MINUTES OF THE TWENTY FIRST MEETING
SEWRPC REGIONAL WATER SUPPLY PLANNING ADVISORY COMMITTEE

DATE: October 6, 2009

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
Kenneth R. Bradbury	Hydrogeologist/Professor, Wisconsin Geological and Natural History Survey
Thomas J. Bunker	Representative, 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 A. Czarkowski	Regional Water Program Expert, Wisconsin Department of Natural Resources, Southeast Region
Daniel S. Duchniak	General Manager, Waukesha Water Utility, City of Waukesha
Daniel T. Feinstein (for Charles P. Dunning)	Hydrologist, U.S. Geological Survey
Thomas M. Grisa	Director of Public Works, City of Brookfield
Andrew A. Holschbach	Director, Ozaukee County Planning, Resources, and Land Management Department
James Kell	Water Utility Superintendent, City of West Bend
Carrie M. Lewis	Superintendent, Milwaukee Water Works, City of Milwaukee
Mark Lurvey	Agricultural Business Operator, Lurvey Turf Nursery
J. Scott Mathie	Director of Government Affairs, Metropolitan Builders Association of Greater Milwaukee
George E. Melcher	Director, Kenosha County Department of Planning and Development
Paul E. Mueller	Administrator, Washington County Planning and Parks Department
Michael P. Rau	President, City Water, LLC
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, MillerCoors, LLC
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
Franklyn A. Ericson	Director Worldwide S/H/E/Q Operations, 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
Thomas J. Krueger	Water and Wastewater Utility Director, Village of Grafton
Jeffrey Musche	Administrator/Clerk, Town of Lisbon
Jack H. Takerian	Interim Director, Milwaukee County Department of Transportation & Public Works

GUESTS

Randall R. Kerkman	Administrator, Town of Bristol
James Rowen	Concerned Citizen
Steven H. Schultz	Department Head, Water Supply and Wastewater Treatment, Ruekert & Mielke, Inc.
Ben Wood	Engineer, Strand Associates, Inc.

STAFF

Stephen Adams	Public Involvement and Outreach Manager, Southeastern Wisconsin Regional Planning Commission
Joseph E. Boxhorn	Senior Planner, Southeastern Wisconsin Regional Planning Commission
Kenneth R. Yunker	Executive Director, Southeastern Wisconsin Regional Planning Commission

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 declared present.

CONSIDERATION OF MINUTES OF THE MEETING OF JUNE 30, 2009

Chairman Bauer noted that copies of the minutes of the June 30, 2009, 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 Technical Report No. 48, *Shallow Groundwater Sustainability Analysis Demonstration for the Southeastern Wisconsin Region,* and the initial portion of Chapter X, "Recommended Water Supply Plan," pages 1 through 18, covering the public reaction of the preliminary plan and the responses thereto. He noted that revised copies of the technical report and the initial portion of Chapter X accompanied the minutes and that approval of those documents would be subject to any comments received on the minutes at this meeting.

Ms. Conley referred to the second full paragraph on page 6 of the minutes and noted that the referenced permit requirement for impact analyses of new high-capacity wells on important resource waters were limited to specific surface waters, classified as outstanding resource waters; exceptional resource waters; and most streams classified as trout streams. She noted that there were only a limited number of exceptional and outstanding resource waters within the Southeastern Wisconsin Region. Mr. Biebel noted that, while the amount of water specifically classified as outstanding and exceptional surface water was limited in the Southeastern Wisconsin Region, there were a fairly large number of trout streams which would be covered under the WDNR regulatory process.

There being no further corrections or additions, the minutes of the meeting of June 30, 2009, were approved as amended on a motion by Mr. Rau, seconded by Mr. St. Peter, and carried unanimously.

CONSIDERATION OF SEWRPC TECHNICAL REPORT NO. 46, GROUNDWATER BUDGET INDICES AND THEIR USE IN ASSESSING WATER SUPPLY PLANS FOR SOUTHEASTERN WISCONSIN

Chairman Bauer then asked the Committee to consider Agenda Item 3. He noted that all Committee members had received a copy of SEWRPC Technical Report No. 46, *Groundwater Budget Indices and Their Use in Assessing Water Supply Plans for Southeastern Wisconsin,* dated September 2009, for review prior to the meeting. He noted that the report was the third of three technical reports being prepared by the Wisconsin Geological and Natural History Survey, the University of Wisconsin-Milwaukee, and the U.S. Geological Survey in support of the regional water supply planning program. The first of the three reports, he said, dealt with the groundwater recharge potential in the Region, was reviewed and approved by this Committee at meetings held on February 19, 2008 and on May 20, 2008, and has been published; while the second report, dealing with shallow groundwater sustainability was reviewed and approved at a meeting held on June 30, 2009. Chairman Bauer indicated that the report to be reviewed today relates to the development and application of groundwater budget indices and their use in the evaluation of alternative water supply plans. He noted that the three reports were all to be published as SEWRPC technical reports.

Chairman Bauer noted that a preliminary draft of the initial portion of the groundwater indices report covering the introduction and description of the indices and the application of the indices to the first alternative plan had been reviewed at the February 19, 2008, Advisory Committee meeting. That review was intended to serve as background for review of the planning report chapters which included summary information on the indices. The Committee comments from that meeting have been incorporated into the report. In addition, the format and text have been expanded substantially. Accordingly, he indicated that it is now proposed to review the technical report in its entirety.

Chairman Bauer noted that Dr. Douglas S. Cherkauer of the University of Wisconsin-Milwaukee Department of Geology, and a Committee member, was the author of the groundwater indices report, and was in attendance. He then asked Dr. Cherkauer to review the report with the Committee on a page-by-page basis. The following comments were made, questions asked, and actions taken during the review.

Mr. Biebel noted that a revised copy of page 10 was provided to each Committee member. He indicated the revised page was intended to provide a corrected copy of Figure 6.

Mr. Shaver generally referred to the figures and tables in the report and recommended that they be labeled as to the year of the data graphically presented, when appropriate. Mr. Shaver also referred to the last sentence of the last paragraph on page 3. He recommended that the wording be refined to reflect the Advisory Committee concurrence with the preliminary recommended plan. It was agreed by consensus to revise the sentence.

[Secretary's Note: The last sentence on page 3 was revised to read as follows:

"Finally, a preliminary recommended water supply plan has been selected by the SEWRPC Regional Water Supply Planning Advisory Committee. That preliminary recommended water supply plan combines aspects of the four alternative plans."]

Mr. Bunker referred to Table 1 on page 4, and asked what the units were for the various aquifer inflow and outflow components. Dr. Cherkauer replied that the units typically used in the modeling are cubic feet per day. However, often the results are converted and expressed as million gallons per day, which is considered to be more familiar to readers of the report.

Mr. Winkler referred to the figures in the report illustrating Figures 3 and 4 on page 6 as an example. He suggested, and the Committee concurred, that the County boundaries be added to the figures to help orientate the reader.

Ms. Conley referred to Figure 1 on page 2 and asked if the numerous small red-colored areas were important indicators of drawdown. Dr. Cherkauer indicated that these small areas indicated the location of high-capacity wells with very localized drawdown and which were not considered significant for regional planning purposes.

Mr. Holschbach referred to Figures 3 and 4 and asked why the demand to supply ratio was high in the vicinity of the Village of Saukville. Dr. Cherkauer reported that the surface area contributing to the groundwater aquifers was likely small relative to the water pumped. He also noted that the Milwaukee River, which flows through the eastern portion of the Village, was probably bedded in clay material providing a weak connection to the aquifer.

Mr. Feinstein noted that if the demand to supply ratio was high in the shallow aquifer, it was an indication that there often can be impacts on the surface water baseflow. Thus, the ratio may correlate to a high baseflow reduction index.

Mr. Schultz noted that the initial presentation of the indices was based upon data for the year 2005, and he asked what year the data on recharge were based upon. Dr. Cherkauer indicated that the recharge was based upon a long-term average recharge built into the regional groundwater model which assumed year 2000 land use conditions. He noted that the recharge assumptions were held constant through the year 2035 and were similar to those developed by Dr. Bradbury and documented in the technical report reviewed at the previous meeting.

Mr. Grisa asked if land cover changes would have a significant impact on the recharge rates, and if that should have been considered in the analysis. Dr. Cherkauer replied that, while accurate historic land use data were available for the recent past, accurate historic land cover data were not available. Mr. Feinstein noted that a significant effort had been devoted in the USGS and WGNHS research effort on the topic of recharge rates over time. He indicated that the conclusions were that the modeling assumptions were sound and would not be significantly impacted by differing recharge assumptions based upon land cover changes. Mr. Biebel noted that the area devoted to impervious cover in the Region was expected to change only by about 1 percent between 2000 and 2035. Thus, the impervious cover assumptions used in the model based upon 2000 conditions would not be expected to change significantly over the period for which the indices were applied to evaluate the alternative plans. He also noted that current WDNR rules set forth in Chapter NR 152 of the *Wisconsin Administrative Code* limited reductions in infiltration associated with new development, further minimizing any potential changes in recharge conditions due to land cover changes between 2000 and 2035 on a regional basis.

Ms. Conley referred to Figure 3 on page 6 and noted an area indicating a high demand to supply ratio in the vicinity of Oconomowoc and asked if the problem represented would be addressed in the plan recommendations. Mr. Biebel responded in the affirmative, and noted that the indices and groundwater drawdown-drawup maps of the alternative plans and the preliminary recommended plan were provided later in the report.

Mr. Holschbach noted that Ozaukee County had a significant number of holding tanks used for private sanitary waste disposal. He asked if the impact of removing water from the aquifer by private wells and then transporting it from the area in the form of holding tank waste was factored into the modeling. Dr. Cherkauer responded in the affirmative, noting that the modeling inputs for the areas with private wells and onsite sewage disposal systems had been modeled assuming a water loss of about 20 percent. In areas served by private wells and either sanitary sewers or holding tanks, it was assumed that none of the extracted water was returned to aquifers.

Dr. Bradbury observed that the report provided only very summary information on the conversion of the groundwater model output to the indices, and asked if Dr. Cherkauer contemplated preparing a professional paper providing more detail on the procedures used. Dr. Cherkauer replied in the affirmative. Mr. Feinstein suggested that another option would be to describe the basis for the development of each of the inflow and outflow

parameters listed in Table 1 in an appendix to the report. Dr. Cherkauer indicated that such an appendix could be prepared if the Committee so desired. Following further discussion, it was agreed by consensus to ask Dr. Cherkauer to consider preparing an appendix to the report documenting the procedure used to connect the groundwater model outputs to the indices presented in the body of the report.

[Secretary's Note: A copy of the desired appendix is included in the revised version of the technical report transmitted with these minutes.]

Ms. Conley referred to the "HSh in" symbol in Table 1 on page 4 and suggested the symbol be clarified. Dr. Cherkauer indicated that the HSh in parameter for 2005 referred to septic tank inputs. Mr. Grisa suggested a subscript be used for that parameter. Dr. Cherkauer agreed to review and clarify the parameter symbol.

[Secretary's Note: The parameter "HSh in" in Table 1 has been changed to "H_{sh} in".]

Mr. Bunker referred to the text in the last paragraph on page 9 and to Figure 6, indicating a relatively high deep aquifer HIR in the vicinity of the City of Burlington and Village of Union Grove under existing 2005 conditions. Dr. Cherkauer indicated that was indeed the case under 2005 conditions. He noted that the indicated problems in the deep aquifer are largely resolved under the preliminary recommended plan, as illustrated in Figure 51, which indicate a drawup in the deep aquifer throughout Racine County.

Mr. Feinstein noted that because of the lack of historic streamflow monitoring data and the potential impacts of climate change over the period 1900 to 2005, the actual baseflow reduction data could vary somewhat from the modeled data. However, the relative differences in baseflow reductions between alternatives is considered valid. Dr. Cherkauer referred to Figure 9 indicating the baseflow reduction index between 1900 and 2005, and noted that the index was only related to changes in groundwater-derived baseflow, and not to other inputs to streamflow. Mr. Grisa indicated that this limitation was important, and suggested the text be clear on that fact. After review, it was agreed that the text in the third full paragraph on page 12 did adequately address this fact.

Mr. Czarkowski referred to Figures 4 and 9 and noted that he would have expected a somewhat better correlation between the two, even though he recognized a close correlation would not be expected. Dr. Cherkauer noted that there were indeed similarities between the two figures. The dissimilarities were, in part, attributed to the scale differences in the two indices concerned. Dr. Bradbury noted that the baseflow reduction indices are most significant for relatively small streams, or for headwater areas of larger streams, and that this is reflected in Figure 9.

Mr. Czarkowski asked if the baseflow data were based solely upon theoretical computer-modeled results, or were they verified with field measurements. Mr. Feinstein reported that the WGNHS had conducted some field verification, but that such verification was limited to reaches on which existing gaging stations were located. Dr. Bradbury indicated that the verification was typically done for stream reaches at selected locations downstream of the locations where baseflow reductions were noted and thus included cumulative impacts of the baseflow reductions at a number of locations.

Ms. Conley referred to the second full paragraph on page 14 and asked if the text was consistent with current WDNR well regulations. Mr. Mathie asked for an explanation of the statement in the same paragraph regarding uncoordinated utilization of the aquifers. Mr. Grisa referred to the same paragraph and indicated that some coordination does take place between utilities. Dr. Cherkauer indicated the intent was to indicate a current lack of regional coordination, as opposed to considering the impacts of individual wells. After further discussion, it was agreed by consensus to direct the staff to revise the second paragraph on page 14 for clarification on this issue.

[Secretary's Note: The second full paragraph on page 14 has been revised to read as follows:

"To date, there has been no significant regional management of the groundwater supplies of southeastern Wisconsin. Individual communities and developers have generally utilized the aquifers without regional coordination, but generally have considered the impacts of individual proposed wells on the existing wells including those of adjacent utilities. The communities have also provided system interconnections for emergency purposes. In addition, the WDNR regulates high-capacity well siting, and requires consideration of the impact of potential new wells on certain specified surface waters, as well as on other municipal wells. The result of this lack of regional management has produced some developing problems, including areas of groundwater budget deficit in the deep aquifer and attendant significant water level reductions, and locations where surface waterbodies have been impacted by heavy groundwater use in the shallow aquifer. The former has led to the Region being declared a groundwater management area by the WDNR, a designation that requires development of a regional plan to mitigate the problems."

In addition, the second full paragraph on page 17 has been revised to read as follows:

"Alternative 1 is considered the base case to which other water use alternatives are compared. The sources of supply under this alternative are based upon existing trends and committed actions. Almost all groundwater using communities are assumed to continue to apply groundwater management measures similar to current measures. These include limited coordination with respect to aquifer utilization by neighboring utilities, and the WDNR oversight of high-capacity well development considering impacts on municipal wells and selected surface water. The projected future demands require increased pumping of about 18.2 mgd from the shallow aquifer, and about 8.8 mgd from the deep."]

Mr. Biebel referred to the indices values provided in Table 3, and reminded the Committee that the primary intent of developing the indices was to be able to compare alternative plans, and that the absolute values of the indices were not intended to apply to site-specific locations.

Mr. Grisa recommended, and it was agreed by consensus, to indicate the units of the indices on all the figures where appropriate.

Ms. Lewis noted that if the report was intended to stand alone, an explanation of the alternative plans was needed. Mr. Biebel responded that the reports were not intended to stand alone, but to be considered within the context of the other reports produced under the planning program. Never-the-less, a brief description of each alternative plan was included in this report, such as that provided for Alternative Plan 2 on page 25. After further discussion, it was generally agreed that the alternative summaries as edited were adequate for the purposes of the report being considered.

Ms. Conley referred to Figure 22 on page 27, and asked if the title should include a reference to the "deep aquifer" to be consistent with the other figures. After further discussion, it was agreed by consensus to add the word "deep" in the title of Figure 22 and similar figures in the report. It was also agreed to change the word "drawdown" to "drawup" in the title of the same figures. Mr. Grisa recommended, and it was agreed by consensus, to change the legend in Figure 22 and similar figures to include whole numbers.

Mr. Grisa recommended, and it was agreed by consensus, to replace the word "unmanaged" with the word "base" in the second line of the first paragraph on page 29, and to add the words "are illustrated" to the second sentence in the second paragraph on page 31.

Mr. Grisa referred to the text describing Alternative Plan 3 and its related indices. He noted that the artificial recharge component appeared to offer relatively significant benefits in terms of the deep aquifer level recovery, as illustrated by Figures 28 and 29. He also noted that in the second full paragraph on page 35, there is a statement that such injection is not currently allowed under State regulations, and asked for an explanation. Dr. Cherkauer noted that the regulatory issues related to water quality concerns. Mr. Czarkowski agreed, noting that there were potential water quality issues when a dewatered aquifer is recharged in the manner envisioned under Alternative Plan 3. Mr. Biebel noted that more detail concerning this issue is included in the planning report, but that significant pilot testing would likely be required prior to implementing a deep aquifer injection system, and the results of the testing would be unknown. He noted further that under the preliminary recommended plan there was also a significant, drawup in the deep aquifer even without the use of the deep aquifer injection wells. Accordingly, it was concluded that a deep aquifer injection well system was not required to resolve the deep aquifer drawdown problem. Mr. Grisa indicated that he understood the issue, but indicated it seemed inconsistent with the regulations which allow septic tank effluent to be returned to the groundwater system. Mr. Duchniak suggested, and the Committee agreed by consensus, that the text be clarified with a reference to the planning report.

[Secretary's Note: The last two sentences of the second full paragraph on page 35 have been replaced with the following text:

"Because of the current regulations, it is likely that significant pilot testing would be required prior to implementing a deep aquifer injection system. The water quality issues associated with Alternative 3 are described in greater detail in the regional water supply plan report now under preparation. In addition, a portion of the water, while injected at a location east of the subcontinental divide, would—at least for a time until the aquifer were fully recharged—travel westward beneath the subcontinental divide. This issue may have to be addressed in the context of the rules governing the Great Lakes Compact."]

Ms. Lewis referred to the third sentence in the fifth paragraph on page 44 and recommended, and it was agreed by consensus to do so, that the reference to "SEWRPC" be changed to the "preliminary recommended plan."

Mr. Bunker referred to the second paragraph on page 52 and noted that it appeared that portions of Racine County, including the Burlington area, would continue to experience problems in the deep aquifer as the target DSR of 1.0 was exceeded. Dr. Cherkauer agreed that the DSR for Racine County showed a slight increase. However, he noted that the groundwater supply for the County was expected to be adequate through 2035. He also observed by reference to Figure 51 that there was expected to be a drawup in the deep aquifer from 2005 to 2035, signifying that no significant problems should exist well beyond 2035.

Mr. Shaver recommended, and it was agreed by consensus, to revise the third and fourth sentences in the third paragraph on page 55 to eliminate the reference to unmanaged exploitation.

[Secretary's Note: The third bulleted item and the paragraphs following on page 55 have been revised to read as follows:

"• It demonstrates that the Region will have an adequate quantity of water through 2035 under either option. The groundwater impacts under both options and related surface water baseflow impacts are reviewed herein. In selected areas of the Region, there is a need to revisit the management recommendation in the future as new development and water use data become available.

These points bear closer examination. The composite plan will greatly reduce demand for ground water in eastern Waukesha County and southern Ozaukee County by utilizing Lake Michigan as an alternative supply. For most other areas currently served by groundwater supplies, the preliminary regional water supply plan recommends continued use of groundwater as the source of supply with supplementation, in some cases, by treatment and changes in the sources from the deep to the shallow aquifer. The analyses conducted indicate that this course of action will provide for an adequate source of supply through the year 2035. On a countywide average basis the baseflow reduction index in the shallow aquifer is generally maintained at -5 percent or less from 2005 to 2035 (Table 12). However, in the deep aquifer, Waukesha County's DSR remains well above 1.0, even when the City of Waukesha is simulated as no longer using ground water (Option 2; DSR = 3.197). This means that water must be induced to flow toward Waukesha County from surrounding areas to balance the remaining overdraft from this aquifer. The imbalance indicated by the high DSR is verified by the continued existence of a reduced cone of depression (Figures 45 and 52; Options 1 and 2, respectively). However, the deep aquifer recovery illustrated in Figures 44 and 51 indicates that the deep aquifer quantity issues are substantially improved through the year 2035 under both options, but particularly under Option 2. It must be remembered, however, that the return of treated wastewater to the Lake Michigan watershed will also have impacts on surface water quantity that have not been addressed and are beyond the scope of this report.

This situation will remain stable until 2035 as long as the water demands remain within the range projected in the Water Supply Plan (SEWRPC, 2009). If, or when, water demands in western Waukesha County and surrounding areas grow beyond those simulated in the regional model, the indices indicate a need for further periodic evaluation in selected areas as future land use and water demand projections beyond 2035 become available.

One step that the Composite Plan projects for the outlying areas is an increase in the shift from the deep to the shallow aquifer. As a consequence, the water levels in the deep aquifer will rise, but the baseflow reductions in these areas will be larger than under either Alternative 3 or 4. The effect is particularly apparent in Walworth County. At the same time, the DSR in the deep aquifer in Walworth County is approaching the undesirable level of 1.0 by 2035 and will presumably exceed it shortly after the end of the planning period without a change to management of the resource. The ground water indices indicate that there could be some problem areas that will develop in the western part of the planning area, and these should be revisited in the future."]

Ms. Lewis referred to the third plan component listed on page 45 related to water conservation. She recommended, and it was agreed by consensus, to expand the component description to indicate that the water conservation programs would be tailored on a community-by-community basis.

[Secretary's Note: The third component description on page 45 has been revised to read as follows:

"Water efficiency and conservation programs to include measures to be developed on a utility-specific basis."]

Mr. Rau asked if the groundwater indices report suggest that the alternative plans considered were broad enough in considering the use of Lake Michigan supplies. Mr. Biebel responded that Alternative Plan 4 was intended to represent the maximum practical use Lake Michigan supplies. He noted that the preliminary recommended water

supply plan provided a lesser use of Lake Michigan than envisioned under Alternative Plan 4. Thus, it could be concluded that having another alternative with even more extensive use of Lake Michigan supply would likely not impact the design of the preliminary recommended plan.

Ms. Lewis asked if the impacts of groundwater withdrawals and deep aquifer drawdown in the northeastern Illinois area could overwhelm the impacts of uses in southeastern Wisconsin. Mr. Feinstein indicated that the Chicago area apparently intended to divert more Lake Michigan water to serve developing areas located west of the subcontinental divide. He also noted that the modeling done by the USGS of the Lake Michigan basin groundwater system indicated that there should not be a significant impact, given the expected decline in groundwater use in northeastern Illinois, or southeastern Wisconsin, with possible exceptions in the far western portions of northeastern Illinois and southeastern Wisconsin. Mr. Biebel noted that Lake County, Illinois, was developing plans for extending Lake Michigan supplies to the western portion of the County, and apparently could do so without violating the Great Lakes Compact. Chairman Bauer indicated that potential additional extensions of Lake Michigan supplies and the future impacts from northeastern Illinois can be considered in future plan amendments as more information becomes available.

Ms. Conley asked if the effects of the Milwaukee Metropolitan Sewerage District deep tunnel or the aquifers underlying Milwaukee County should be evaluated, particularly with respect to impact on building foundations. Dr. Cherkauer responded that the inflow into the tunnel, while significant, had been incorporated into the model, and with respect to water supply was not a major concern. He indicated there were some legal issues regarding compaction and subsidence of soils and related impacts on buildings. Chairman Bauer noted that there had been groundwater-related building foundation problems in the Milwaukee downtown area for many years. These problems related, in part, to the timber pilings supporting buildings becoming unsaturated, resulting in deterioration, and a need for replacement by steel and concrete caps. This was not, however, an issue of use of the shallow aquifer for water supply.

Ms. Conley asked if there were surface water baseflow impacts associated with the tunnel inflow. Dr. Cherkauer indicated that such impacts, if any, would be expected to be very limited.

There being no further questions or comments, SEWRPC Technical Report No. 48, 46, *Groundwater Budget Indices and Their Use in Assessing Water Supply Plans for Southeastern Wisconsin,* dated September 2009, was approved as amended on a motion by Mr. Shaver, seconded by Ms. Conley, and carried unanimously.

Mr. Biebel stated that Dr. Cherkauer should be commended for developing a state-of-the-art method for evaluating alternative groundwater-related actions. He noted that the USGS, WGNHS, UW-Milwaukee, and SEWRPC staffs had discussed the potential for such a methodology early in the plan development process. At that time only preliminary, more-rudimentary systems were reported in the literature. He indicated Dr. Cherkauer has taken the methodology to a much higher level.

UPDATE ON STATUS OF SOCIOECONOMIC STUDY OF PRELIMINARY REGIONAL WATER SUPPLY PLAN

Chairman Bauer then asked Mr. Yunker to report on the status of the socioeconomic study of preliminary water supply plan.

Mr. Yunker reminded the Committee that the Regional Planning Commission had created an Environmental Justice Task Force to assist in involving the minority and low-income communities in its planning process. The Committee had requested that a socioeconomic analysis be conducted on the preliminary recommended regional water supply plan. He reported that four consultant teams had submitted proposals to carry out the requested socioeconomic analysis. A consultant selection committee was formed and determined to select two of the consultant teams for personal interview, after which the selection committee recommended selection of the University of Wisconsin Center for Economic Development to carry out the desired analysis. A final study design

was currently being developed by the Commission staff and the consultant. He indicated that the analysis is scheduled for completion in February 2010.

Ms. Lewis asked when the scope of work would be finalized. Mr. Yunker indicated that would be done later in the week. Ms. Lewis asked if the scope of work could be provided to any members of this Committee that expressed an interest in receiving that scope of work, and if the staff would be open to comments on the scope. Mr. Yunker indicated in the affirmative.

Mr. Shaver asked if a socioeconomic analysis had been carried out in conjunction with the 2035 regional land use plan. Mr. Yunker indicated that such an analysis had not been done for the regional land use plan. The completion of that plan predated the formation of the Environmental Justice Task Force.

Chairman Bauer indicated that recommendation by this Committee of a final plan would now have to await completion of the socioeconomic study and consideration of its findings. Accordingly, he observed that there would most likely be no need for the Committee to meet before February of next year.

OTHER BUSINESS

Chairman Bauer then again noted that the completion by this Committee of a final recommended water supply plan would have to be held in abeyance until completion of the socioeconomic impact analysis of the preliminary recommended water supply plan. As reported by Mr. Yunker, that analysis is expected to be completed in February of next year, and Committee consideration and approval of a final recommended plan will have to await presentation and consideration of the findings of the socioeconomic impact analysis He indicated that there would likely be two more meetings of this Committee required to complete its work, one perhaps in March and one the following month to agree on a final recommended plan, plan implementation measures, and a plan report summary chapter.

Chairman Bauer also indicated that he would propose changing the procedure with regard to approval of the minutes of this meeting in order to expedite publication of Dr. Cherkauer's technical report. He recommended that the minutes and a revised version of SEWRPC Technical Report No. 46 be completed and provided to all Committee members for review as soon as possible. The Committee members would receive a return mail card indicating their vote to approve the minutes and report. If any member expressed a need to meet on the minutes and report before acting then such a meeting could be called. This would allow the staff to proceed with publication of Dr. Cherkauer's technical report prior to the next Advisory Committee meeting. There was an agreement by consensus to proceed in this matter as proposed by the Chairman.

DATE AND TIME OF NEXT MEETING

After brief discussion, it was agreed that the next meeting of the Advisory Committee would be scheduled to be held at the Commission offices at the call of the Chair, most likely in February of next year. Chairman Bauer noted that the summary of the socioeconomic study and the remainder of Chapter X, "Recommended Water Supply Plan," and any other relevant items would be taken up at that meeting.

ADJOURNMENT

There being no further business to come before the Committee, on a motion by Mr. Mueller, seconded by Mr. Melcher, the meeting was adjourned at 11:40 a.m.

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