MINUTES OF THE NINETEENTH MEETING
SEWRPC REGIONAL WATER SUPPLY PLANNING ADVISORY COMMITTEE

DATE: July 22, 2008

TIME: 9:00 a.m.

PLACE: Lower Level Conference Room
Regional Planning Commission Offices
W239 N1812 Rockwood Drive
Waukesha, Wisconsin

MEMBERS PRESENT

Kurt W. Bauer, Chairman	Executive Director Emeritus, SEWRPC
Robert P. Biebel, Secretary	Special Projects Environmental Engineer, SEWRPC
Thomas J. Bunker	Representative, Water and Wastewater Utility, City of Racine
John Carlson (representing Thomas M. Grisa)	Engineering Project Manager, City of Brookfield
Douglas S. Cherkauer	Professor of Hydrogeology, University of Wisconsin-Milwaukee
Lisa Conley	Representative, Town and Country Resource Conservation and Development, Inc.
Michael P. Cotter	Director, Walworth County Land Use and Resource Management Department
Charles A. Czarkowski	Regional Water Program Expert, Wisconsin Department of Natural Resources, Southeast Region
Charles P. Dunning	Hydrologist, U.S. Geological Survey
Andrew A. Holschbach	Director, Ozaukee County Planning, Resources, and Land Management Department
Mark Lurvey	Agricultural Business Operator
George E. Melcher	Director, Kenosha County Department of Planning and Development
Paul E. Mueller	Administrator, Washington County Planning and Parks Department
Jeffrey Musche	Administrator/Clerk, Town of Lisbon
Michael P. Rau	General Manager, We Energies-Water Services
Daniel S. Winkler	Director of Public Works and Utilities, City of Lake Geneva
Steven N. Yttri	General Manager, Water and Sewer Utility, City of Oak Creek

MEMBERS EXCUSED OR OTHERWISE ABSENT

Julie A. Anderson	Director, Racine County Division of Planning and Development
Kenneth R. Bradbury	Hydrogeologist/Professor, Wisconsin Geological and Natural History Survey
Daniel S. Duchniak	General Manager, Waukesha Water Utility, City of Waukesha
Franklyn A. Ericson	Manager, Environmental Operations & Central Services, S.C. Johnson & Son, Inc.
David Ewig	Water Superintendent, City of Port Washington
Jeffrey A. Helmuth	Hydrogeologist Program Coordinator, Wisconsin Department of Natural Resources, Madison
Eric J. Kiefer	Manager, North Shore Water Commission
Terrence H. Kiekhaefer	Director of Public Works, City of West Bend
Thomas J. Krueger	Water and Wastewater Utility Director, Village of Grafton

Carrie M. Lewis	Superintendent, Milwaukee Water Works, City of Milwaukee
J. Scott Mathie	Director of Government Affairs, Metropolitan Builders Association of Greater Milwaukee
Edward St. Peter	General Manager, Water Utility, City of Kenosha
Dale R. Shaver	Director, Waukesha County Department of Parks and Land Use
James Surfus	Senior Environmental Engineer, Miller Brewing Company
George A. Torres	Director, Milwaukee County Department of Transportation & Public Works

GUESTS

Daniel R. Butler	Engineer, Ruekert & Mielke, Inc.
Paul G. Hayes	Mid Kettle Moraine Partners Group
Claus Dunkelberg	Water Industry Specialist, Milwaukee 7
Steven H. Schultz	Department Head, Water Supply and Wastewater Treatment, Ruekert & Mielke, Inc.
Ben W. Wood	Engineer, Strand Associates, Inc.

STAFF

Kenneth R. Yunker	Deputy Director, Southeastern Wisconsin Regional Planning Commission

CALL TO ORDER AND ROLL CALL

Chairman Bauer called the meeting to order at 9:00 a.m. Roll call was taken by circulating an attendance signature sheet, and a quorum declared present.

Chairman Bauer then asked Mr. Rau to introduce Mr. Claus Dunkelberg, a water industry specialist who was in attendance. Mr. Rau indicated that Mr. Dunkelberg was working with the Milwaukee 7, an organization formed to promote regional cooperative economic development in southeastern Wisconsin. He welcomed Mr. Dunkelberg to the meeting and asked him to expand upon his current role in the Milwaukee area.

Mr. Dunkelberg noted the Milwaukee 7 had an objective of fostering collaboration regarding water-related technology among industry, academia, consultants, and public agencies. He noted that it was the opinion of the Milwaukee 7 organization that such technology could comprise an economic growth center within the Region. Mr. Dunkelberg offered to be available if he could be of assistance to the Advisory Committee and indicated he would monitor the Committee's activities.

Chairman Bauer indicated that future agendas for the Committee meetings would be provided to Mr. Dunkelberg for his information, and based upon those agendas, he could request materials of interest to him, and as he found to be desirable or necessary, attend future Committee meetings.

CONSIDERATION OF MINUTES OF THE MEETING OF FEBRUARY 19, 2008

Chairman Bauer noted that copies of the minutes of the May 20, 2008, meeting of the Committee had been provided to all members of the Committee for review prior to the meeting, and asked that the Committee consider approval of those minutes.

Chairman Bauer reminded the Committee members that all of the revisions which the Committee directed to be made in the materials reviewed at that meeting were intended to be fully documented in the minutes, or in attachments thereto. He noted that approval of the minutes would constitute approval of the first portion of Chapter VIII, "Alternative Plans: Description and Evaluation," pages 1 through 46, covering the first three

alternative plans. He noted that a revised copy of Chapter VIII in its entirety accompanied the minutes and that the approvals on pages 1 through 46 would be subject to any comments received today on the minutes.

Ms. Conley referred to the last full paragraph on page 7 of the minutes and indicated that increases in stormwater runoff as a component of streamflow had been shown to have detrimental impacts on water quality and flooding. She noted that such a component of streamflow was, thus, not as desirable as groundwater-derived baseflow. Mr. Biebel agreed, but indicated that in the context of the report, it may be assumed that the impacts of stormwater runoff on stream water quality would be minimized by the now-required stormwater management practices.

Dr. Cherkauer referred to the text of the revised Chapter VIII on the groundwater and surface water impacts of each alternative plan. He indicated that the reordering of that text and related tables and maps had greatly improved the chapter. He noted that for the shallow aquifer drawdown and drawup, mapping was provided only for the sand and gravel portion of the aquifers and not for the dolomite portion. He suggested that for the eastern portion of the Region, the dolomite aquifer was important and in the central and western portions of the Region, the sand and gravel aquifer was important, and he recommended the mapping be provided for both portions of the shallow aquifer. It was agreed by consensus to add the dolomite aquifer mapping as suggested.

[Secretary's Note: Maps VIII-6a, VIII-14a, VIII-20a, and VIII-31a have been added to indicate the drawdown and drawup in the Silurian dolomite portion of the shallow aquifer. The added maps are included in the revised version of Chapter VIII transmitted with these minutes.]

There being no further corrections or additions, the minutes of the meeting of May 20, 2008, were approved as amended on a motion by Mr. Rau, seconded by Mr. Melcher, and carried unanimously.

CONSIDERATION OF PORTION OF CHAPTER VIII, "ALTERNATIVE PLANS: DESCRIPTION AND EVALUATION," PAGES 47 THROUGH 65 COVERING ALTERNATIVE PLAN 4 AND THE CHAPTER SUMMARY

Chairman Bauer then asked the Committee to consider Agenda Item 3. He noted that all Committee members had received a copy of Chapter VIII, "Alternative Plans: Description and Evaluation," concerned for review prior to the meeting. He noted that the portion of Chapter VIII, pages 1 through 46, covering the introductory text and of the first three alternative plans description and impact analysis had been reviewed at the November 27, 2007 and May 20, 2008, meetings. He indicated that the materials to be reviewed at this meeting covered the plan description and plan surface and groundwater impact analyses of Alternative Plan 4, as well as chapter summary pages 47 through 66.

Chairman Bauer then asked Mr. Biebel to review the portions of Chapter VIII concerned on a page-by-page basis. The following comments were made, questions asked, and actions taken during the review.

Mr. Rau referred to Subalternative 2 for the provision of Lake Michigan water under Alternative Plan 4, as described in the fourth paragraph on page 48. He asked if consideration was given to having the City of Port Washington construct a new, larger water plant south of the City to serve the City and the Cedarburg-Grafton area. He noted that the City had, at one time, considered that option. Mr. Biebel replied in the negative, noting that the subalternative provided for a new water plant to serve the Cedarburg-Grafton area, with the City of Port Washington Water Utility expanding its plant to serve Port Washington and Saukville. Mr. Biebel indicted that he would consider the new Port Washington water plant option.

[Secretary's Note: A review of the City of Port Washington's 2006 water system master plan update indicated no consideration was given to abandonment of the existing water treatment plant. However, that master plan did not envision that significant plant capacity expansion would be needed during the 20-year planning period extending to 2025. No excess treatment capacity is available at the City of Port Washington water

treatment plant, given the projected 2035 needs developed under the regional water supply plan, to serve the Grafton and Cedarburg area with a Lake Michigan supply. Under Subalternative 2 of Alternative Plan 4, a new Lake Michigan water treatment plant was assumed to serve the Grafton and Cedarburg area with the existing City of Port Washington Water Utility water treatment plant being maintained and expanded to serve the City of Port Washington and the Village of Saukville. The option of abandoning the City of Port Washington water treatment plant and constructing a new, larger plant to the south of the City would result in the need for construction of an additional 4.0 mgd of capacity over-and-above the capacity needed to serve only the Cedarburg and Grafton area. This added capacity would be required to replace the capacity of the existing Port Washington plant. In addition, the construction of new water transmission mains to bring the treated water back to the City would be required. These two additional requirements tend to favor maintaining the existing City of Port Washington water treatment plant.]

Mr. Carlson referred to the last full paragraph on page 49 and questioned the basis of the 15 percent figure related to the greater amount of return flow than water used. Mr. Biebel indicated that the Commission staff had reviewed and compared the wastewater treatment plant effluent flows as documented in the annual compliance maintenance annual reports filed by the communities involved with the WDNR, and compared those flows to the water pumpage date for the same communities to arrive at the value of 15 percent.

Dr. Cherkauer referred to the second option for providing a return flow under Alternative Plan 4, as described in the first full paragraph on page 50—now the last paragraph on page 49. He asked if there were explicit costs included for the central system to regulate the return flows during high and low streamflow periods. Mr. Biebel indicated that the return flow option included the costs of a pumping station at each of the three sewage treatment plants involved, and that the control system envisioned would have to include electronic communication and computer facilities and the control valves at those stations. However, no specific increase in the pumping station costs for such control systems had been provided. He agreed that there would be some increased costs involved and that the costs would be adjusted accordingly.

[Secretary's Note: The costs in Tables VIII-43 and VIII-44 for both subalternative return flow components have been adjusted to reflect the costs of the needed control systems at each of the pumping stations located at the existing sewage treatment plants concerned.]

Mr. Carlson referred to the first full paragraph on page 60 regarding the potential impacts of the return flow to tributary streams. He raised the issue of the potential for increased erosion and streamflow "flashiness" associated with the return flow to the two streams involved under the second subalternative for a return flow under Alternative Plan 4. Mr. Biebel agreed that erosion would be a potential issue to be considered in more detail as part of any second-level planning. He noted that the operational concept would redirect the return flow during any high streamflow periods. Thus, streamflow "flashiness" would not likely be an issue. After brief discussion, it was agreed by consensus to adjust the text to include erosion as an issue to be considered, among others, in more detail, should the option of providing a return flow via a stream or river be adopted and implementation pursued.

[Secretary's Note: The text in the first and second paragraphs on page 60 has been revised to indicate the potential for increased streambank erosion on the streams tributary to Lake Michigan as a result of the return flow additions.]

Ms. Conley indicated that she had a similar concern related to the potential for partially treated sanitary sewer overflows or bypasses being discharged to the streams involved. Mr. Biebel indicated that the three sewage treatment plants involved did not routinely bypass, even in wet weather, so that any bypassing would be very rare and could occur within the sanitary sewer system, as well as at the treatment plant. In any case, such bypassing

would not contribute to the return flows carried by the return flow effluent main. He noted, further, that during high-flow periods, the return flow would be discharged to the same location as it currently is.

Mr. Carlson referred to Map VIII-25 and asked why the return flow pipeline was continued from near the City of St. Francis south to the center of the City of Oak Creek. Mr. Biebel indicated that that had been done as a conservatively failsafe measure to get the return flow downdrift of the water plants in the County, and that littoral drift was generally from north to south. Chairman Bauer noted that the Jones Island wastewater treatment plant discharged inside the inner harbor at Milwaukee with a much larger amount of treated wastewater and this was "upstream" from the City of Milwaukee Texas Avenue water intake and the Oak Creek, South Milwaukee and Cudahy Water Works. Mr. Bunker agreed that general flow pattern in the Lake nearshore area was from north to south. However, he noted that wastewater treatment plants have been designed to safely treat Lake Michigan water containing very diluted pollutant loadings from a variety of sources. He noted that any input of treated wastewater would be very dispersed by the time it would be a short distance from its source. He also noted that the treatment levels associated with the plants discharging to the Fox River were higher than those associated with Lake Michigan discharges. After further discussion, it was generally agreed to revise the plan to terminate the return flow pipeline with an outfall in the vicinity of the end of the easterly extending transmission main.

[Secretary's Note: Map VIII-25 has been revised to end the return pipeline with an outfall in the vicinity of the City of St. Francis. The associated costs in Table VIII-43 and the related text have been revised as appropriate. The revised map, table, and text are included in the revised version of Chapter VIII transmitted with these minutes.]

Mr. Bunker noted that the return flow component to the Root River could offer some environmental advantages during low-flow periods. He noted that the fishery in the River is limited now by low-flow conditions.

Mr. Carlson referred to the alternative plan summary table on pages 65 and 66. He recommended that the table be displayed on one page in the final report since comparisons of the alternative plan was more difficult if the data for the alternatives are on multiple pages. Mr. Biebel agreed to make the suggested revision.

Mr. Rau indicated that he would provide information on a minor change to the manner in which the Mequon and Thiensville areas would be served by connection to the Milwaukee Water Works system.

[Secretary's Note: The connection point for the transmission main from the Milwaukee Water Works to serve the Mequon-Thiensville area has been changed from in the vicinity of N. 76th Street to in the vicinity of N. 108th Street. This revised location, in conjunction with the existing connection would eventually form a looped system. This revision is included in the appropriate maps and tables in the revised versions of Chapters VIII and IX transmitted with these minutes.]

There being no further questions or comments, pages 47 through 66 of Chapter VIII, "Alternative Plans: Description and Evaluation," covering the Alternative Plan 4 and the chapter summary, of SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, was approved as amended on a motion by Mr. Melcher, seconded by Mr. Winkler, and carried unanimously.

CONSIDERATION OF A PORTION OF CHAPTER IX, "ALTERNATIVE PLAN COMPARATIVE EVALUATION AND SELECTION OF COMPOSITE PLAN FOR FURTHER CONSIDERATION," PAGES 1 THROUGH 22 COVERING THE FINDINGS OF A COMPARATIVE EVALUATION OF THE ALTERNATIVE PLANS CONSIDERED AND A CONCEPTUAL DESCRIPTION OF A COMPOSITE PLAN FOR FURTHER CONSIDERATION

Chairman Bauer then asked the Committee to consider Agenda Item 4. He noted that all Committee members had received a copy of Chapter IX, "Alternative Plan Comparative Evaluation and Selection of Composite Plan for

Further Consideration," concerned for review prior to the meeting. He noted that the portion of Chapter IX to be reviewed at this meeting from pages 1 through 22, covered the comparative evaluation of the alternative plans and a conceptual description of a composite plan—in effect a staff-recommended plan—for further consideration. He noted that a detailed description of the composite plan and an evaluation of its impacts would be added to the chapter and provided to the Committee for review at the next meeting.

Chairman Bauer then asked Mr. Biebel to review the portions of Chapter IX concerned on a page-by-page basis. The following comments were made, questions asked, and actions taken during the review.

Mr. Carlson referred to the description of the rank-based expected value method used in evaluating the alternative plans as described on page 2. He questioned if consideration had been given to assigning different weights to the objectives. Mr. Biebel responded that such differential weighting had been considered, noting that a number of weighting scenarios had been tested. However, the analyses indicated that such differential weighting would not significantly affect the final rank ordering of the alternative plans. He also indicated that the weights given to the objectives would be subjective. Given these considerations, no weighting was used. Dr. Dunning noted that there was an implicit weighting given to the standards in that there was varying numbers of standards for each objective. Mr. Biebel indicated that the standards associated with each objective were weighted equally. However, he agreed that this implicitly meant different weights were given to standards for different objectives.

Dr. Cherkauer indicated that he generally agreed with the methodology used. However, he noted that Alternative Plan 3 was rated low, in large part due to the inclusion of the deep aquifer injection wells. He noted that if that component were not part of the alternative, it would have ranked significantly higher. He noted that was particularly true for Objective No. 5. He recalled that one purpose of Alternative Plan 3 was to be able to segregate the value of the components. He recommended, and it was generally agreed, to add text to indicate the potential for a better ranking of Alternative Plan 3 if the injection well component were not included.

[Secretary's Note: In order to expand the text regarding the deep aquifer injection well impact on Alternative Plan 3, text has been added to the second paragraph on page 13. The added text is included in the revised version of Chapter VIII transmitted with these minutes.]

Ms. Conley referred to Standard 5 under Objective No. 1, related to the preservation of environmental corridors. She noted that under Alternative Plan 3, there were rainfall infiltration sites being developed. She indicated that such sites may be conducive to preserving the environmental corridors. Mr. Biebel indicated that the rainfall infiltration sites would likely not be able to be sited in the corridors, because of the need for regrading and revegetation. However, he noted that such sites could be located adjacent to the corridors and eventually become part of expanded corridor areas. He noted also, that Alternative Plan 3 also had a component which specifically provided for preserving the groundwater recharge areas with high and very high recharge potential. He noted that that aspect could provide a basis for considering Alternative Plan 3 being a better plan than the other three alternative plans. After further discussion, it was agreed that the staff would reconsider the ranking for Standard 5 under Objective No. 1.

[Secretary's Note: After further consideration, the ranking of the alternative plans related to Standard 5 under Objective No. 1 has been revised to indicate Alternative Plan 3 as ranking the highest and the other three alternative plans ranking equally. The text related to Standard 5 on page 3, and Tables IX-1 and IX-2 were revised accordingly. The revised text and tables are included in the revised version of Chapter IX transmitted with these minutes.]

Ms. Conley referred to Standard 7 under Objective No. 1 on page 4 related to the preservation of agricultural lands. She noted that the development of rainfall infiltration systems under Alternative Plan 3 could be more beneficial for agricultural land preservation and that Alternative Plan 3 should be ranked the highest. Chairman Bauer indicated that the rainfall infiltration sites would typically not be suitable for agricultural uses, since they

would typically need to have excessive amounts of rainwater artificially directed to the sites and that vegetation would be planted which minimizes evapotranspiration. Moreover, he said, farmers managed the land to maximize yields and profits; a quite different objective than managing the sites to maximize infiltration. Mr. Lurvey agreed with this statement, indicating recent rainfall periods highlighted the situation where excess water can cause an interruption in agricultural operations.

Dr. Cherkauer indicated that he recognized that the rainfall infiltration sites would not generally be suitable for agricultural uses. However, he noted that the sites covered about four square miles, which was less than 0.2 percent of the Region in areal extent. Mr. Biebel acknowledged that the area was relatively small, but noted it was a higher percentage of the agricultural land in the Region, and that there was some distinction to be made between alternative plans. After further discussion, it was generally agreed not to change the ranking for Standard 7 under Objective No. 1.

Mr. Carlson referred to Standard 2 under Objective No. 2 related to managing the shallow aquifer to be sustainable as set forth on page 4. He asked why Alternative Plan 2 was ranked lower than Alternative Plan 1, since there was an increased use of Lake Michigan water under Alternative Plan 2. Mr. Biebel noted that while Alternative Plan 2 did include a greater use of Lake Michigan as a source of supply compared to Alternative Plan 1, it also provided for the conversion from deep aquifer use to shallow aquifer use and that on balance, more shallow aquifer supply was used under Alternative Plan 2 than under Alternative Plan 1.

Dr. Cherkauer referred to Standard 3 under Objective No. 2 as set forth on page 5. He noted that under Alternative Plan 4, there may be a transfer of nutrients and other pollutants from the Fox River to the involved streams tributary to Lake Michigan under one of the subalternatives for a return flow. He indicated this issue should be considered. Mr. Biebel agreed that that issue should be raised, but that the major impacts to the surface waters were related to the stream baseflow and chloride discharges. He also noted that, in general, the concentrations of conventional pollutants in the plant effluent involved were lower than the instream concentrations. Thus, he recommended the ranking be retained. After further discussion, it was agreed by consensus to add the concept of transferring pollutant loadings to the text, but retain the ranking as it was.

[Secretary's Note: The text for Standard 3 under Objective No. 2 on page 5 was revised to raise the issue of transferring the pollutant loading under Alternative Plan 4. The added text is included in the revised version of Chapter IX transmitted with these minutes.]

Ms. Conley referred to Standard 5 under Objective No. 2 as documented on page 6. She noted that the impacts of transferring pollutant loadings from one watershed to another was also an issue to be considered. Mr. Biebel agreed that that was an issue under Alternative Plan 4. However, he noted that, as previously discussed, that impact was not clearly defined and could be very minimal, or even positive from some points of view. After further discussion, it was agreed to add text to raise the issue of pollutant loading transfer between watersheds.

[Secretary's Note: The text for Standard 5 under Objective No. 2 on page 6 was revised to raise the issue of transferring pollutant loadings between watersheds under Alternative Plan 4. The revised text is included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Rau referred to Standard 1 under Objective No. 3 on page 7 relating to the achievement of the established Drinking Water Standards. He noted that surface water supplies generally meet the primary and secondary drinking water standards, while groundwater supplies often did not meet some of the secondary standards, such as those for iron and manganese. Therefore, he indicated that the greater use of surface water was positive for those alternatives involved. Mr. Mueller suggested that either the reference to the standard should be more specific, indicating the primary standards concerned, or the ranking should be adjusted. After further discussion, it was agreed by consensus to add text regarding the achievement, or lack thereof, of secondary drinking water standards, and to adjust the ranking accordingly.

[Secretary's Note: The text for Standard 1 under Objective No. 3 on page 7 was revised to specifically address both primary and secondary drinking water standards. The ranking of the standard was adjusted accordingly in Tables IX-1 and IX-2. The revised text tables are included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Biebel reported that Ms. Lewis had provided an e-mail which included comments on Standard 3 under Objective No. 3 on page 7. She suggested that surface waters are more vulnerable than groundwater to emerging pollutants and that surface water treatment processes typically do not remove some of these pollutants. Ms. Lewis indicated that would result in surface water supplies being ranked lower than groundwater supplies for this standard, as opposed to the ranking as it is in the draft chapter. Ms. Lewis indicated that an option might be to state both cases and then conclude that the alternative plans would be ranked equally. Mr. Biebel indicated that the text, as written, indicates groundwater reliance to be more vulnerable since only limited treatment is typically provided.

Dr. Cherkauer noted that private onsite well users typically provide no treatment. He also indicated that the focus of the emerging pollutant issue should be on the protection of the source water by removing the pollutants from the wastewater or by preventing their entry into the wastewater. Ms. Conley agreed, indicating source water protection should be stressed. She indicated further that based upon the source water protection, groundwater sources are more protected than surface water sources and are, thus, more desirable in this regard.

Mr. Bunker indicated that surface water treatment plants typically have the ability to adapt the treatment process as needed to meet new requirements.

After further discussion, Mr. Mueller moved to revise the text for Standard 3 under Objective No. 3 to include a statement of the rationales for the potentially different rankings for surface and groundwater supplies under this standard, and that the text concluded that, because of the conflicting rationales, the alternative plans all be ranked equally under this standard. The motion was seconded by Mr. Musche, and carried with Ms. Conley voting no. Ms. Conley indicated that she voted no because she believed the focus of the standard should be on source water protection and that groundwater typically was more protected than surface water.

[Secretary's Note: The text covering Standard 3 under Objective No. 3 on page 8 has been revised to reflect the issues related to the safety of both surface water and groundwater as sources of supply. In addition, the text and Tables IX-1 and IX-2 have been revised to equally rank all the alternative plans. The revised text and tables are included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Biebel indicated that Ms. Lewis also had commented on Standard 6 under Objective No. 3 on page 8 regarding the minimization of treatment and disposal of water treatment waste streams. She suggested a broader analysis of waste streams for the standard. She specifically noted waste streams relating to radium for groundwater treatment and residuals generated in surface water treatment plants. After discussion, it was agreed by consensus to expand the text associated with this standard and to then reevaluate the ranking involved.

[Secretary's Note: In order to more-fully present the range of water treatment residuals and waste streams, the text related to Standard 6 under Objective No. 3 on pages 8 and 9 was expanded. The ranking of the standard remained unchanged. The expanded text is included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Bunker questioned the nature of the recommended plan, asking if it would offer options for the utilities to consider, or it would recommend a preferred configuration. Chairman Bauer replied that a single set of recommendations would be developed as the recommended Commission plan. Mr. Bunker also raised the question of what would happen if an unforeseen condition arose that would be incompatible with the plan. He cited the example of a large ethanol plant development in the vicinity of the Village of Union Grove as an example. Mr. Biebel responded that the best way to deal with those situations would be to amend the regional

water supply plan as appropriate. In that way, he indicated the plan would remain up-to-date and sound. Chairman Bauer indicated that the Regional Planning Commission's long-standing practice was to monitor changing conditions within the Region that may affect the plan recommendations, and in light of the monitored conditions, review and update, as appropriate, all of the regional plan elements every 10 years, or earlier if conditions warrant. The results of the monitoring efforts, he said, are reported in great detail in the Commission *Annual Reports*.

Ms. Conley referred to the first full paragraph on page 15 relating to the City of Waukesha Water Utility. She noted that the City has been reporting at the Waukesha Water Conservation Coalition meetings that its outdoor water uses have been reduced due to the revised rate structure and to the outdoor watering restrictions instituted. She asked if there was a need for the Waukesha Water Utility to increase or change its source of supply given the reduced usage. Mr. Biebel responded that the forecast water usage for the City of Waukesha Water Utility included assumptions on the impacts of water conservation which were generally consistent with the changes in outdoor water use reduction being achieved by the City. However, due to issues related to water quality and to expected service area increases in water use due to growth, there is a projected need for additional sources of water supply.

Mr. Melcher referred to the section on Country Estates Sanitary District on page 16. He recommended that the township and county location of the District be provided, noting that it was distinguished from general-purpose units of government, the locations of which were generally known. The recommendation was duly noted.

[Secretary's Note: The township and county location of the Country Estates Sanitary District has been added to the fourth paragraph on page 17. The added text is included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Rau referred to the section on private water supply systems beginning on page 18. He asked if the composite plan included the concept of encouraging the private systems to be connected to municipal systems over time when the municipal systems are expanded and available. Mr. Biebel responded that such a recommendation was implicit. It was generally agreed to more specifically state that assumption in the text.

[Secretary's Note: In order to specifically address the issue of the connection of private water supply systems to municipal systems as they become available, the text in the third full paragraph on page 18 has been expanded. The expanded text is included in the revised version of Chapter IX transmitted with these minutes.]

Ms. Conley referred to the section on stormwater management practices in the third paragraph on page 20. She referred to the development of the stormwater management rules that occurred in 2001 and 2002 and resulted in the promulgation of Chapter NR 151 of the *Wisconsin Administrative Code*. She indicated that the process did not go far enough in terms of recognizing and requiring newer, more state-of-the-art technologies. Mr. Holschbach asked for examples of such technologies. Ms. Conley cited parking lots designed for enhanced infiltration and stormwater parks which are urban green spaces designed to capture and retain or slowly release stormwater from adjacent developed areas. She cited the Menomonee Valley stormwater park as an example.

Mr. Biebel indicated that such practices, while primarily used for stormwater management purposes, could have value as a groundwater recharge measure. However, he cautioned that the use of such systems in highly urbanized areas, would be of some concern relating to the potential for groundwater contamination if the primary purpose was groundwater recharge, as opposed to reducing stormwater runoff rates of flow. He indicated that there were areas in the Region where enhanced groundwater recharge was being recommended as described under Composite Plan Element 10 on page 21. He suggested, and it was agreed by consensus, to add text to that element, noting that the enhanced recharge recommended could be carried out a number of ways, one of which would be similar to the stormwater management measures, such as Ms. Conley suggested.

[Secretary's Note: The text under "Composite Plan Element 10— Enhanced Recharge for the Shallow Aquifer" on page 21 has been expanded to indicate the options for providing the enhanced recharge. The expanded text is included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Dunning referred to the groundwater analyses recommended to be associated with well siting under Composite Plan Element 9 on page 20. He noted that the regional groundwater model was suitable for such analyses when the features of the model providing for localized inset model refinement are used.

Ms. Conley referred to the Composite Plan Element 10—Enhanced Recharge for the Shallow Aquifer, on page 21. She asked if there was an opportunity to include infiltration of wastewater treatment plant effluent, such as is done in the City of Lake Geneva. Mr. Biebel replied that the additional treatment and recharge of wastewater treatment plant effluent had specifically been evaluated under Alternative Plan 3. However, because of the high cost, the potential for adding contaminants to the groundwater system, and the unlikely implementation of such a component, it was not proposed for inclusion in the composite plan. He noted that the Lake Geneva system was a special case where such the geology and other factors resulted in a viable system which was expected to remain in use.

Dr. Cherkauer indicated that he generally agreed with the structure of the proposed composite plan. However, he indicated that the components which dealt with well siting and groundwater recharge, as set forth in Composite Plan Elements 8, 9, and 10, were somewhat vague at this point. He indicated this was a particular concern in the outlying areas of the Region where the composite plan generally envisions continuation of the use of individual, onsite systems similar to the current situation. He noted that in some of this area the shallow and deep aquifers are interconnected.

Mr. Melcher agreed, indicating that there was a need to include firm recommendations to guide water supply system development and expansion in the outlying areas. Chairman Bauer indicated that the issues being raised were valid concerns that should be addressed. He indicated that the plan implementation chapter would include more-specific implementation strategies which would address these issues. After further discussion, it was agreed by consensus to consider the specificity of Composite Plan Elements 8, 9, and 10 in Chapter IX and also to be cognizant of the issues raised as the recommended plan and implementation chapters are developed.

[Secretary's Note: In order to clarify the intent for guiding the development of water supply development in the outlying peripheral areas of the Region, a new section was added on page 22 to clarify that intent of the composite plan. The added section is included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Bunker referred to Composite Plan Element 9—Siting, Analysis, and Monitoring Practices for Shallow Wells Component, on page 20. He asked if that component applied to all high-capacity wells, or just to municipal wells. Mr. Biebel indicated it was intended to apply to all high-capacity wells and that the text would be reviewed and refined to indicate such.

[Secretary's Note: The text covering Composite Plan 9 on page 20 has been revised to indicate that the well siting, analyses, and monitoring measures apply to all high-capacity wells. The revised text is included in the revised version of Chapter IX transmitted with these minutes.]

Mr. Carlson asked it the regional water supply plan might become part of a regulatory process, whereby approvals of water supply facility permits would be contingent upon consistency with the plan, as is currently the case for sanitary sewerage system facilities. Mr. Biebel indicated that such changes would have to be considered as the State rules for water supply planning and implementation are revised over time. He noted that revised rules are currently being developed by the Wisconsin Department of Natural Resources and are to be completed in 18 months.

Chairman Bauer then asked for a motion to approve the portion of Chapter IX on pages 1 through 22 as amended.

Dr. Cherkauer indicated that he was concerned because the materials covered only conceptually described the composite plan. He indicated that there may be changes or details provided in the detailed description of the composite plan that would raise objections and he was concerned about being locked into the conceptual plan. Chairman Bauer indicated that the detailed composite plan description would be included in the next section of Chapter IX and that the Committee will review and revise that section, as appropriate. at the next meeting.

Mr. Bunker cited concerns relating to maintaining the larger, private water users on municipal water supply systems. He cited the examples of large water users opting out of a municipal system, and either developing self-supplied systems on existing sites within the municipal service areas, or on new sites beyond the municipal service areas. He indicated such actions could be triggered by changes in rates or other economic conditions. He suggested that the regulations on such actions, whereby a large user would develop a new onsite self-supplied well were unclear and asked that this issue be considered in the final plan recommendations and implementation strategy.

Mr. Winkler referred to Table IX-2. He recommended, and it was generally agreed, to "write out" the alternative plan headings so that the reader would not have to go back to the text for an identification of the alternative plans concerned.

[Secretary's Note: Tables IX-1 and IX-2 have been revised to write out the alternative plan names. The revised tables are included in the revised version of Chapter IX transmitted with these minutes.]

There being no further questions or comments, pages 1 through 22 of Chapter IX, "Alternative Plan Comparative Evaluation and Selection of Composite Plan for Further Consideration," covering the comparative evaluation of the alternative plans and a conceptual description of a composite plan of SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, was approved as amended on a motion by Mr. Bunker, seconded by Mr. Melcher, and carried unanimously.

CONSIDERATION OF APPENDIX J, "SUPPLEMENTARY ANALYSES FOR COMPARING ALTERNATIVE WATER SUPPLY PLANS," OF SEWRPC PLANNING REPORT NO. 52, *A REGIONAL WATER SUPPLY PLAN FOR SOUTHEASTERN WISCONSIN*

Chairman Bauer then asked the Committee to consider Agenda Item 5. He noted that all Committee members had received a copy of Appendix J which was referenced in Chapter IX for review prior to the meeting. Chairman Bauer asked Mr. Biebel to review the appendix with the Committee.

Mr. Biebel referred to Appendix J, "Supplementary Analyses for Comparing Alternative Water Supply Plans." He noted that this appendix presented more detailed information on the evaluation criteria used for comparing the alternative plans.

The following questions were raised, comments made, and action taken in the course of the review.

Mr. Carlson referred to Figure J-2 and noted that the demand-to-supply ratio was greater than 1.0 in many locations under all the alternative plans. He pointed out that this indicates that more groundwater is being extracted than can naturally be replaced. However, the information in Chapter VIII indicted that there was a general drawup in the entire Region under Alternative Plans 2, 3, and 4. He questioned if the results of these two analyses results were consistent. Dr. Cherkauer indicated that the results were not inconsistent, in that, while the extracted groundwater stress were projected to exceed the naturally replaced groundwater in 2035, as shown in Figure J-2, the groundwater extraction stresses would be expected to diminish in many areas. He also noted that

the groundwater drawup and drawdown mapping represent a regional aquifer phenomenon, while the demand-to-supply ratio mapping is representing more localized conditions around pumping centers.

There being no further questions or comments, on a motion by Mr. Mueller, seconded by Mr. Holschbach, and carried unanimously, Appendix J of SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, was approved as amended.

OTHER BUSINESS

Chairman Bauer reported that under Agenda Item 7, Other Business, Mr. Biebel would report on the Lake County, Illinois, water forum which was held on May 28, 2008, and which Mr. Biebel attended. He noted that the forum had been announced to the Committee at the May 20, 2008, meeting and that it had been indicated that any pertinent information presented at the forum would be presented to the Committee. He asked Mr. Biebel to summarize the relevant information on the Lake County forum.

Mr. Biebel distributed a staff memorandum providing the pertinent information presented at the Lake County, Illinois, Water Forum. Mr. Biebel then summarized the memorandum. Mr. Dunkelberg noted that he lived in the Lake County area and was familiar with the northern Lake Michigan pipeline project being considered. There were no questions or further comments from the presentation.

[Secretary's Note: A copy of the SEWRPC staff memorandum summarizing the pertinent information presented at the May 28, 2008, Lake County, Illinois, Water Forum is attached hereto as Exhibit B.]

DATE AND TIME OF NEXT MEETING

After brief discussion, it was agreed that the next meeting of the Advisory Committee would be tentatively scheduled to be held at the Commission offices on Tuesday, September 23, 2008, beginning at 9:00 a.m. Chairman Bauer noted that a draft of the remaining portions of Chapter IX setting forth in effect a staff recommended plan should be ready for Committee consideration.

ADJOURNMENT

There being no further business to come before the Committee, on a motion by Mr. Bunker, seconded by Mr. Winkler, and carried unanimously, the meeting was adjourned at 11:45 a.m.

* * *

#138305 V1 - RWSP MINUTES 07/22/08
310-1001
KWB/RPB/pk
08/25/08

Exhibit A

Biebel, Robert P.

From: Lewis, Carrie [Carrie.M.Lewis@milwaukee.gov]
Sent: Friday, July 18, 2008 2:46 PM
To: Biebel, Robert P.
Subject: July 22 meeting of Water Supply Planning Advisory Cte

Hi Bob,

I am sorry that I will not be able to attend the July 22 meeting of the Advisory Committee.

I would like to submit the following comments for the consideration of the group:

1) Chapter VIII: Regarding the needed facilities and estimated costs for various utilities in each alternative plan, there was not sufficient time between when the documentation was received and today to have the identified projects "reality-checked" by MWW engineers. Is there a place for such "reality checks" in the review?

2) Chapter IX, Objective No. 3, Standard 3 on page 7: I wondered if true vulnerability of groundwater vs surface water sources to emerging pollutants was adequately considered, and if the treatability of new pollutants was adequately considered, in the ranking of the alternatives. It seems to me that surfaces water sources are inherently more vulnerable than groundwater, and treament processes for surface waters typically have little effect on these emerging pollutants. If correct, then surface water sources should be ranked lower than groundwater sources. Alternatively, it could be decided that this entire standard is so speculative and that there is so little reliable science on these emerging pollutants and their treatability that the alternatives cannot even be ranked for this standard.

3) Chapter IX, Objective No. 3, Standard 6. I'd like to suggest a broader analysis of waste streams for this standard. Chlorides are not the only potential waste from groundwaters-- radium quickly comes to mind as another waste stream. In addition, surface water treatment plants have copious amounts of residuals-- settled solids and sludges, spent filter backwash, etc., which do not seem to have been addressed as part of the comparison.

Carrie

Exhibit B

SEWRPC Staff Memorandum

SUMMARY OF PROCEEDINGS AT THE MAY 28, 2008, LAKE COUNTY, ILLINOIS, WATER FORUM

There were three topics considered at the May 28, 2008, Lake County, Illinois, Water Forum which are likely to be of interest to the SEWRPC Advisory Committee on Regional Water Supply Planning. The proceedings covering these topics are summarized below.

REPORT ON STATE OF LAKE COUNTY'S WATER SUPPLY

A report on Lake County's water supply has been completed. The report is basically an inventory of the existing water supply systems in the County. The County has a 2005 population of about 704,000 persons. The projected year 2030 population is 842,000 persons, an increase of about 21 percent over the 2005 level.

Om 2005, the County was served by 107 public community water systems. The aquifers underlying Lake County are similar to those in the Southeastern Wisconsin Region. Excluding thermo-electric water uses, the existing supply is provided from the following sources: Lake Michigan 70.4 mgd; shallow aquifer 18.1 mgd; deep aquifer 4.3 mgd; for a total of 92.8 mgd.

This total amount may be compared to a total of 21 mgd and 15 mgd of total water used in Kenosha and Walworth Counties, respectively, during 2005.

FUTURE WATER SUPPLY PLANNING

The County is considering undertaking a water supply planning program, some of which may be carried out in cooperation with the Northeastern Illinois Regional Water Supply Planning Program being coordinated by the Chicago Metropolitan Agency for Planning (CMAP). Lake County, and Illinois in general, do not have the basic groundwater inventories and groundwater modeling that has been developed by SEWRPC for southeastern Wisconsin. No detailed prospectus was available to describe the scope and content of the proposed program. However, the groundwater and geologic inventory phase of the program is estimated to cost in the approximate range of $400,000 to $500,000 on a very preliminary basis.

NORTHERN LAKE COUNTY LAKE MICHIGAN SUPPLY PLANNING

A group of communities are in the planning stages for a new Lake Michigan supply to serve the north and western portion of Lake County, including the communities of Antioch, Fox Lake, Lakeville, Lindenhurst, and Wauconda. By 2030, facilities being considered would serve as many as 195,000 residents with an average day water demand of about 17 mgd. As previously noted, this compares to an average day 2005 water demand of 21 mgd and 15 mgd in Kenosha and Walworth Counties, respectively.

The project would consist of a treatment plant and about 45 miles of transmission main extending west from the vicinity of Zion. The capital cost for the project is approximately $200 million on a very preliminary basis. The planning is in the feasibility study stage. An application for a Lake Michigan water allocation will be the next step. Although the communities to be served are all located west of the subcontinental divide, no provision for return flow is included in the planning, since the plan presumes an allocation from the State of Illinois diversion allowance.

* * *

#138309 V1 - RWSP LAKE CO WATER FORUM STAFF MEMO
310-1001
KWB/RPB/pk
07/17/08