



## Technical Advisory Committee Virtual Meeting

November 26, 2024

### Meeting Minutes

Present: Jeff Freeman, EEI; Amy Gahala, USGS; Aspen Walters, CMAP; Matt Asselmeier, Kendall County; Jodie Wollnik, Kane County Water Resources; Scott Kuykendall, McHenry County; Derek Hiland, DeKalb County; Kelsey Pudlock, CMAP; Margaret Schneemann, IISG; Walt Kely, Retired ISWS; Wei Han, IDNR; Devin Mannix, ISWS; Joe Munder, Aurora; Eddie Ramos, West Chicago; Dan Hadley, ISWS; Gary Clark, Retired IDNR/ISWS; Brad Merkel, Sugar Grove; Haider Mehdi, CMAP; Mike Pubentz, Elgin; Katie Piotrowska, CMAP; Anthony Speciale, Sugar Grove Water Authority; Jeff Babich, Sugar Grove Water Authority.

Jeff Freeman called the meeting to order at 10:02 A.M.

**Agenda Changes and Announcements:** Nothing at this time.

**Approval of September and October Meeting Minutes:** Jodie Wollnick (Kane County Water Resources) moved to approve the minutes. Joe Munder (Aurora) seconded. Minutes approved.

**Presentation and facilitated group discussion: “NWPA Water Supply Sustainability Plan: Review of draft plan”:** Kelsey (CMAP) & Margaret (IISG) presented this topic to the group. Kelsey conducted the first half of the presentation

An Executive Summary will be added to the plan later. It will provide a brief summary of the entire plan.

Section 1 of the plan focuses on the need for a plan. It provides a summary of the region’s water supply resources and how the region could extend the life span of the region’s existing water supply resources. Section 1 also provides recognition that a switch to an alternative source likely would be expensive and take a lengthy amount of time.

CMAP updated the regional water demand forecasts and the ISWS updated their water supply modeling for the study. ISWS has developed estimates for sustainable supply rates for the water supply resources in the region.

The plan’s goals are to establish water supply sustainability goals, provide a menu of water conservation strategies and best practices, increase awareness of priority strategies and resources, and encourage communities to create their own water conservation plans. The plan is intended to serve as a template for communities to complete their own water conservation plan.

Plan development occurred over two years. It started in January 2023. The current schedule is to submit the draft plan to the Executive Committee for early 2025 approval.



The plan primarily focuses on public water supply systems since they comprise the majority of water suppliers in the region. There are 98 public water supply systems in the 5-county region. Typically single family residential water users are the largest users. The water sources in the region are shallow groundwater, deep groundwater, the Fox River and Lake Michigan.

The supply estimates were provided by the ISWS. They are estimates on a county and water supply resource level and are intended to be used for regional water supply planning. The demand values are from CMAP's 2024 forecasts starting with the most recent available IWIP data (2018).

The total available sustainable water supply in the region is estimated to be 203.8 million gallons per day (MGD). Passive water conservation throughout the region is expected to reduce demand from the 2018 level of 161 MGD to 137 MGD in 2050. While the region's demand is projected to be below the region's sustainable water supply, Kane County's demands are projected to be above the county's sustainable water supply. More specifically, Kane's deep and shallow groundwater demand is projected to be above its deep and shallow groundwater sustainable supply. Lake County's deep groundwater demand is projected to be above the available deep groundwater sustainable supply, too.

Scott (McHenry County) referred to Figure 2-12 in the report and stated it seems to show the sustainable water supply availability in McHenry County is above demand. However, he believes there are portions of McHenry County where the demand exceeds the sustainable supply in that area. Scott asked how the County should explain Figure 2-12 to their constituents as the current chart could lead people to believe there should be no concerns. Scott asked how it was determined that McHenry County has such a high amount of deep groundwater supply available. Jodie (Kane County) stated they are updating the shallow groundwater modeling and are concerned the results will be different than what this study is showing. Devin (ISWS) stated when new modeling results are developed, then the information needs to be updated. Scott stated he is trying to think through parts of McHenry County where the supply availability is as much higher than the demand as the graph shows. He is concerned that the current way the data is being presented is not reflective of what actually is the case in McHenry County. Scott requested CMAP consider presenting the information in another way.

Scott requested Chapter 2 explicitly state that shallow groundwater in McHenry County can be sustainably recharged and that it is a renewable resource. The biggest concern with shallow groundwater is industrial contamination. Scott suggested adding more comments on contamination concerns.

Kelsey stated Chapter 3's focus is a call to action. While the plan provides suggestions for the region, local supply and demand assessments must be conducted so water supply sustainability can be assessed locally and then specific water conservation strategies can be developed for each community.

Chapter 3 also summarizes the overall benefits of water conservation including minimization of local water supply and water quality constraints. A water conservation focus can help manage peak water demands, delay and minimize expensive infrastructure investments, and reduce water and energy cost savings.



Kelsey then asked if Chapter 3 should be moved before the supply and demand summary – currently Chapter 2. Scott stated it could help provide more context and may be able address some of the concerns with the graphs as currently presented.

Kelsey stated Chapter 4 includes the plan vision as, “The NWPA water supply sustainability plan will serve as a roadmap for members seeking to take voluntary steps toward feasible and effective long-term use of water supply resources.” Goals were established for all four water sources within the region. Priority water conservation strategies were identified to be residential retrofits, landscape water efficiency, new development standards, commercial, industrial and institutional water conservation programs, water loss control and information and education. Implementation approaches include technical assistance, financial incentives, voluntary programs, local policies, and information and education.

Margaret presented the draft water conservation strategies and potential water savings included within Chapter 5. Margaret stated a process guide was developed to evaluate each of the water conservation best practices. The water savings process guide includes: 1) the strategy description, 2) a refined baseline, 3) the level of implementation expected, and 4) the water savings calculation.

One of the overarching assumptions within the calculations is that only the public water supply sector and its customers were included in the analysis. Multifamily water use was omitted. The calculations also assume all assumptions made by CMAP in processing IWIP data, socio-economic forecast, UrbanSim data, and water demand forecasting apply. National averages were utilized in place of local data and point-in-time estimates were established for base year calculations (2018 water withdrawals and 2010 land use). The estimated savings are those estimated beyond expected passive savings. The conservation program participation rates were assumed to be consistent with the rates presented in Water 2050. All of the assumptions will be included in a technical appendix to the plan.

Margaret stated residential retrofits target existing single family homes and include toilet, showerheads and faucets replacements with WaterSense devices. In the low conservation scenario, 10% of home retrofits would save 1.01 MGD, whereas the high conservation scenario with 50% replacement would save over 5 MGD. Retrofits were assumed for houses built before 2007. All retrofits combined would save approximately 36 gallons per day per household.

Residential outdoor landscape targets existing single-family households within the NWPA communities served by a community water supplier, include residential landscape water end-uses and include landscape design, hardware improvements and policy landscape water conservation measures. The low water conservation scenario (10% adoption) achieves 0.1 MGD of savings whereas the high water conservation scenario (50% adoption) would save 0.5 MGD. Outdoor water use is estimated at 10% of the total use. It is estimated 10% of the yards, on a national average, already have water wise components. Therefore, the base was adjusted to reduce the total outdoor water use for the region to 4.8 MGD as the starting point.



Residential new development targets new single-family households within NWPA communities served by community water suppliers. New development refers to homes built between 2020 and 2050. It includes all residential water end-uses plus other end uses necessary to meet targeted goals. CMAP forecasts 102,919 single family homes to be constructed in the region by 2050. The low water conservation scenario achieves 0.52 MGD of savings and high conservation saves 2.61 MGD.

The water loss control strategy targets community water supplies. It includes the portion of a community water supplier's water withdrawals attributed to water loss. Water conservation measures to reduce water loss include water audits, leak detection and repair, and water loss prevention programs. Based on national study data, it is assumed 40% of water loss could be economically recovered. The low conservation savings is estimated at 0.73 MGD. The high water conservation savings is estimated at 3.67 MGD.

The non-residential/commercial, industrial and institutional strategy targets both existing and new non-residential facilities within NWPA communities served by a community water supplier. It includes programs targeted at offices, hospitals, hospitality (including hotels and restaurants), educational, retail and industrial land uses. The low conservation savings is estimated at 0.6 MGD, whereas the high conservation savings is estimated at 3.1 MGD.

When adding all of the strategies together, the low conservation scenario would save 3 MGD and the high conservation scenario would save 15 MGD. The high water conservation scenario results in around 1% reduction per year, which is consistent with national averages when targeted water conservation programs are implemented.

Amy (USGS) asked how many people 15 MGD would generally equate to. Jeff (EEI) stated the general rule of thumb is 100 gallons per capita per day, so it would equate to 150,000 people. Amy reiterated a previous suggestion to equate MGD to a unit that the general public could understand.

Wei (IDNR) suggested referencing AWWA's manuals, including M 52, to help with the water conservation estimations. Margaret stated she referenced the AWWA manuals when completing the calculations.

Kelsey explained the next steps. Report revisions will be completed in December. The revised plan will be presented to the EC in January.

**2025 TAC Schedule:** Jeff (EEI/MWCOG) referenced the proposed schedule that was in the packet. There are two in person meetings scheduled for April 22<sup>nd</sup> and October 28<sup>th</sup>.

**Sensible Salting Committee (SSC) (Update):** Scott (McHenry County) restated the Conservation Foundation has developed the Chloride Watchers program and suggested people consider joining the network. In McHenry County they had an increase from 4 participants to 23 this year. They will be targeting sampling pre- and post-storm events in 2025. The participants have expressed their inclusion in the program has given them a sense



that they are really helping the environment by being part of the program. Scott also stated program facilitation helps entities meet MS4 permit requirements.

**CMAP (Update):** Other than the WSSP draft plan being issued, Kelsey (CMAP) stated she has no other updates.

**IISG (Update):** Margaret (IISG) reported that they are working on the website for Kane County Conserve. They continue to work on the toilet rebate, which could be the first county-wide program. The Government Finance Research Center of the University of Illinois Chicago Technical Advisory Group meeting was yesterday. They are finalizing the statewide water rate analysis.

**ISAWWA (Update):** No update

**ISWS (Update):** Devin (ISWS) stated he was at the Minnesota groundwater conference last month. Minnesota's approach to groundwater governance is similar to Illinois'. The Managed Aquifer Recharge (MAR) study in the Will County area has been funded. The study will evaluate wastewater treatment facility effluent recharging shallow aquifers.

**IDNR (Update):** Wei (IDNR) reported they are working with downstate regions to start a water supply planning program. There are ten water supply planning regions throughout the state. Five of the regions, mostly in Northern Illinois, have completed plans. Some other areas have not started.

**USGS (Update):** Amy (USGS) stated she had no updates.

**SGTWA (Update):** No update.

**Other Business:**

The next meeting will be held online on January 28, 2025.

The meeting was adjourned at 11:53 AM.

Submitted by Jeff Freeman, EEI