



Technical Advisory Committee Virtual Meeting

March 25, 2025

Meeting Minutes

Present: Peter Wallers, EEI/MWCOG; Jeff Freeman, EEI; Mike Pubentz, City of Elgin; Matt Asselmeier, Kendall County; Jerry Elliott, Sugar Grove Water Authority; Dan Hadley, ISWS; Dan Nagel, Sugar Grove Water Authority; Jodie Wollnik, Kane County Water Resources; Amy Gahala, USGS; Gary Clark, Retired IDNR/ISWS; Derek Hiland, DeKalb County; Margaret Schneemann, IISG; Devin Mannix, ISWS; Cecilia Cullen, ISWS; Brad Merkel, Village of Sugar Grove; Haider Mehdi, IISG; Kelsey Pudlock, CMAP; Scott Kuykendall, McHenry County; Wei Han, IDNR; Phil Cotter, Village of East Dundee; Ryan Wilson, Village of Elburn; Jeff Babich, Sugar Grove Water Authority; Nora Beck, CMAP; Natalie Karney, Retired Village of South Barrington; Cary McElhinney, USEPA; Terra McParland, IDNR; Mary McCann, M T McCann Associates; Angie Smith, EEI

Peter Wallers called the meeting to order at 10:02 A.M.

Agenda Changes and Announcements: Nothing at this time.

Approval of February Meeting Minutes: Jerry Elliott (Sugar Grove Water Authority) moved to approve the minutes. Dan Nagel (Sugar Grove Water Authority) seconded. Minutes approved.

Presentation: "NWPA Water Supply Sustainability Plan: Final Draft": Kelsey Pudlock (CMAP) presented this information to the group. Water Supply Sustainability Plan is finished!

Kelsey reviewed the timeline with the group, with today beginning the adoption process by the TAC. The Executive Committee will be meeting to consider plan adoption on Thurs., March 27th.

Matt Asselmeier (Kendall County) – Pg. 10, he commented on the population table, he doesn't think that the numbers are in the right cells by County. Kelsey Pudlock (CMAP) stated that the data that is being used is from the Socioeconomic Forecast dated 2022. Kendall County's population is showing 714,232 and they are currently at 131,000ish. Kelsey will double-check those County labels to match the 2020 population. Kelsey will share this info with the design team to make this change.

Pete Wallers (EEI/MWCOG) – any other comments on info that might be askew? No other comments.

Natalie Karney (Retired Village of South Barrington) made a motion to approve the Water Supply Sustainability Plan (WSSP) and to send the WSSP plan to the Executive Committee for approval. Mike Pubentz (City of Elgin) seconded the motion. No discussion. Motion passed.



Jodie Wollnik (Kane County) put the following message in the chat of the meeting: I would like to make my vote on the WSSP an abstention instead of a yes vote. I was not comfortable voting no, and having thought about it, and expressed my concerns to Kelsey, I think an abstention is the most appropriate vote for Kane County.

Pete Wallers (EEI/MWCOG) stated that now the hard work begins with rolling out the public outreach portion. Thank you to Kelsey and Margaret for all their hard work on the Plan.

Presentation: “March 2025 Updates to Kane County Shallow Aquifer Sustainability Study”: Dan Hadley and Cecilia Cullen (ISWS) presented this topic to the group.

There are three parts to this study:

1. Assessment of Shallow Groundwater Water Quality in Kane County, IL – Fall 2023: Repeat study of water quality in Kane County’s shallow aquifer and homeowner’s wells. How has water quality changed since 2003? Since 2015?
2. Assessment of Shallow Groundwater Sustainability in Kane County, IL – 2023-Dec. 2025: Community discussions and modeling to define sustainability methodology for the shallow aquifer and constrain metrics for long term sustainability of this system.
3. Establishment of a Real-Time Monitoring Network in Kane County, IL – 2023-2026: Using telemetry stations to monitor water levels throughout the county.

Kane County Quality Study showed:

- Arsenic is the most significant groundwater contaminant for public health
- Chloride in groundwater is most abundant in the eastern county, but accumulating fastest in central county
- 20 years of chloride data will be invaluable to modeling efforts
- Complete report available at: <https://hdl.handle.net/2142/125283>

Supply vs. Demand was discussed the different Tier methodology. It was reported for Tier 1 that the sustainable supply for Kane County shallow groundwater is 11 MGD. Tier 2 (County level) would calculate supply based on actual groundwater withdrawals, local geology and recharge rates, full modeling approach and regional assessments. Tier 3 (Sub-County/Sub-Watershed Scale) driven by community withdrawal data, community-defined sustainability metrics, possibly account for water quality concerns and this project will be the test case.

It was noted that the hydrology of Kane County has changed dramatically since predevelopment. It was also noted that future demands are much smaller than those simulated in the past Meyer study. They have met with

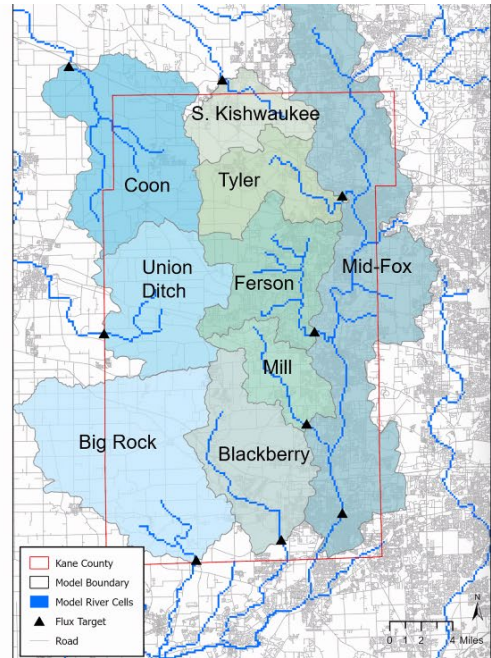
all of the communities within this area and added all the demands together. The overall increase in demand is very slight and it is in alignment with the WSSP with a flatline going into the future.

The sub-watershed sustainable supply estimates were shared with the group.

Sustainable Supply Estimates (mgd)

Sub-Watershed	Model Recharge Method	Predev. Baseflow Method
Big Rock Creek	2.24	1.45
Blackberry Creek	1.86	1.67
Coon Creek	2.13	1.87
Ferson Creek	1.54	1.32
Mid Fox River	6.03	6.32
Mill Creek	0.72	0.37
S Br. Kishwaukee River	0.58	0.48
Tyler Creek	0.93	0.66
Union Ditch	1.39	1.16
TOTAL	17.42	15.31

- Sub-watersheds defined by stream gauge locations and model domain size
- Remember, Tier 1 assessment for *county* footprint is 11 mgd

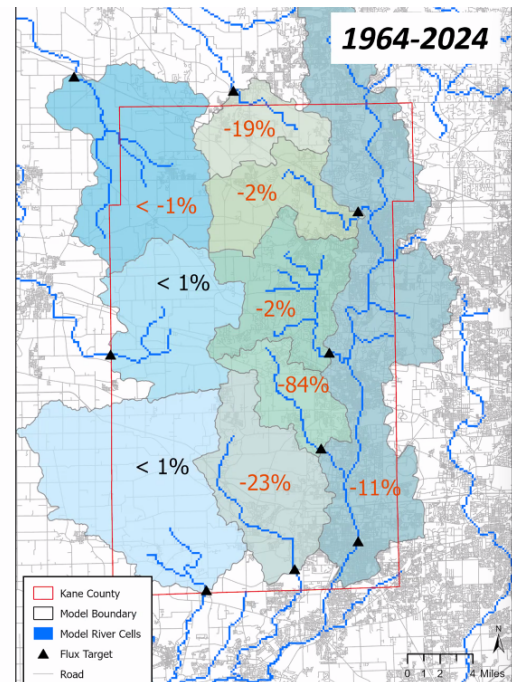


Dan Nagel (SGWTA) asked if Rob Roy Creek, which is located in Kendall County, was part of the watershed they are looking at? There's a big manhole near Jericho Road and two 24's, 42 and a 30-inch that drain into the open ditch which goes down into the Fox River in Yorkville. Dan Hadley (ISWS): no, it is not being taken into account.

The sub-watersheds of Mid-Fox River (above Montgomery), Blackberry Creek, and Mill Creek were compared. Mill Creek shows the most exceedance sustainable supply since 1990s; steady increase in demands to 2024; future projections for exceed supply.

Modeling Results: Baseflow Reductions from Predevelopment

- What happens when demands exceed sustainable supply?
- “Streamflow capture”
- Mill Creek: 84% decline in baseflow
- Blackberry Creek: 23% decline in baseflow
- S. Branch Kishwaukee: 19% decline in baseflow
 - Even though minimal demands in watershed
 - Likely due to Algonquin wells just outside of watershed boundary
- Mid-Fox River: 11% decline in baseflow
- **PRELIMINARY RESULTS (Model is re-running right now)**



Jerry Elliott (SGTWA) commented that there seems to be concerns with decline over time, but yet it shows a flatline so it doesn't seem to correlate. Daniel Hadley (ISWS): do think that there are withdrawals within the Mill Creek that are affecting the Blackberry Creek as well. The model is only going up to 2024. We have added more wells into the model and will be re-running it and extending it to 2050.

The simulated baseflow vs. actual calculated and observed baseflows for Blackberry Creek and Mill Creek.

Jeff Freeman (EEI) inquired if the model takes into account the two land applications that are used in this area? Daniel Hadley (ISWS) stated the model doesn't account for that yet. We are aware there is land application, but we don't know how much goes back. We can simulate it explicitly, but it would be quite challenging since we don't know the information. Jeff Freeman (EEI) replied that simple land acquisition goes to the two golf courses. They have to submit reports to IEPA for the amount that they are land applying. I believe both of those are deep well, but they're going back to the shallow. Daniel Hadley (ISWS) replied that it is a great point! Have reached out to Jason Fowler and he gave an overview of the process. Will plan to follow-up with him and see if we can get the numbers for what is land applied.

Nora Beck (CMAP) asked if there is enough information to delineate groundwatersheds? Just wondering if it would be more valuable to use those boundaries instead of the stream watersheds, given that the groundwater baseflow might be from a different geography. Daniel Hadley (ISWS) replied that the simple answer is we don't really know because groundwater sheds are somewhat trickier to define.

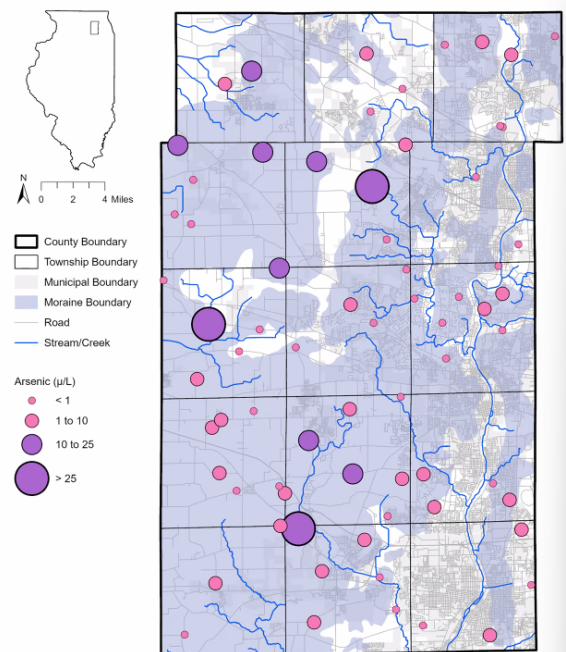
Amy Gahala (USGS) asked if there is any data on the types of biota in the streams historically (pre-development) vs. recent years? How can we answer whether the effluent quantity is making up for baseflow but is the quality effecting the species or quantity of biota available? Ceclia Cullen (ISWS) replied that there has been some mussel studies, sometimes find a decline in species, but it seems that it's a mix of answers. It's hard to say what the effects are. Daniel Hadley (ISWS) commented that mussels are probably the best indicators of changes.

Jeff Freeman (EEI) asked if Tier 1, recharge over a County. What do you do with the boundary of the County? Do you account for the hydraulics of groundwater moving into the County? Daniel Hadley (ISWS) stated it is not cut off, there is a buffer around the watersheds. At the edge of the model there are flux targets that are paired with the larger sandstone model. Jeff Freeman (EEI) provided some other general comments: the projections that the shallow groundwater withdrawal will go up. There are a lot of municipalities that can use shallow wells. When a municipality is in the bedrock valley and it's more cost effective to dig shallow wells. Just a reminder that it's not uniform across the County. Daniel Hadley (ISWS) stated that they definitely want to emphasize this in the report. The geologic resources are not evenly distributed within Kane County.

Pete Wallers (EEI/MWCOG) asked about Ceclia's comment on arsenic? Cecilia Cullen (ISWS) replied it was from the repeat wells that had arsenic before the concentrations. Encouraged homeowners to test their water quality in the house. Concerning results – there were two high arsenic that were treated water. Highest concentration was 60pbm. Pete Wallers (EEI/MWCOG) asked if they made contact with IDPH or County Health Department? Cecilia Cullen (ISWS) stated that the letters were only sent to the homeowners, but we can send it to IDPH and the County Health Department as well.

Arsenic

- Arsenic was the most significant contaminant in this study to drinking water quality.
- High arsenic (purple) are observed at 10 wells in central or west Kane County
- Often, these wells coincide with moraines that hinder the recharge of water to aquifers





Wei Han (IDNR) asked if it can impact the water quality some day that it would not be useful? Sustainable supply is based on the groundwater flow model right now. Daniel Hadley (ISWS) stated it is hard to determine how it would affect the supply. We want to update the risk maps and show where the aquifers are susceptible. Within this study there are several communities that will be switching off shallow wells to deep wells. An example would be South Elgin, going to favor the sandstone more into the future because of the PFAS issues they are experiencing.

Scott Kuykendall (McHenry County) stated he has been an advocate for testing in McHenry County. One of the things that we wrestle with is if everyone were to install a reverse osmosis system. Important to caution people on jumping to whole house treatment systems. Need to advocate for monitoring and treatment but also need to caution them on options for treatment.

Nora Beck (CMAP) asked for an explanation on the difference between Tier 1, 2 and 3 to a layperson, especially when the boundary of the study appears to be different (county versus watersheds)? Devin Mannix (ISWS) stated that Tier 1, is basically comparing Statewide. Tier 2, studies that IDNR is funding for regional water supply planning. Tier 3, is where there is drilling down at the local level. Nora Beck (CMAP) replied that we generally understand that values will be different between all of these different Tiers.

Terra McParland (IDNR) asked for confirmation on the 10 ug/l is the water quality limit for drinking water. Also, wondering if PFAS is being looked at for future tracking? Daniel Hadley (ISWS) replied that they have not looked at it yet. They just know which communities are affected by PFAS and who is not. The Statewide study is the only information that they have available.

Presentation: “Conserve Water for Kane”: Margaret Schneeman and Haider Mehdi (IISG) presented this topic to the group.

Kane County is announcing a Water Conservation Technical Assistance Program. This assistance is available to help communities in Kane County undertake initiatives related to water efficiency and conservation.

The type of assistance provided, and the time commitment will vary depending on the proposed project, and can include direct technical assistance, funding assistance to support expert consultants, purchase of water efficiency devices, and other needs as identified by the applicant.

Check out the program at: www.conservewaterforkane.org



Upcoming workshops are noted below:

Workshop Series and Curriculum

In-person workshop series tied to our residential program is in development and planning. These **2-hour workshops** will include **short presentations, activities, and resources** for residents to take home! The series will also be used to pilot and develop a **dedicated curriculum for residents** that covers all workshop topics!



June 14, 2025
Understanding Water in Kane County

Explore Kane County's water sources and supply.



July 17, 2025
WaterSense, EnergyStar and Device Retrofits
Understand the benefits of WaterSense-labeled products and high-efficiency devices.



August 9, 2025
Indoor Water Use
Learn how to reduce water consumption in your home via device retrofits and behavioral changes.



Sep. 13, 2025
Outdoor Water Use
Discover strategies to optimize water use in landscaping, gardening, and other outdoor activities.



Oct. 11, 2025
Water Use Habits and Behavioral Changes
Explore how daily habits and small behavioral changes can save water.



Nov. 8, 2025
Building a Sustainable Water Future
Create action plans for water conservation at home and in the community.

Sensible Salting Committee (SSC) (Update): Scott Kuykendall (McHenry County) nothing to report.

CMAP (Update): Kelsey (CMAP) nothing to report.

IISG (Update): Margaret Schneemann (IISG) nothing to report.

ISAWWA (Update): Nothing to report.

ISWS (Update): Devin Mannix (ISWS) finalizing updates to the shallow model from Tier 1. Will talk at a future meeting.

IDNR (Update): Wei Han (IDNR) reported that they just started a new two year contract with ISWS.

USGS (Update): Amy Gahala (USGS) nothing to report.

SGTWA (Update): Jerry Elliott (Sugar Grove Water Authority) creek is running 27,000. All monitoring is on schedule and looking good.

Pending legislation: Pete Wallers (EEI/MWCOG) commented on SB224 which has gotten through Committee. This is related to fire hydrants in permits. If you are inclined, support would be appreciated.

Other Business: The next meeting will be held in-person on April 22, 2025, at the Centre in Elgin.



The meeting was adjourned at 12:02 PM.

Submitted by Angie Smith, EEI