

**MINUTES OF THE SIXTEENTH MEETING
SEWRPC REGIONAL WATER SUPPLY PLANNING ADVISORY COMMITTEE**

DATE: November 27, 2007

TIME: 9:30 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
Douglas S. Cherkauer	Professor of Hydrogeology, University of Wisconsin-Milwaukee
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
Daniel S. Duchniak	General Manager, Waukesha Water Utility, City of Waukesha
Charles P. Dunning	Hydrologist, U.S. Geological Survey
Franklyn A. Ericson	Manager, Environmental Operations & Central Services, S.C. Johnson & Son, Inc.
Thomas M. Grisa	Director of Public Works, City of Brookfield
Terrence H. Kiekhaefer	Director of Public Works, City of West Bend
Carrie M. Lewis	Superintendent, Milwaukee Water Works, City of Milwaukee
Mark Lurvey	Agricultural Business Operator
George E. Melcher	Director, Kenosha County Department of Planning and Development
Matthew Moroney	Executive Director, Metropolitan Builders Association of Greater Milwaukee
Paul E. Mueller	Administrator, Washington County Planning and Parks Department
Michael P. Rau	General Manager, We Energies-Water Services
Frank Risler (for Julie A. Anderson)	Planning Manager, Racine County Planning Division
Edward St. Peter	General Manager, Water Utility, City of Kenosha
Dale R. Shaver	Director, Waukesha County Department of Parks and Land Use
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

Kenneth R. Bradbury	Hydrogeologist/Professor, Wisconsin Geological and Natural History Survey
Lisa Conley	Representative, Town and Country Resource Conservation and Development, Inc.
David Ewig	Water Superintendent, City of Port Washington
Jeffrey A. Helmuth	Hydrogeologist Program Coordinator, Wisconsin Department of Natural Resources, Madison

Andrew A. Holschbach	Director, Ozaukee County Planning, Resources, and Land Management Department
Eric J. Kiefer	Manager, North Shore Water Commission
Thomas J. Krueger	Water and Wastewater Utility Director, Village of Grafton
Jeffrey Musche	Administrator/Clerk, Town of Lisbon
James Surfus	Senior Environmental Engineer, Miller Brewing Company
George A. Torres	Director, Milwaukee County Department of Transportation & Public Works

GUESTS

Daniel R. Butler	Engineer, Ruckert & Mielke, Inc.
Daniel T. Feinstein	Hydrologist, U.S. Geological Survey
Paul G. Hayes	Mid-Kettle Moraine Partners Group
Randall R. Kerkman	Administrator, Town of Bristol
Jeffrey J. Ripp	Water Conservation Coordinator, Public Service Commission of Wisconsin
James Rowen	Concerned Citizen
Steven H. Schultz	Department Head, Water Supply and Wastewater Treatment, Ruckert & Mielke, Inc.
Ben Wood	Engineer, Strand Associates, Inc.

STAFF

Joseph E. Boxhorn	Senior Planner, Southeastern Wisconsin Regional Planning Commission
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CALL TO ORDER AND ROLL CALL

Chairman Bauer called the meeting to order at 9:30 a.m. Roll call was taken by circulating an attendance signature sheet, and a quorum was declared present.

Chairman Bauer welcomed Mr. Jeffrey J. Ripp of the Public Service Commission (PSC) who was attending the meeting as a guest. He noted that Mr. Ripp was responsible for coordinating water conservation efforts at the PSC; was actively involved in monitoring water conservation efforts statewide; and was a valuable resource for information on water conservation programs.

CONSIDERATION OF MINUTES OF THE MEETING OF AUGUST 21, 2007

Chairman Bauer noted that copies of the minutes of the August 21, 2007, 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 SEWRPC staff memorandum entitled "Conceptual Framework for Existing and Future Condition Alternative Plans to Be Considered Under the Regional Water Supply Planning Program for Southeastern Wisconsin, Revised August 31, 2007." He noted that the approval would, of course, be subject to any comments received today on the minutes and the attachments thereto.

Ms. Lewis reported that she was willing to work on the Committee to develop and evaluate the alternative water supply plans. However, she indicated, it would still be preferred that the land use plan be subservient to the water supply plan, rather than the current regional land use plan being the basis for the design of all of the alternatives. Chairman Bauer indicated that the Commission was charged by law to prepare a comprehensive plan for the physical development of the Region; that the regional land use plan is the central and most important element of that plan; is intended to provide the basis for the design of a number of supporting functional plan elements—transportation, sanitary sewerage, drainage and flood control, and parks, among others—as well as water supply; and is the basis for coordinating the planning and development of all of the functional elements concerned. The adopted regional land use plan, he said, was carefully designed to meet an agreed upon, comprehensive set of land use development objectives; provided the basis for the State-mandated preparation of county and local comprehensive plans within the Region; and could not—in accordance with good planning principles and practice—be made subservient to any one functional plan. Such single-purpose planning, he noted, had long been rejected by the planning profession and by knowledgeable members of the engineering profession responsible for highway, transit, and airport system planning, water quality management planning, and flood control planning, and was indeed precluded by Federal planning guidelines. Nevertheless, he said—as has been noted a number of times in these meetings—the Commission staff was committed to considering recommending changes in the adopted regional land use plan should the findings of the water supply planning program indicate such changes were needed.

Mr. Yttri referred to Table 1 of the August 31, 2007, staff memorandum regarding the conceptual framework for the alternative plans which was referenced in the minutes. He noted that footnote “b” had been revised to include the reference to “Existing Supply Facilities,” rather than the “Existing System,” and questioned the reason for the change. Mr. Biebel responded that at the previous meeting Mr. Michael Sullivan, who attended in Mr. Yttri’s stead, had noted that there were water supply system service area expansions planned for a number of utilities which purchased water on a wholesale basis. He had indicated that these facilities were, in some cases, indicated to have adequate capacity, even though they needed to expand their transmission and distribution system. He had cited the Caledonia Utility District No. 1 as an example. In that case, the utility was noted as having adequate capacity through the year 2035 because the utility purchased water from the City of Racine Water and Wastewater Utility, which had adequate water treatment plant supply capacity through 2035. In response to Mr. Sullivan’s questions at the previous meeting, the table had been revised to indicate that the capacity-related comments in the last column of Table 1 were related to the source of supply and not to the water supply service areas or distribution system. After further discussion, and consultation with Mr. Yttri, it was agreed that no further changes were needed to the footnotes to Table 1.

Ms. Lewis referred to the sixth paragraph on page 3 of the minutes and suggested that the text be expanded to note that the initially preferred alternative and the recommended plan could include a combination of components from the other alternative plans. The Committee concurred with the suggestion.

[Secretary’s Note: The August 31, 2007, staff memorandum regarding the conceptual framework for existing and future condition alternative plans has been revised to address Ms. Lewis’ suggestion. More specifically, the text on page 7 regarding the initially preferred alternative has been revised by inserting the following sentence as the second sentence of the second full paragraph on page 7:

“The initially preferred alternative plan may include a components drawn from one or more of the four alternative plans or other components deem appropriate based upon review of the other alternative plans.”

A similar sentence was added to the description of the recommended plan on page 7 of the staff memorandum. A revised copy of the referenced staff memorandum is attached to these minutes.]

Mr. Grisa referred to the fourth paragraph on the first page of Exhibit A of the minutes. He noted that water supply could be an intended surface water use, and that all streams are not intended for full recreational use. It was agreed to revise the paragraph to reflect this observation.

[Secretary's Note: The fourth sentence of the fourth paragraph on page 1 of Exhibit A was revised to read as follows:

“The control of nonpoint source pollution is a necessary step in the process of improving surface water quality to render such waters suitable for their intended uses for recreation, fisheries, and water supply.”]

Mr. Winkler referred to the comments from Ms. Conley as set forth in Exhibit B to the minutes. He indicated that he understood that approval of the minutes would constitute approval of the Secretary's Note on pages 8 and 9 of the minutes, which included a respond to Ms. Conley's comments, rather than approval of Ms. Conley's comments. Chairman Bauer indicated in the affirmative, noting that approval of the minutes constituted approval of the secretary's note on pages 8 and 9 responding to the comments in Exhibit B which was provided as an attachment to the minutes for reference.

There being no further corrections or additions, the minutes of the meeting of July 17, 2007, were approved as amended, on a motion by Mr. Melcher, seconded by Mr. Rau, and carried unanimously.

CONSIDERATION OF PORTION OF CHAPTER VIII, “ALTERNATIVE PLANS: DESCRIPTION AND EVALUATION,” COVERING INTRODUCTORY MATERIALS AND ALTERNATIVE PLAN 1: DESIGN YEAR 2035 FORECAST CONDITIONS UNDER EXISTING TRENDS AND COMMITTED ACTIONS

Chairman Bauer then asked the Committee to consider Agenda Item 3. He noted that all Committee members had received a copy of the portion of Chapter VIII, “Alternative Plans: Description and Evaluation,” concerned for review prior to the meeting. He noted that it was intended to obtain Committee approval of the introductory text and of the first alternative plan description and impact analysis prior to the staff proceeding with the preparation of the descriptions and impact analyses for the other alternative plans to be considered, as well as with a comparative evaluation of the alternative plans.

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.

Ms. Lewis referred to the second paragraph on page 2, and suggested that the text be expanded to include the concept that the initially preferred alternative plan could include a combination of selected components from the first four alternative plans. The Committee concurred with the suggestion.

[Secretary's Note: In order to clarify that the initially preferred alternative plan may include components from review of all the alternative plans, a paragraph has been added as the third full paragraph on page 2. The new paragraph is included in the revised version of the initial portion of Chapter VIII attached to these minutes]

Mr. Bunker referred to the second paragraph on page 4 which listed the problems and issues to be addressed in preparation of the alternative plans, and noted that resolution of some of those problems and issues will have associated costs. He cited the groundwater radium contamination problem as one such problem, and asked if the cost-effectiveness analyses would address those problems and issues. Mr. Biebel indicated in the affirmative, noting that each of the alternative plans and the associated costs would include facilities needed to meet the plan design year 2035 forecast water demands and current water supply quality requirements. He noted, for example, that under Alternative Plan 1, treatment systems for radium were included for certain utilities, such as the City of

Brookfield Water Utility. Under other alternatives which proposed the substitution of Lake Michigan water for groundwater as a source of supply, the cost of the abandonment of the related wells and treatment systems were considered. He noted, however, that the alternatives did not consider water quality requirements over and above those currently in place.

Mr. Rau referred to the first paragraph on page 5 and suggested that text be added regarding the accuracy of the cost estimates. The Committee concurred with the suggestion.

[Secretary's Note: In order to discuss the accuracy of the cost estimate, a new paragraph has been added as the second full paragraph on page 5. The additional text is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Rau referred to the first full paragraph on page 6, and questioned the use of the term "drawup," a term he had not heard before. A brief discussion ensued, at the conclusion of which it was agreed to continue to use the term "drawup," but to define the term where first used in the text.

[Secretary's Note: In order to clarify the term drawup, the sixth full paragraph on page 6 has been replaced by three sentences. The revised text is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Rau referred to the first two full paragraphs on page 6 describing the groundwater-surface water model to be used in the evaluations of the alternative plans, and suggested that the range of anticipated error in the model outputs be described. Mr. Biebel indicated that typically such ranges were not assigned to model outputs under forecast future conditions, since the actual future conditions are unknown at this time. Mr. Feinstein agreed. Mr. Biebel indicated that the text indicated that the modeling results were considered adequate for the comparative analyses of alternative plans. He noted that more detailed model applications would be needed to determine the potential impacts of site-specific proposals. Chairman Bauer recommended, and it was agreed, to add text explaining the level of accuracy inherent in the model performance to the extent practical.

[Secretary's Note: Two paragraphs have been added after the first full paragraph on page 6 (now as the second and third full paragraphs on page 7). The added paragraphs are included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Shaver referred to Map VIII-1 and recommended that the new wells proposed for under Alternative Plan 1 be color-coded to indicate whether they were finished in the deep or shallow aquifer. Mr. Biebel indicated that this would be done.

[Secretary's Note: Map VIII-1 has been revised to illustrate the aquifer in which the proposed new wells are to be finished. The revised map is included in the revised copy of the initial portion of Chapter VIII attached to these minutes.]

Mr. Shaver referred to the seventh element of Alternative Plan 1, as summarized on page 8, which specifically cited the infiltration requirements of Chapter NR 151 of the *Wisconsin Administrative Code*. He noted that in addition to the requirements in Chapter NR 151, there were other stormwater management regulations, including the U.S. EPA regulation termed municipal separate storm sewer system regulations (MS4 regulations) which have been incorporated into county or local stormwater management ordinances which may also be suggested to have an impact on the infiltration associated with new development or redevelopment activities. A brief discussion ensued, upon which it was agreed to expand the description of the seventh element of Alternative Plan 1 on page 8.

[Secretary's Note: The seventh bulleted item on page 8 (now page 9) has been expanded. In addition, the section on pages 6 and 7 (now page 8) describing the evaluation of environmental

and other impacts has been expanded to indicate the system-level evaluation of the alternative plans component providing for implementation of the current regulatory programs. The expanded text is included in the revised copy of the initial portion of Chapter VIII attached to these minutes.]

Mr. Rau referred to Table VIII-1 and noted that there were new storage facilities included in the facility improvements indicated to be needed for selected utilities; and asked if the storage facilities were related to supply or conveyance needs. Mr. Biebel indicated that the analyses, as described in Appendix H, were intended to consider storage needs as a function of water supply. He indicated that it was recognized that storage may also be used to meet conveyance needs, and that subsequent analyses conducted at the local system planning and preliminary engineering stages of the conveyance and distribution systems could indicate additional storage needs for conveyance purposes.

Mr. Bunker referred to the Northwest Caledonia Area Water Utility listed on page 5 of Table VIII-1, noting that the alternate plan component description included a transmission main for that newly planned utility, and noting that that main was the only transmission main noted in the table as required under Alternative Plan 1. Mr. Biebel responded that the area concerned to be served consisted of a relatively small new industrial park. He indicated, further, that under Alternative Plan 1, the area was assumed to be served by 9,000 feet of water main, with a connection to the Oak Creek system, and that under Alternative Plan 2, the area was expected to be served by a connection to the Racine system. Mr. Bunker noted that it may be less costly to serve the area with a well. Mr. Biebel indicated that the area was located east of the subcontinental divide and in an area where sites for shallow wells with adequate capacity may not be readily found. Given the planned land use, Mr. Biebel indicated a Lake Michigan supply was initially considered preferable. Mr. Biebel indicated further other needed water transmission mains would be included under the other alternative plans as required.

Mr. Grisa referred to Table VIII-1 and noted that the communities which purchased water, were consistently noted as having no needed supply expansion. He asked if the needs analysis reflected new customers for those communities. Mr. Biebel indicated that the supply-related facilities required by the utility which owned and operated the primary supply. He noted the example of the City of Oak Creek Water Utility which was indicated to require some supply expansion, while the customer utilities, such as the Caddy Vista Sanitary and City of Franklin Water Utility were indicated as needing no such expansions. Mr. Grisa asked if the customer communities could, nevertheless, have a need for some additional facilities. Mr. Biebel indicated that, in some cases, storage facilities may be needed. He cited the example of the Village of Pleasant Prairie Water Utility which was indicated to need an additional storage facility for supply purposes.

Ms. Lewis asked what was the basis for the order of the utility listing in Table VIII-1. Mr. Biebel noted that Table VIII-1 was generally ordered by city, village, and town utility district. However, he noted that planned new utilities which did not exist in 2005 were listed last. After brief discussion, it was agreed to check the ordering of the utilities in Table VIII-1 for consistency.

[Secretary's Note: Table VIII-1 was revised to order the utilities within each county by existing city, village, and town utility district followed by planned utility districts. Each group was alphabetized. The revised table is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Yttri asked Mr. Biebel to explain each of the columns in Table VIII-1. Following the explanation, Mr. Yttri asked why there was an operation and maintenance cost for utilities with no capital cost. Mr. Biebel indicated that, in those cases, the operation and maintenance cost was associated with water conservation measures. After brief discussion, it was agreed that the operation and maintenance cost column should be clarified with regard to the inclusion of a water conservation component.

[Secretary's Note: A footnote has been added to Table VIII-1 to address this concern raised. The footnote is included in the table in the revised version of Chapter VIII attached to these minutes.]

Mr. Rau referred to Table VIII-1, noting that the cost of purchasing water represented an operation and maintenance cost, but was not apparently included. Mr. Biebel replied that the cost of purchasing water was only indirectly included in the cost-effectiveness analyses. He indicated that the cost-effectiveness analyses were not fiscal analyses, but economic analyses intended to be used to compare the capital and operation and maintenance costs of the facilities proposed in each alternative plan. After brief discussion, it was agreed to add a footnote to Table VIII-1 to clarify the issue raised.

[Secretary's Note: A footnote was added to Table VIII-1 to clarify that the cost-effectiveness analyses were based upon incremental costs associated with new or expanded facilities. In addition, the text on page 5 describing the economic evaluation has been expanded regarding this issue. The revised table and text are included in the revised version of Chapter VIII attached to these minutes.]

Ms. Lewis recommended, and it was generally agreed, to revise the title of Table VIII-1 to indicate the costs are related to the new facilities required for supply purposes.

[Secretary's Note: The title of Table VIII-1 has been revised to read "Principle Features and Costs of New, Expanded, and Upgraded Facilities Required for Supply Purposes under Alternative Plan 1, Design Year 2035 Forecast Conditions under Existing Trends and Committed Actions."]

Mr. St. Peter asked if the costs were related only to the water supply facilities. Mr. Biebel responded in the affirmative.

In response to a question by Mr. Bunker, Mr. Biebel indicated that economic life used in the cost-effectiveness evaluation for wells was 50 years.

Mr. Grisa asked if there should be a description of the sustainability of the aquifers under Alternative Plan 1. Chairman Bauer replied that the groundwater and surface water impacts presented were developed to be used for a comparative evaluation of the alternative plans and to permit an evaluation as to the extent to which the alternatives achieve the plan objectives and standards. He indicated that would be done on a comparative basis after presenting the alternative plans and related impacts. Mr. Schultz added that sustainability of the aquifer was defined in the objectives and standards, and that sustainability would, thus, be addressed as the alternatives are compared with regard to the achievement of the objectives and standards.

Dr. Cherkauer referred to the description of the groundwater impacts on the shallow and deep aquifers as described on pages 9, 10, and 11. He indicated that the sustainability and more modest impacts on the shallow aquifer levels are not comparable to the relatively more-severe impacts on the deep aquifer. He indicated that the impacts on the shallow aquifer were moderated by the dampening effect of the changes in surface water base flows. He noted that the groundwater-derived surface water base flow reductions were the more significant impact when considering the shallow aquifer withdrawals.

Mr. Bunker referred to the section on the groundwater and surface water impacts of Alternative Plan 1 beginning on page 9 (now page 10). He noted that there were relatively long paragraphs describing the impacts. He recommended, and it was generally agreed, to break up the paragraphs in order to improve the readability.

[Secretary's Note: In order to improve the readability of the text covering the groundwater and surface water impacts, the text was revised to limit the length of the paragraphs. The revised

text is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Grisa referred to the description of the base flow reduction index for the shallow aquifer cited on page 11. He asked if the return of wastewater treatment plant effluent to the streams was considered. Dr. Cherkauer replied that it was not factored into the analyses, but, rather, the index was related to groundwater-derived baseflow. Mr. Grisa indicated that the surface water impacts and the base flow reduction may be expected to altered significantly under the alternative plans which include a return flow to Lake Michigan, as opposed to the current flows, including discharge of the spent water to a local surface water. Mr. Biebel indicated that it was important to understand that the changes in the surface water flows were related to groundwater-derived base flow, not streamflow. He indicated that the text would be reviewed to be sure that was clear.

[Secretary's Note: In order to further amplify that the model results regarding surface water impacts were related to groundwater-derived baseflows, the text on pages 11, 12, and 13 (now pages 12 and 14) was revised. The revised text is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Biebel referred to Map VIII-2 illustrating drawdown and drawup in the deep aquifer from the year 2000 through 2035. He noted that the impacts due to pumping were not extreme relative to historic pumping impacts. Dr. Cherkauer noted that the moderation of the impacts was due, in part, to a conscious change for selected utilities under Alternative Plan 1 from pumping of the deep aquifer to pumping of the shallow aquifer. He noted that while such change transfers the impacts of pumping from the deep aquifer to the shallow aquifer it does so with related surface water impacts. Dr. Cherkauer also pointed out that in areas where there was little change or drawup in the deep aquifer between 2000 and 2035, that the historic drawdown had been 300 to 500 feet. Thus, there remained a major concern. Mr. Schultz reminded the Committee that the plan objectives for limitations on drawdown of the deep aquifer were developed to be related to the current year 2000 levels.

Mr. Feinstein referred to Map VIII-2 and noted that there was an obvious impact from pumping in northeastern Illinois. He noted that, for modeling purposes, pumping in that region was maintained at the 2000 level through the year 2035. He indicated that this assumption was made because of the changes that may take place beyond the Region were unknown at this time. Mr. Biebel indicated that the anticipated economic and demographic growth in the greater Chicago area being accompanied by conversions from groundwater to Lake Michigan water as a source of supply. It should be noted that there are currently no comprehensive regional plans. Mr. Grisa recommended, and the Committee agreed, to add text to the report section covering the groundwater impacts on the deep aquifer on page 11.

[Secretary's Note: Text has been added to the first full paragraph on page 11 (now the fourth full paragraph on page 12) to address the issue of groundwater use in northeastern Illinois. The revised text is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Chairman Bauer observed that a review of the section on the groundwater and surface water impacts associated with Alternative Plan 1, as presently written, may lead some readers to indicate that this alternative was a viable one, albeit with some undesirable environmental impacts related to groundwater and surface water conditions. Dr. Cherkauer cautioned the Committee in this respect to not minimize the potential impacts of Alternative Plan 1 on the groundwater and surface water conditions. He referred to Maps VIII-4 and VIII-5 which indicated areas where the groundwater-derived baseflow in the surface water may be expected to be reduced by 10 to 25 percent. He also referred to Map VIII-3 which indicated areas where the potentiometric surface in the upper portion of the deep aquifer could be drawn down below the Maquoketa shale, potentially introducing air into the upper portion of the deep aquifer. He indicated such a condition could cause water quality problems possibly related to the release of naturally occurring arsenic contaminants.

Mr. Bunker referred to Table VIII-9 and noted the difference between the Kenosha County and the Racine County demand to supply ratios and the human influences ratio for the deep aquifer. He noted that Kenosha County appeared to have a more significant drawdown in the deep aquifer, but was indicated to have a lower water budget deficit and a lower human impact than Racine County. Dr. Cherkauer indicated that both Counties were expected to have relatively modest pumping and recharge; and that the indicators were not necessarily related to drawdown. Mr. Biebel noted that the drawdown in Kenosha County was largely due to pumping in northeastern Illinois, and that the indicators were based upon anticipated conditions within each County, as opposed to cumulation impacts from both within and outside the County. It was also noted that anticipated deep aquifer pumping in Racine County, namely by the City of Burlington, was significantly higher than pumping in Kenosha County.

Mr. Shaver referred to Tables VIII-6 and VIII-9, noting that the text explained what the indicators meant.; in looking at the tables alone, it was difficult to interpret the information given without looking back at the text. After brief discussion, it was agreed to footnote Tables VIII-6 and VIII-9 to more completely explain the meaning of the indicators.

[Secretary's Note: Footnotes have been added to Tables VIII-6 and VIII-9 to explain each of the indicators referenced. The revised tables are included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Grisa observed that the text on the groundwater and surface water impacts was exceedingly complex and deserved an interpretive summary that explained the salient findings.

Mr. Shaver agreed and noted that the text was complete and, therefore, lengthy. The Committee agreed, to add a concluding section summarizing the potential impacts.

[Secretary's Note: In order to summarize the potential groundwater and surface water impacts of Alternative Plan 1, a conclusion section has been added to page 14 (now page 16). The added section is included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Grisa referred to Map VIII-3 and asked that the title be revised to make it clear that the dolomite in question was part of the deep aquifer.

[Secretary's Note: The title of Map VIII-3 has been revised to read "Simulated Year 2035 Unsaturated Conditions in the Sinnipee Group Dolomite Located in the Upper Portions of the Deep Aquifer under Alternative Plan 1 Conditions."]

Mr. Bunker referred to Table VIII-1 and Map VIII-1. He suggested, and the Committee agreed, to indicate the aquifer involved for each new well in the table and on the map.

[Secretary's Note: Table VIII-1 and Map VIII-1 have been revised to indicate the wells as being finished in either the shallow or deep aquifer. The revised table and map are included in the revised version of the initial portion of Chapter VIII attached to these minutes.]

Mr. Bunker also referred to Map VIII-2, indicating drawdown and drawup conditions in the deep aquifer under the alternative plan. He asked if a similar map could be provided for the shallow aquifer. Mr. Biebel indicated that modeling of conditions in the deep aquifer was less complex than in the shallow aquifer because of the uniformity of conditions and the lack of localized impacts of recharge. In the shallow aquifer, local recharge makes the conditions of drawdown and drawup highly variable. In addition, he said, the levels of drawdown in the shallow aquifer were more limited in large part because of the buffering affect of the surface water system interrelationships. After further discussion, it was agreed that the staff would investigate the potential to add a map indicating drawdown and drawup in the shallow aquifer under the alternative plan conditions.

[Secretary's Note: A map has been added showing the estimated drawdown and drawup in the shallow aquifer under Alternative Plan 1. The map is included in the revised version of the initial portion of Chapter VIII attached to these minutes. Similar maps will be provided for the other alternatives and recommended plans.]

There being no further questions or comments, pages 1 through 14 (now pages 1 through 16) of Chapter VIII, "Alternative Plans: Description and Evaluation," covering the introductory materials and Alternative Plan 1: Design Year 2035 Forecast Conditions under Existing Trends and Committed Actions, of SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, was approved on a motion by Mr. Grisa, seconded by Mr. Risler, and carried unanimously.

CONSIDERATION OF APPENDIX H, "METHODOLOGY FOR ANALYZING WATER SUPPLY SYSTEM CAPACITIES AND FOR DEVELOPING SYSTEM-LEVEL ALTERNATIVE PLANS"

Chairman Bauer then asked the Committee to consider Agenda Item 4. He noted that all Committee members had received a copy of Appendix H which was referenced in Chapter VIII, "Alternative Plans: Description and Evaluation," of SEWRPC Planning Report No. 52 for review prior to the meeting. Chairman Bauer asked Mr. Biebel to review the Appendix with the Committee.

Mr. Biebel referred to Appendix H, "Methodology for Analyzing Water Supply System Capacities and for Developing System-Level Alternative Plans." He noted that this Appendix presented more detailed information on the procedures used for evaluating the capacities of the existing water supply systems in relation to the existing and forecast 2035 water use demands.

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

Mr. Grisa noted the Appendix indicated the use of fire-flow demand rates based upon the size of the system. He noted that fire-flow demands were more typically based upon land use and building types. Mr. Biebel indicated that at the system-level, it would be difficult to evaluate the various potential categories for fire-flow demand within each utility based upon land uses and building types. Thus, the demands were generalized. Mr. Butler agreed, and noted that most utilities were evaluated using a fire flow rate of 3,500 gpm. After brief discussion, it was agreed that the methodology used was reasonable for system-level planning.

Mr. Grisa noted that the way the analyses were done, it assumed that transfer station consisting of either pumping stations or pressure reducing valves were in place between pressure zones. Mr. Biebel agreed, noting that in cases where such transfer stations were not in place, they could be added at relatively modest cost.

Mr. Bunker referred to Table H-1 and noted that the footnote for the City of Racine should be revised from "a" to "e." The change was duly noted.

Mr. St. Peter referred to the example treatment process given on page 4. He noted that newer water treatment plants would not use the same units, but would more likely include membrane filtration. After brief discussion, it was agreed to include a reference in the Appendix to a treatment train including membrane filtration unit for use in cases where new facilities were being evaluated.

[Secretary's Note: In order to indicate that newer facilities would include membrane filtration, the text on page 4 has been revised. The added text is included in the revised version of Appendix H attached to these minutes.]

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

CORRESPONDENCE

Chairman Bauer then asked the Committee to take up Agenda Item 5. He noted that all members of the Committee had been provided with copies of two sets of correspondence materials for review prior to the meeting. The first was a SEWRPC staff memorandum to which was attached an exchange of correspondence between representatives of several civil rights, economic development and neighborhood development, and environmental organizations and the Regional Planning Commission regarding the ongoing regional water supply planning program. He noted that the letter of response from the Commission indicated that the concerns raised in the correspondence were being forwarded to the Commission Environmental Justice Task Force for consideration and recommendation. He asked if there were any questions or comments on this set of correspondence.

Mr. Bunker referred to the second item on the first page of the September 27, 2007, letter. He indicated that the conclusions regarding the impacts of water conservation and the need to minimize water rates was accurate. He indicated that the water rates in Racine were carefully reviewed and revised to reflect the concerns raised.

Mr. Rau asked if the environmental justice issue was related to other Commission work programs. Chairman Bauer indicated that it was indeed an issue that was raised in other planning programs, most significantly with regard to the regional transportation planning program.

Mr. Rau asked what were the options to be considered to address the issue. Chairman Bauer indicated that the staff was to meet with the Commission Environmental Justice Task Force later that day. The Task Force would be asked for any suggestions as to how to deal with the issue.

Mr. Ericson asked if the recipients of the September 27, 2007, letter had responded. Chairman Bauer indicated in the negative.

Ms. Lewis asked that the Advisory Committee be kept informed of potentially public informational or related meetings on the water supply planning programs. Mr. Biebel indicated that would be done.

Chairman Bauer then referred to the second set of correspondence which was comprised of a Legislative Council Memorandum and a letter from Senator Neal Kendzie advising of the dissolution of the Study Committee on the Great Lakes-St. Lawrence River Basin Water Resources Compact. He noted that several members of the SEWRPC Advisory Committee on Regional Water Supply Planning had participated in the deliberations of the dissolved Committee, and that he understood that Governor Doyle had formed another State-level committee to consider the Compact. He asked if there were any questions or comments on the second set of correspondence. There were no comments by Committee members on this correspondence.

Mr. Biebel reported that Ms. Conley was out of the country, but had sent an e-mail correspondence raising two issues she wished to bring to the Committee's attention and response. Mr. Biebel noted that a copy of Ms. Conley's e-mail had been distributed to all Committee members for review prior to this meeting. He pointed out that the first issue raised related to the amount of water supplied for outdoor uses in the City of Waukesha. Ms. Conley raised the question of how an adequate return flow to Lake Michigan could be provided, given the amount of outdoor water use.

Mr. Biebel noted in response that the wastewater flow for the City of Waukesha was typically 10 percent or more greater on an annual average basis than the potable water used in the City. This ratio is typical in southeastern Wisconsin and may be attributed to clearwater infiltration and inflow into the sanitary sewerage systems. Thus,

the available amounts of wastewater treatment plant effluent should constitute more than an adequate return flow quantity if this became an issue.

Mr. Biebel noted the second issue raised by Ms. Conley was related to the use of rainwater as a water source. Ms. Conley reported on a conversation she had with a representative of the Alliance for Water Efficiency, a Chicago-based nonprofit organization involved in promoting water efficiency products and programs, concerning this issue. The implication of the conversation was that the Committee had not considered rainwater as a source of water supply.

Mr. Biebel indicated that the Committee had, indeed, carefully considered rainwater as a source of water supply, in that the state-of-the-art report on water supply practices had identified a number of ways in which rainwater could be used, including for maintenance and enhancement of infiltration, outdoor water uses, and rainwater harvesting. Details on these practices were provided, and the associated costs documented. In addition, he said, the initial alternative plans all call for a reduction in the maximum daily water use of from 6 to 18 percent, depending upon utility-specific measures. Such a reduction will require, among others, measures for achieving outdoor water use conservation. The alternative plans also include measures, he said, to achieve varying levels of groundwater infiltration. Finally, he said, as documented in the minutes of the August 21, 2007, meeting, it was planned, at Ms. Conley's recommendation, to comparatively evaluate the initially preferred plan with a plan that considers the effects of including an expanded level of water conservation. That level would be established to approximate the highest level which could practically be expected to be achieved. That plan would likely include increased use of rainwater as a source of supply. The Committee could then consider the benefits, costs, and other impacts of such an alternative. Accordingly, he concluded that the practice of using rainwater as a source of supply was being adequately addressed by the Committee. The Committee concurred by consensus.

[Secretary's Note: A copy of Ms. Conley's e-mail correspondence is attached hereto as Exhibit A.]

DATE AND TIME OF NEXT MEETING

After brief discussion, it was agreed that the next meeting of the Advisory Committee would be held at the Commission offices on Tuesday, February 19, 2008, beginning at 9:30 a.m. Chairman Bauer noted that for the next meeting technical reports on groundwater analyses and possibly portions of the remainder of Chapter VIII was expected to be completed in draft form.

ADJOURNMENT

There being no further business to come before the Committee, on a motion by Mr. Shaver, seconded by Mr. Ericson, and carried unanimously, the meeting was adjourned at 11:50 a.m.

* * *

Exhibit A

Page 1 of 1

Biebel, Robert P.

From: Lisa Conley [mailto:lconley101@gmail.com]

Sent: Monday, November 12, 2007 9:42 AM

To: Biebel, Robert P.

Subject: Water supply advisory committee

I will be out of the country until Dec 5th, but would like to bring two issues to the meeting that surfaced at the Waukesha Water Conservation coalition meeting last Friday:

If the Waukesha Water utility is able to get water from Lake Michigan, and a stipulation is that it should be returned to the lake, I am concerned that a large percentage of this water will be used watering lawns, and never get back to the lake. I was amazed at the percentage of local water that goes into landscaping, and that it is a growing trend.

Mary Ann Dickenson spoke at our meeting, and I mentioned afterwards that our advisory committee had not considered rainwater as a water source, and her comment to me was - "that's too bad - they are really out of step" <http://www.allianceforwaterefficiency.org/>

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Lisa Conley

262/567-5947

lconley101@gmail.com

11/16/2007