

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

DATE: December 5, 2006

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
Julie A. Anderson	Director, Racine County Division of Planning and Development
Kenneth R. Bradbury	Hydrogeologist/Professor, Wisconsin Geological and Natural History Survey
Thomas J. Bunker	General Manager, Water and Wastewater Utility, City of Racine
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 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
Jeffrey A. Helmuth	Hydrogeologist Program Coordinator, Wisconsin Department of Natural Resources, Madison
Andrew A. Holschbach	Director, Ozaukee County Planning, Resources, and Land Management Department
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
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
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**

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
David Ewig	Water Superintendent, City of Port Washington
Roger C. Johnson	Manager, North Shore Water Commission
Thomas J. Krueger	Water and Wastewater Utility Director, Village of Grafton
Patrick T. Marchese	Member, Water Policy Advisory Panel, Public Policy Forum
Jeffrey Musche	Administrator/Clerk, Town of Lisbon
George A. Torres	Director, Milwaukee County Department of Transportation & Public Works

## **GUESTS**

Daniel T. Feinstein	Hydrologist, U.S. Geological Survey
Ernst-Ulrich Franzen	Associate Editorial Page Editor, Milwaukee Journal-Sentinel
Randall R. Kerkman	Administrator, Town of Bristol
Kamron E. Nielson	Project Engineer, Ruekert & Mielke, Inc.
James Rowen	Concerned Citizen
Steven H. Schultz	Department Head, Water Supply and Wastewater Treatment, Ruekert & Mielke, Inc.

## **STAFF**

Catherine D. Madison	Planner, Southeastern Wisconsin Regional Planning Commission
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## **CALL TO ORDER AND ROLL CALL**

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

## **CONSIDERATION OF MINUTES OF THE MEETING OF OCTOBER 11, 2006**

Chairman Bauer noted that copies of the minutes of the October 11, 2006, meeting of the Regional Water Supply Planning Advisory 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 were requested by the Committee to be made in the materials reviewed at that meeting were intended to be fully documented in the minutes, or in attachments thereto. He reminded the Committee members that approval of the minutes would constitute final approval of Chapter III, "Existing Water Supply Conditions in the Region," of SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, excepting the chapter summary section, and of Chapter VIII, "Water Transmission and Storage Facilities," of SEWRPC Technical Report No. 43, *State-of-the-Art of Water Supply Practices*. He noted that the approval would, of course, be subject to any comments received today on the minutes and the attachments thereto.

Mr. Grisa referred to Table VIII-4 on page 9 of revised Chapter VIII, "Water Transmission and Storage Facilities," and noted that it was agreed to change the valve spacing. Mr. Biebel responded that the change was made in the corresponding text, but not the table and that the table would also be changed.

[Secretary's Note: The fifth column in Table VIII-4 was revised to change the word "four" to "three or four" and to change the word "three" to "two or three."]

Ms. Lewis indicated that, in her opinion, the minutes were well done and constituted an accurate record of the Committee's deliberations.

There being no further corrections or additions, the minutes of the meeting of October 11, 2006, were approved as amended, on a motion by Mr. Grisa, seconded by Ms. Conley, and carried unanimously.

### **CONSIDERATION OF THE SUMMARY SECTION OF CHAPTER III, "EXISTING WATER SUPPLY CONDITIONS IN THE REGION," OF SEWRPC PLANNING REPORT NO. 52**

Chairman Bauer then asked the Committee to consider Agenda Item 3. He noted that all Committee members had received a copy of the summary section of Chapter III, "Existing Water Supply Conditions in the Region," of SEWRPC Planning Report No. 52 for review prior to the meeting. Chairman Bauer reminded the Committee that all of Chapter III, excepting the summary section, had been reviewed and approved at previous meetings. He noted that the Chapter III summary would also be refined and used as Chapter II of the state-of-the-art report. He then asked Mr. Biebel to review the summary section with the Committee on a page-by-page basis.

Mr. Biebel reminded the Committee that Map 46 which is intended to be included as page 4 of the summary section has been initially considered at the previous meeting with regard to its suitability to meet the intention of the Committee and the staff relating to security issues. Mr. Biebel recalled that, at the time Committee action on the proposed map was deferred pending resubmittal with the text of the summary section of Chapter III of SEWRPC Planning Report No. 52. He distributed a copy of that map, noting that it had not been sent out to avoid multiple copies being made public prior to the Committee review.

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

Ms. Conley referred to the first paragraph on page 1 of the summary. She recommended that text be added indicating that rainwater was a viable source of water supply. Mr. Biebel responded that the summary section was intended to summarize the chapter proper, and that rainwater was not described as a source of supply in the chapter itself. He noted that the addition to the summary would require a revision to the earlier text. He also noted that the chapter was intended to describe the existing source of supply used in southeastern Wisconsin, and that rainwater was not currently a significant source. Mr. Grisa indicated that the chapter was intended to describe potable sources of supply, and that rainwater could not be considered as a potable source of supply. He indicated that if rainwater were described as a source of supply, the use of graywater should also be covered, and stated that rainwater harvesting should be described in the chapter on water conservation. Mr. Biebel agreed, noting that the topic of rainwater harvesting had been covered in the chapter on water conservation to be reviewed as the next agenda item. He noted that the topic of rainwater use for aquifer recharge purposes had also been described in Chapter VI, "Artificial Groundwater Recharge and Management." After further discussion, it was decided by consensus not to revise the text in this regard.

Dr. Cherkauer referred to the first sentence of the only paragraph on page 8 and asked that the first sentence be clarified. It was agreed to move the word “resident” to after the term “year 2005” and to change the erroneous number “335” to the correct number “335,000.”

Dr. Cherkauer again referred to the only paragraph on page 8 and asked for an explanation of the 65 gallons per capita per day estimated water use. Mr. Biebel indicated that the value closely approximated the regional values of 67 to 70 gallons per capita per day noted in Table 47 of the summary section, and in Table VII-8 of Chapter VII, “Water Conservation.” However, a slightly lower value of 65 gallons per capita per day was used for the residential water use of residents with individual private wells. Those residents were expected to typically use a somewhat lower amount of water because of onsite sewage disposal considerations and because of more limited outdoor uses. It was agreed to expand the text in this regard.

[Secretary’s Note: The following footnote was added referencing the 65 gallons per capita per day water use value:

“The value of 65 gallons per capita per day was selected to represent average water use in residential areas served by private wells. This value is somewhat lower than the regional average of 67 to 70 gallons per capita per day for residential use in areas served by municipal systems. The lower value was selected because residential water use in areas served by private wells may be expected to be somewhat lower than in areas served by municipal systems because of concerns with onsite well capacity and with performance of onsite sewage disposal systems. In addition, outdoor water use demands may be expected to be lower in areas served by private wells than in areas served by public water supply systems.”]

Mr. Biebel referred to Map 46, and noted that approval of the chapter summary would be taken to indicate an approval to utilize the map as presented. Chairman Bauer again noted, as he had several times in the past, that the Regional Planning Commission planning documents typically included detailed system maps with the correct location of existing facilities shown at a useable scale as the basis for the analyses of existing system performance, the formulation of alternative plans and the presentation of a recommended plan. He acknowledged this was not possible for the water supply plan given the security concerns. Mr. Bunker indicated that he appreciated Chairman Bauer’s comments, as well as the way the staff has proceeded in this regard. He noted that the water utilities industry was giving a high priority to security issues and that he had provided information to the Commission staff in that regard. He noted that the utilities had a duty to be sensitive about security issues.

There being no further questions or comments, on a motion by Mr. Moroney, seconded by Mr. Holschbach, and carried unanimously, the summary section of Chapter III, “Water Supply Conditions in the Region,” of SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, was approved as amended, including Map 46, “Selected Municipal Water Utility Facilities and Areas Served in the Southeastern Wisconsin Region: 2005.”

## **CONSIDERATION OF CHAPTER VII, “WATER CONSERVATION,” OF SEWRPC TECHNICAL REPORT NO. 43**

Chairman Bauer asked the Committee to consider Agenda Item 4. He noted that all Committee members had received a copy of Chapter VII, “Water Conservation,” of SEWRPC Technical Report No. 43 for review prior to the meeting. He asked Mr. Schultz to review the chapter with the Committee on a page-

by-page basis. The following questions were raised, comments made, and actions taken in the course of the review.

Ms. Conley referred to the first paragraph on page 1, noting that stormwater runoff and the development of impervious surfaces was a factor in contributing to the limitations in groundwater supply. She also indicated that global warming may have an affect on limiting groundwater resources as a result of a pattern of more intense rainfall and runoff events. Dr. Cherkauer indicated that while the consensus of the scientific community held that global warming was indeed occurring, there was no agreement on the impact of the phenomenon on precipitation patterns. Ms. Conley asked if there was agreement that rainfall events were becoming more intense as a result of global warming. Dr. Cherkauer replied in the negative, noting that the present ability to model climatic conditions relating to global warming was inadequate to make such judgments.

After further discussion, it was agreed that reference to potential impacts of climate change on water supply not be made in the text, but reference runoff due to the increase in impervious surfaces attendant to urbanization as a factor impacting water supplies.

[Secretary's Note: Text has been added to the first paragraph on page 1 indicating that increased imperviousness is a factor impacting water supplies. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Ms. Lewis referred to the third sentence of the fourth paragraph which begins on page 1, and she suggested, and the Committee concurred, that the term "in situations where the sources of water demand are limited" be deleted.

Ms. Conley referred to the concept of "decoupling" as considered in the energy utility industry. Ms. Conley noted that the "decoupling" was a rate structure concept which allows a utility to recover needed revenues and adjust rates as needed without direct consideration of energy demands. Such methods is designed to remove the linkage between revenue and energy consumption. Mr. Grisa noted that the current Public Service Commission regulations and policies do not permit the decoupling water use and revenues. However, he noted that there were provisions which would not only allow, but would require water utilities to recover needed amounts of revenue, lost through the institution of conservation measures. Mr. Rau noted that rate structures and the costs and benefits of water conservation measures were addressed later in the chapter.

Dr. Cherkauer referred to Figure VII-1 on page 2. He recommended, and the Committee agreed, to that the water use symbols be color-coded to distinguish between surface and groundwater uses.

Mr. Grisa referred to the sixth sentence in the second paragraph on page 2 and indicated that he disagreed that any potential losses of revenues attendant to successful water efficiency programs may require reductions in such programs. He noted that the revenue needs of a utility, including the revenue needs of any water efficiency programs, can be recovered from the users regardless of the effectiveness of water conservation programs. He recommended that the sentence be deleted. Ms. Lewis also indicated a concern with the subject sentence, as it indicated a relationship between revenue and water supply system efficiency programs which does not necessarily exist. Mr. Biebel responded indicating that he had thought that there had been discussion at past meetings that indicated the concern as stated that the loss of revenue due to water conservation programs could have a negative impact on the resources available for water system efficiency programs. Chairman Bauer suggested, and it was generally agreed, that either appropriate revision in the sentence concerned by agreed upon, or the sentence deleted.

[Secretary's Note: In response to the expressed concerns, that the portion of the sixth sentence in the second full paragraph on page 2 following the word "rates" and the entire seventh sentence in the second full paragraph on page 2 have been deleted.]

Mr. St. Peter and Mr. Bunker both indicated that, in their opinion, the section of the report on water conservation and water supply system efficiency implications as set forth on pages 2 and 3 was sound and presented important concepts well.

Mr. Grisa referred to the third paragraph on page 2 and indicated that the distinction between utilities related to water conservation needs was dependent, in part, upon the source of supply—groundwater or surface water—and not upon the location of the service areas east or west of the subcontinental divide. Mr. Mueller also indicated that there also was a distinction which should be made between private and municipally supplied water users in this respect. Messrs. Melcher and Ericson indicated that the geographic location related to the subcontinental divide was an important factor which should be referred to in the paragraph being discussed. Upon further brief discussion, it was agreed that the third paragraph on page 2 should be appropriately revised by the staff and presented to the Committee for review and approval as part of the minutes.

[Secretary's Note: The text of the third paragraph on page 2 (now the first paragraph on page 3) as been revised to address the issues raised. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Ms. Conley referred to the first sentence of the first full paragraph on page 3, and suggested, and it was agreed, to add the word "policies" after the word "procedures" in that sentence.

Mr. Bunker referred to the first full sentence of the first full paragraph on page 3. He recommended, and it was agreed, to add the phrase "or to improve or maintain water system efficiency" at the end of that sentence.

Ms. Conley referred to the second sentence of the second full paragraph on page 3 and suggested that the term "minimize negative impacts on the environment" be revised to "protect and preserve the water resources of the Region." Mr. Moroney suggested the word "sustain" be substituted for the word "preserve" in Ms. Conley's recommended phrase. After brief further discussion, the change suggested by Ms. Conley, as amended by Mr. Moroney, was agreed to.

Mr. Grisa referred to the first paragraph on page 4 and suggested that the paragraph be revised to more specifically note, and differentiate between, the two concepts of water conservation—conservation to reduce the amount of water use, and system efficiency to reduce the amount of water pumped to meet a given demand. It was agreed that the paragraph concerned be revised by the staff and presented to the Committee for review as part of the minutes.

[Secretary's Note: The second full paragraph on page 4 has been revised as recommended. The revised paragraph is included in the revised version of Chapter VII transmitted with these minutes.]

Ms. Lewis referred to the second paragraph on page 4 regarding the provision by utilities of incentives to customers to install more-efficient plumbing fixtures. She noted that the Public Service Commission (PSC) of Wisconsin does not currently allow for such practices to be included in utility rate structures. It was agreed to note this in the text.

[Secretary's Note: Text has been added to the first partial paragraph on page 5 to indicate the current PSC limitation. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Helmuth referred to the section on pages 4 and 5 relating to Federal laws. He noted that the relevancy of the laws cited was not clear and asked that appropriate text be added to indicate the relevancy of the laws.

[Secretary's Note: The text summarizing the Safe Drinking Water Act on page 5 has been expanded to provide additional information on relevancy to water conservation. The text on the Clean Water Act on page 5 has been deleted.]

Mr. Helmuth referred to the summary of Chapter NR 142 of the *Wisconsin Administrative Code* and suggested that the text be revised to clarify that the Chapter applies to all waters of the State, not just water supply systems. The Committee agreed.

[Secretary's Note: The fourth full paragraph on page 6 has been revised to reflect Mr. Helmuth's suggestion.]

Ms. Conley referred to the text on page 7 summarizing the provisions of the Groundwater Quantity Act. She asked if the ongoing planning in southeastern Wisconsin would reflect the recommendations of the Groundwater Advisory Committee (GAC). Mr. Biebel referred to the coordination which has taken place between the SEWRPC staff and the Groundwater Advisory Committee and its staff. He noted that the report to the Legislature nearing completion by the GAC included recommendations for plan preparation in groundwater management areas, such as southeastern Wisconsin. Those recommendations, he said, would indeed be considered in the preparation of the water supply system plan for southeastern Wisconsin.

Mr. St. Peter suggested that the recommendations of the Great Lakes Charter Annex 2001 be summarized in the text, and the Committee agreed.

[Secretary's Note: A summary of the water conservation provisions in the Great Lakes Charter Annex 2001 has been added under the section on Federal laws on pages 5 and 6. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Bunker referred to the requirements of Chapter NR 812 of the *Wisconsin Administrative Code* governing well construction. He noted that the current regulations would allow for large individual water users to opt out of municipal systems and develop self-supplied wells, either in current or alternate locations. He noted that regulations, such as those requiring water conservation, could result in the development of self-supplied wells.

[Secretary's Note: Summaries of the requirements of Chapter NR 812 of the *Wisconsin Administrative Code* and Section 281.34(5) of the *Wisconsin Statutes* have been added to the section of State regulations on page 7. That Chapter and Statute govern the siting of new private wells. The added summary is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Helmuth referred to the first full paragraph on page 7 (now page 8) and noted that the statement that the community water systems all had some type of water conservation program in place was not

applicable to the 167 “other-than-municipal systems.” It was agreed that the staff would revise the fourth paragraph accordingly.

[Secretary’s Note: The fourth sentence of the first full paragraph on page 8 was revised to read as follows: “All municipal water utilities, and a number of the other than municipal community water supply system may be expected to have some water conservation programs in place.”]

Ms. Conley referred to the first paragraph on page 7 and recommended that stormwater conservation and management actions be noted as a potential municipal water conservation measure. Mr. Grisa noted that the inclusion as proposed would require that a section be added to the text describing such measures. He noted that stormwater management measures had been adequately covered in other chapters. Mr. Shaver noted that the chapter under review was intended to cover water system efficiency and demand side water conservation measures. Stormwater management measures designed to replenish the aquifers was an important concept, he said, but was covered in other chapters. He recommended, and it was generally agreed, to add text in the introductory section of the chapter to make this distinction.

[Secretary’s Note: Text has been added to the first paragraph on page 1 regarding the distinction between stormwater management measures designed to replenish sources of supply and water conservation measures focused on water system efficiency and demand side conservation measures. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Helmuth referred to the last sentence of the first full paragraph on page 7. He recommended, and it was generally agreed, to delete the words “highly wasted.”

Mr. Bunker referred to the section of the report on fixture and plumbing management on page 8. He noted that it was important to consider the entire water use system, including the use for wastewater carriage, when considering low-flow fixtures. He cited examples of problems where low-flow fixtures did not produce enough water to flush receiving sanitary sewers, resulting in clogged sewers and related potential health problems. It was noted that such problems were described in a later section of the report entitled “Water Conservation Program Impacts.”

Ms. Lewis referred to the example information provided on a conservation program in Santa Monica, California. She noted that the cost and water savings cited may be misleading, because of differences in water rates, water availability, regulations, and cost-effectiveness of conservation measures in areas climatically quite different from southeastern Wisconsin. She suggested that such examples be deleted, or supported by data which indicated that the example was applicable. She cautioned against giving officials and the public unrealistic examples to use as a basis for considering for local measures. Mr. St. Peter agreed, and recommended deleting such examples. Upon further discussion regarding the example set forth on page 8, and another set forth on page 12, it was moved by Mr. St. Peter, seconded by Mr. Melcher, and carried unanimously, to delete the examples of water conservation effectiveness given in the chapter. Mr. Grisa suggested that more-applicable examples should be considered.

Ms. Conley noted that New York City may be another example where a water conservation program was successful. Mr. St. Peter indicated that New York data would not be useful because the City of New York has an unaccounted-for water pumpage of about 60 percent. Dr. Cherkauer suggested Waterloo, Ontario, as a possible more-applicable water conservation program example.

[Secretary’s Note: The text covering the water conservation program examples from California have been deleted in the chapter. A new, more-detailed water conservation

program example—for Waterloo, Ontario—has been added on page 41 ahead of the section entitled “Water Conservation Program Impacts.” The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. St. Peter referred to the second to last sentence in the third paragraph on page 8. He noted that, as previously discussed, offering rebates for plumbing fixture replacement is not currently allowed in Wisconsin. After brief discussion, the Committee agreed to delete the sentence in question.

Mr. Bunker referred to Table VII-1 and suggested that the abbreviation “gpcd” be explained. That recommendation was duly noted, and also applied to Tables VII-1, VII-2, VII-3, VII-4, VII-8, and VII-9.

Ms. Lewis referred to the section of the report on water reuse on page 9. She suggested that the cost associated with dual distribution systems is impacted by climate, noting that in Wisconsin, such systems must be placed below the frost line which makes the cost substantially more than in warm climates. Mr. Schultz agreed and noted that an example of the cost of a dual system was to be added under the section on water reuse and reclamation.

[Secretary’s Note: Text has been added to the second full paragraph on page 9 (now page 11) regarding the impact of climate on the cost of dual systems. More-specific cost data was added to the report in the section entitled “Water Reuse and Reclamation” on page 40. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Ms. Lewis referred to the second sentence in the first full paragraph on page 12 concerning the effects of rates on conservation, and suggested the sentence be revised to be less negative. Mr. Rau also referred to this section on rate structures, and noted that the text did not include consideration of customer classes as they relate to the type of rate structures. He noted that the potential rate structure revisions had different impacts for different customer classes. Mr. Grisa indicated that, in many cases, the rate structure would not have a significant impact on the water use for many customers, as the cost differentials concerned were not a major financial concern.

[Secretary’s Note: The second sentence in the first full paragraph on page 12 (now the last paragraph on page 13) has been revised as recommended. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Ms. Lewis referred to Table VII-4 which summarizes various rate structures, noting that the declining block rate was designed to reflect the true cost relationships of water production and delivery.

Mr. Grisa noted that decisions on water use conservation were being made routinely by industries as they updated and revised processes. He noted that this was being done under the current rate structure and probably would not change if the rate structure were changed. Mr. Grisa indicated that the irony of the situation was such that water rates in this Region were relatively low, and apparently do not drive decisions by industries on water conservation measures. Ms. Lewis and Mr. Bunker agreed, noting that industries do not waste water and do carry out water conservation measures as a sound business practice. Mr. Ericson also agreed, indicating that industries often make decisions on water conservation as a matter of sound business practice regardless of the rate structure involved.

Mr. Bunker again raised the issue of the potential for industries shifting to the use of groundwater wells by construction plants in areas outside the utility service area if necessary, or outside of the Region or

State in order to avoid regulations, including water conservation regulations. Mr. Shaver recommended, and it was generally agreed, that that issue be noted in the section on water conservation program impacts near the end of the chapter.

[Secretary's Note: A paragraph has been added to the section entitled "Water Conservation Program Impacts" on page 36 (now page 49) noting the issue of potential water customers opting out of use of the municipal system. The added text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Rau also recommended that the heading for the fourth column of Table VII-4 on page 13 be revised. Mr. Grisa suggested revising the wording of the fourth column of Table VII-4 and the Committee agreed.

[Secretary's Note: The heading and text for the fourth column of Table VII-4 (now on page 14) was revised as recommended.]

Mr. Winkler referred to the reference to unaccounted-for water in the second paragraph on page 14. He recommended, and it was generally agreed, to include the amount of water, in addition to the percentage.

[Secretary's Note: A sentence has been added to the second paragraph on page 14 (now the second full paragraph on page 16) indicating the amount of unaccounted-for water in the Region. The added sentence is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Holschbach referred to the section on private water supply conservation beginning on page 15. He noted that in Ozaukee County there were about 1,000 holding tanks in place. He observed that such onsite sewage disposal systems do not return the spent water to the aquifer. He recommended, and the Committee agreed that this fact should be noted in the text.

[Secretary's Note: The third paragraph on page 15 (now the last paragraph on page 17) was revised to add a statement regarding the loss of water used by private water users who rely on holding tanks for onsite sewage disposal. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Shaver noted that there was no reference to water softener usage, and suggested that such use be addressed. The Committee agreed.

[Secretary's Note: A review of the literature indicates that water softeners use about 6 percent of the total flow through the tank for regeneration. Depending upon the percent of the water softened in a residence, this amounts to two to four gallons per capita per day. The savings which could be expected by conversion to more-efficient softeners based upon water volume and/or quality rather than based upon time could be one to two gallons per capita per day.

In addition to improved efficiency, water softeners could reduce the amount of sodium chloride discharged to the sanitary sewer system or onsite sewage disposal system. The use of Lake Michigan as a source of supply would eliminate the need for water softening.

Text regarding water softener uses has been added on page 17 (now page 19) to the section on conservation measures for private and public customers. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Dr. Cherkauer referred to Figure VII-2 on page 16 and recommended the estimates of water use by domestic private wells be checked.

[Secretary's Note: Figure VII-2 (now on page 19) was revised to reflect 2005 data set forth in Chapter III of SEWRPC Planning Report No. 52.]

Ms. Lewis referred to the paragraphs on page 18 which present information on private residential outdoor water conservation. She noted that municipal outdoor landscape watering practices would also be a logical candidate for water conservation practices. She suggested that that concept be added to the chapter. The Committee agreed.

[Secretary's Note: Text has been added to the section on municipal outdoor water conservation measures on page 13 (now page 15) regarding outdoor water conservation measures for municipally managed lands. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Dr. Cherkauer asked how the last column of Table VII-6 was derived. Mr. Biebel responded that the indoor water use estimates were adjusted to a value somewhat lower than the values noted in the columns "Without Water Conservation," but higher than the amounts in the column entitled "With Water Conservation" to reflect the fact that a limited amount of water conservation was in place, including the use of efficient plumbing fixtures in new or replacement situations. The outdoor water use estimates were adjusted to reflect a shorter growing season and more-humid climate than was used as the basis for the outdoor water use estimates in the table. The adjustments were made to match a control total per capita water use of 68 gallons per capita per day, which is the current estimated value based upon reported data.

Ms. Conley referred to the first paragraph on page 19 regarding rainwater harvesting. She recommended that the first sentence be revised so as not to limit the experience of rainwater harvesting systems to arid regions. Mr. Biebel indicated that the use of any extensive system was primarily limited to arid areas. Ms. Conley indicated that she had references citing the use of such systems in other areas, such as New York. It was agreed to review those references and adjust the text accordingly.

[Secretary's Note Ms. Conley provided references which indicated that there had been developed in other than arid areas, including New York and Seattle. Some of the systems noted are typically used for both stormwater runoff control and rainwater harvesting. The text of the first paragraph on page 19 (now page 22) has been adjusted accordingly. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Dr. Cherkauer referred to the section entitled "Agricultural Water Conservation" beginning on page 19. He noted that the section also mentioned irrigation for other uses besides agriculture, such as golf course irrigation. He recommended, and it was agreed, to change the title of the section to "Agricultural and Other Irrigation Uses Water Conservation."

Mr. Helmuth referred to the information in Chapter VII relating to high-capacity well locations and amounts of pumpage, such as is depicted in Figure VII-3. He reported that the Wisconsin Department of Natural Resources is currently updating its inventory of high-capacity wells. He asked if more current

data could be included if made available. Mr. Biebel indicated that this could, indeed, be done if the data were provided in time for report production and publication. He noted that the state-of-the-art report was planned to be published in the first quarter of 2007 and he asked if new data could be available within the next 60 days. Mr. Helmuth indicated he was not sure, but would check and advise.

Mr. St. Peter referred to Table VII-9 on page 20 (now pages 23 and 24) noting the duplication of the row for the toilet retrofit data. The change was duly noted and made.

Mr. St. Peter also questioned the estimates of 15 to 35 percent reduction in use due to conservation in the second paragraph on page 26. It was agreed to check the source of that information and clarify the text.

[Secretary's Note: A review of the reference for the 15 to 35 percent water use reduction indicates that it referred to a summary of a number of case studies and it was unclear where the facilities were located. However, at least some were in California. Given the earlier comments, the potential nonapplicability of examples from other areas, the text (now on page 30) was revised. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Melcher referred to the last paragraph on page 29 (now on page 33) and noted the reference to "Kenosha" should be changed to the "Village of Pleasant Prairie." The change was duly noted and made.

Ms. Lewis referred to the pie chart on page 30 (now on page 34) illustrating water usage. She recommended, and it was agreed, to change the pie chart to reflect the Southeastern Wisconsin Region water use values, rather than statewide water use values. This was done.

Mr. Grisa referred to the section on Water Reuse and Reclamation beginning on page 31. He noted that in the last sentence of the first paragraph on page 32, that the statement that reuse of wastewater was not yet established in Wisconsin, should be revised. He cited the example of treated wastewater being used for various process uses at wastewater treatment plants.

[Secretary's Note: The last sentence of the first paragraph on page 32 (now on page 36) has been revised to reflect the concern raised. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Mr. Grisa referred to the third paragraph on page 32 and noted that the application of reused water to the groundwater system may be controversial, but asked about the ongoing research on that issue. It was agreed that the staff would research the issue and amend the text as may be found necessary.

[Secretary's Note: It was determined that the third paragraph on page 32 (now on page 36) should be clarified. The revised paragraph is included in the revised version of Chapter VII transmitted with these minutes.]

Ms. Conley referred to the first sentence of the second paragraph on page 33. She indicated that the use of graywater systems is allowed in Wisconsin.

[Secretary's Note: The word "not" has been deleted from the first sentence of the second paragraph on page 33 (now on page 38) and the following sentences were added at the end of that paragraph:

“The use of graywater in Wisconsin is regulated under Chapter NR 82 of the *Wisconsin Administrative Code*. That code sets forth standards for graywater which are relatively stringent and may require treatment of the graywater depending upon the source.”]

Dr. Cherkauer referred to the last sentence of the second paragraph on page 34 and noted that, while graywater does contain some sodium chloride, the amount of sodium chloride that is in dishwater is not as significant as stated. He noted that water softener regeneration, and water-softened water in general, is a more-significant source. It was agreed to revise the sentence to reflect this concern.

[Secretary’s Note: The last sentence of the second paragraph on page 34 (now on page 38) has been revised to better explain the sodium chloride issue with graywater. The revised text is included in the revised version of Chapter VII transmitted with these minutes.]

Chairman Bauer then noted the time as being shortly after Noon, and indicated that the review of Chapter VII would be ended on page 36, with the remaining sections to be reviewed at the next meeting.

There being no further questions or comments, on a motion by Mr. Melcher, seconded by Mr. Winkler, and carried unanimously, pages 1 through 35 up to the section entitled “Estimated Water Conservation Program Impacts,” Chapter VII, “Water Conservation,” of SEWRPC Technical Report No. 43, *State-of-the-Art of Water Supply Practices*, was approved as amended.

#### **DATE AND TIME OF NEXT MEETING**

After a brief discussion, the next meeting of the Advisory Committee was tentatively scheduled to be held in the Commission offices on Tuesday, January 16, 2007, beginning at 9:30 a.m.

[Secretary’s Note: The next Committee meeting has been rescheduled for Tuesday, January 23, 2007 at 9:30 a.m.]

Chairman Bauer noted that, at that meeting, it was planned to review the summary section of Chapter II, “Inventory of Existing Facilities,” and Chapter X, “Application of Standards and Cost Data,” of SEWRPC Technical Report No. 43.

#### **ADJOURNMENT**

There being no further business to come before the Committee, on a motion by Mr. Moroney, seconded by Mr. St. Peter, and carried unanimously, the meeting was adjourned at 12:10 p.m.

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