including pesticides.”]

Mr. Ballweg said that he used the total phosphorus annual unit area nonpoint source loads set forth in Table VII-27 on page 164 to compute separate average unit area loads for the predominantly rural subwatersheds and for the Milwaukee River watershed as a whole. He said that computation yielded a rural average annual unit area load of 0.13 pound per acre, which is less than the watershed average of 0.26 pounds per acre, indicating that rural unit area loads are less than urban unit area loads. Mr. Boxhorn noted that computing a straight average does not account for differences in subwatershed drainage areas, and he suggested that using a weighted average would allow a more appropriate comparison. Mr. Hahn said that the Commission staff could compute average annual unit area loads of total phosphorus using the urban and rural nonpoint source loads (Table VII-28) and the urban and rural land areas (Table VII-2). That would address the issue raised by Mr. Boxhorn and could be used to make additional comparisons if the results warranted inclusion in the chapter.

[Secretary's Note: Urban and rural average annual unit area loads of total phosphorus were computed using the data in Tables VII-2 and VII-28. It was found that the urban unit area load is 0.36 pounds per acre per year and the rural unit area load is 0.26 pounds per acre per year. This verifies Mr. Ballweg's observation that the rural unit area load of total phosphorus is less than the urban unit area load. This conclusion is borne out by examination of Map H-26 in Appendix H of the Technical Report. That map clearly shows that the unit area loads in the northern, more-rural subwatersheds are less than in the urban subwatersheds. To provide another basis for comparison of urban and rural unit area loads for the six pollutants for which data are available, a sentence comparing the urban and rural unit area loads will be added at the end of each paragraph describing nonpoint source loads of each of the pollutants. Those paragraphs begin with the second full paragraph on page 164 and extend through the first paragraph on page 167. The following sentences will be added:

- Page 164 – “The overall average urban unit area load of total phosphorus is 0.36 pound per acre per year and the average rural unit area load is 0.26 pound per acre per year.”
- Page 165 – “The overall average urban unit area load of total suspended solids is 121 pounds per acre per year and the average rural unit area load is 87 pounds per acre per year.”
- Page 166 – “The overall average urban unit area load of fecal coliform bacteria is _____ trillion cells per acre per year and the average rural unit area load is _____ trillions cells per acre per year.”
- Page 166 – “The overall average urban unit area load of total nitrogen is 2.45 pounds per acre per year and the average rural unit area load is 4.91 pounds per acre per year.”
- Page 166 – “The overall average urban unit area load of biochemical oxygen demand is 9.91 pounds per acre per year and the average rural unit area load is 10.21 pounds per acre per year.”
- Page 167 – “The overall average urban unit area load of copper is 0.016 pound per acre per year and the average rural unit area load is 0.006 pound per acre per year.”

Similar additions will be made in Chapters VI, VIII, and IX.]

Ms Joos said that it would be helpful to include maps similar to those in Appendix H, comparing urban and rural nonpoint source loads. Mr. Hahn replied that the Commission staff did not plan to prepare such maps, but that the possible revision of the report text to compare urban and rural nonpoint source unit area loads would address that issue.

[Secretary's Note: The addition of urban and rural nonpoint source unit area load comparisons as described above responds to Ms. Jooss' comment as well as Mr. Ballweg's.]

Mr. Moroney asked if the nonpoint source pollution analysis enabled determination of the effect of implementing pollution control measures called for under Chapter NR 151, "Runoff Management," of the *Wisconsin Administrative Code*. Mr. Hahn replied that the loads set forth in the chapter approximate existing conditions and the effect of implementation of NR 151 measures to date cannot be broken out of the water quality model data. However, he said that such an evaluation could be done for planned conditions by comparing the model results for those conditions with the existing conditions model results. Such a comparison would indicate the anticipated effects of NR 151 runoff controls for future development as well as future implementation of required controls in areas of existing development.

Mr. Holschbach said that there should be specific mention of the effects on nonpoint source pollution related to lawn care and golf courses. Mr. Hahn replied that such references may be in Chapter II of the Technical Report, and that, if not, they would be added.

[Secretary's Note: Review of Chapter II by the Commission staff indicated that these issues are mentioned on pages 16 and 18 of Chapter II, "Water Quality Definitions and Issues." Fertilizers and pesticides are already included on page 16 of Chapter II in a list of pollutant sources associated with residential land use. The following sentence was added at the end of the *Commercial Land Use* subsection on page 17 of Chapter II:

"Excessive use of pesticides and fertilizers on grassed areas associated with commercial land use is also a source of nonpoint pollution."

The *Recreational Activities* subsection on page 18 of Chapter II was reviewed and it was found that golf courses are listed as possible sources of nonpoint pollution and that "the amount of fertilizers and pesticides used" is given as a factor in the amount of pollutants contributed by recreational sites. Thus, no revisions to that part of the report are needed.]

Mr. Hahn noted that the nonpoint source loads of fecal coliform bacteria are not given in Table VII-30 because the modelers are still refining the water quality model to better represent fecal coliform.

Regarding the comparison of wet- and dry-weather loads at two locations along the mainstem of the Milwaukee River as set forth in the first full paragraph on page 168, Mr. Hahn said that, in some respects, the findings were counterintuitive and that the Commission staff intended to try to determine why upstream loads are higher than downstream loads.

[Secretary's Note: The *Wet-Weather and Dry-Weather Loads* subsection was revised, and that subsection was placed on the agenda for the May 24, 2006, Advisory Committee meeting.]

Ms. Gayan said that the mere establishment of a stream water use objective other than coldwater or warmwater fish is not necessarily an indication of reduced water quality, since such stream reaches may be limited by flow or size, but still be performing well relative to other functions. Mr. Hahn said that issue would be addressed.

[Secretary's Note: The following was added after the first sentence on page 6 of Chapter IV, "Water Use Objectives and Water Quality Standards," of the Technical Report:

"It is important to note that establishment of a stream water use objective other than coldwater or warmwater fish and aquatic life is not necessarily an indication of reduced water quality, since such stream reaches may be limited by flow or size, but may still be performing well relative to other functions."]

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

DETERMINATION OF NEXT MEETING DATE AND LOCATION

The next meeting of the Advisory Committee was scheduled for Wednesday, May 24, 2006, beginning at 1:30 p.m. at the Mequon City Hall in the upstairs Council Chambers.

ADJOURNMENT

The March 28, 2006, meeting of the Advisory Committee on the regional water quality management plan update was adjourned at 3:12 p.m. on a motion by, Mr. Behrens, seconded by Mr. Holschbach and carried unanimously by the Committee.

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05/08/06

Exhibit A

SEWRPC Technical Report No. 39

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

Status of Chapters
03/28/06

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 – on website)
Chapter VI—Surface Water Quality Conditions and Sources of Pollution in the Menomonee River Watershed	(Reviewed 08/03/05 – on website)
Chapter VII—Surface Water Quality Conditions and Sources of Pollution in the Milwaukee River Watershed	(Reviewed March 28, 2006)
Chapter VIII—Surface Water Quality Conditions and Sources of Pollution in the Oak Creek Watershed	(Reviewed 12/14/05 – on website)
Chapter IX—Surface Water Quality Conditions and Sources of Pollution in the Root River Watershed	(Reviewed January 25, 2006)
Chapter X—Surface Water Quality Conditions and Sources of Pollution in the Milwaukee Harbor Estuary and Adjacent Nearshore Lake Michigan Areas	(Under preparation. Anticipated to be reviewed in July 2006.)
Chapter XI—Groundwater Quality Conditions and Sources of Pollution in the Study Area	
Chapter XII—Summary and Conclusions	

Exhibit B

SEWRPC Planning Report No. 50

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

Status of Chapters
03/28/06

Chapter I – Introduction and Background	(Reviewed: 02/17/05 – on website)
Chapter II – Description of the Planning Area	(Reviewed: 03/23/05 – on website)
Chapter III – Existing and Historic Surface Water and Groundwater Conditions	(Will summarize TR No. 39 data.)
Chapter IV – Sources of Water Pollution	(Will summarize TR No. 39 data.)
Chapter V – Water Resource Simulation Models and Analytic Methods	
Chapter VI – Legal Structures (regulations) Affecting Water Quality Management Plan Update	(Under preparation. Anticipated to be presented in May 2006)
Chapter VII – Water Quality Management Goals, Objectives, and Standards	(Reviewed 02/17/05 – on website)
Chapter VIII – Future Situation: Anticipated Growth and Change	
Chapter IX – Alternative Plan Description and Evaluation	
Chapter X – Recommended Water Quality Management Plan	
Chapter XI – Plan Implementation	
Chapter XII – Summary and Conclusions	

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Exhibit C

RWQMPU/2020 FP
WATER QUALITY MODELING STATUS
03/28/2006

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 Initial evaluation of alternatives completed
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 Initial evaluation of alternatives completed
Milwaukee River	Completed	Completed	Completed	Underway	Underway	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 Preliminary existing condition pollutant loads provided to SEWRPC Initial evaluation of alternatives completed
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 Initial evaluation of alternatives completed

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	Completed	Completed	Completed	Underway	Not Applicable	Underway		<p>Initial SEWRPC review of Task 1 and Task 2 complete (Upper Root only)</p> <p>Corrections requested based on Task 1 and 2 review have been addressed (Upper Root only)</p> <p>Final Task 1 memo approved by SEWRPC (Upper Root only)</p> <p>Model structure for Lower Root has been agreed upon. Tetra Tech has completed dataset.</p> <p>SEWRPC completed development of precipitation and temperature datasets for use in calibration.</p> <p>Initial SEWRPC review of model input complete.</p> <p>Initial SEWRPC review of hydrology calibration memo complete.</p> <p>Preliminary existing condition pollutant loads provided to SEWRPC.</p> <p>Initial evaluation of alternatives completed</p>
Harbor Estuary and Lake Michigan Nearshore	Completed	Completed	Completed	Underway	Not Applicable	Underway		<p>Model grid system refined</p> <p>Second SEWRPC review of hydrodynamic model calibration memo completed.</p> <p>Initial evaluation of alternatives completed</p>