NORTHWEST WATER PLANNING ALLIANCE

Technical Advisory Committee

Virtual Meeting

January 28, 2025

Meeting Minutes

Present: Peter Wallers, EEI/MWCOG; Jeff Freeman, EEI; Dan Nagel, Sugar Grove Water Authority; Jerry Elliott, Sugar Grove Water Authority; Gary Clark, Retired IDNR/ISWS; Jodie Wollnik, Kane County Water Resources; Matt Asselmeier, Kendall County; Derek Hiland, DeKalb County; Dean Farr, Izak Walton League; Kevin Fescke, Village of Barrington; Terra McParland, IDNR; Mike Pubentz, City of Elgin; Nora Beck, CMAP; Haider Mehdi, CMAP; Scott Kuykendall, McHenry County; Karly Cazzato, CMAP; Kelsey Pudlock, CMAP; Margaret Schneemann, IISG; Carolyn Campbell, McHenry County; Jerry Glogowski, Village of Algonquin; Joe Munder, City of Aurora; Milo Shapey, CMAP; Walt Kely, Retired ISWS; Wei Han, IDNR; Brad Merkel, Sugar Grove; 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 November Meeting Minutes: Dan Nagel (Sugar Grove Water Authority) moved to approve the minutes. Jodie Wollnik (Kane County Water Resources) seconded. Minutes approved.

Presentation: *"Regional Water Demand Forecast Update 2024":* Karly Cazzato (CMAP) presented this information to the group. The Water Demand Forecast for 2024 was compared to 2018 and 2050 data. The report covered five major water sectors: agriculture; industrial, institutional and commercial; municipal domestic self supply; municipal water system; smaller scale community water system.

Milo Shapey (CMAP) covered the trends that they saw when compiling the information for the Water Demand Forecast. As we know ISWS has pulled together the sustainable supply estimates for the deep sandstone and shallow groundwater. All Counties besides Kane County will have a greater than 1.5 MGD demand-to-supply ratio by 2050.

Distribution of sandstone groundwater demand is not uniform. Counties in the eastern portion of the Illinois – seven Counties are expected to exceed their demand-to-supply ratio. Those seven are: Will, DuPage, Kane, Lake, Cook, Kendall and McHenry.

Demand exceedances in shallow and sandstone sources by County, 2050 are noted in the table to the right.

County	Reduction Needed (MGD)
Cook	0.54
DuPage	2.44
Kane	12.59
Kendall	--
Lake	0.11
McHenry	--
Will	4.02
Total	**19.71**

All of the data will be available on CMAP Datahub:
https://datahub.cmap.illinois.gov/maps/598e59f7bc8040468734f7aa592824bd/about

The forecast limitations include: domestic self supply, compared CMAP (2018) to USGS results for estimated population GPCD (2015) shows the following differences:

Forecast	USGS 2015 Estimates	CMAP Municipal DSS 2018 Estimates	Percent difference
GPCD	80.0	93.1	+14%
Population	448,572	66,712	-85%
MGD	35.89	4.66	-87%

Data centers 2024: 66 operational with 13 planned centers. They may purchase water from municipal PWS or they could self supply. There is a lot of uncertainty on this topic in the forecast.

Dean Farr (Izak Walton League) commented there are a lot of sources of water. The Fox River is going to become important. Similar comment on the Kankakee River and the shallow groundwater. The Kankakee River comes from Indiana, would be interested to know what they're plans are.

Jodie Wollnik (Kane County) stated that she will be interested to see the full report. Currently going through the modeling with ISWS for the shallow groundwater capacity. She questioned the slides on agricultural water use stating that it is going down and that it seems to be a bit surprising due to climate change and the droughts we are experiencing. They have a lot of users that are using center pivoting more. Karly Cazzato (CMAP) stated that is primarily based on the formula that is used and it is based on acreage and held demand constant and applied the conservation. Jodie Wollnik (Kane County) expressed that she felt it would be beneficial to review the information that ISWS is pulling together.

Scott Kuykendall (McHenry County) echoed Jodie's comments as well. This information paints too rosy of a picture and it will be used to rationalize bad behavior in both the deep and shallow aquifers. He gave the example of Wonder Lake currently drilling a new well and will be building 5,000 new homes. Huntley, Crystal Lake and Cary are all drilling new deep wells. This information does not reflect what is happening on the ground. Some of the aquifers that are confined are already seeing challenges for water supply. Scott asked Walt Kelly (retired ISWS) about the report that was done 15-20 years ago and have used that data for raising concerns and implementing water conservation practices. It seems counter to what we have been working on. Walt Kelly (retired ISWS) replied there was some concern around Algonquin and Woodstock area at that time. I agree in principle, the good news is that the demand is going down even with the increase in population. Many of the areas do show the deep wells already being stressed so this is not going to be a long-term solution. Peter Wallers (MWCOG/EEI) asked the group to remember this is still considered Tier 1 information that is being used. Nora Beck (CMAP) thanked everyone for their comments and feedback. She offered that she is willing to have a conversation after the meeting so that we're reflecting the right information at the County scale.

Wei Han (IDNR) mentioned the aquifer recharge program they are looking into in Will County. Recently the ISWS has made a proposal to do a feasibility study in the shallow aquifer management recharge to restore it. It will be a long term effort, but it will be a good start for this region. IDNR will partially fund the feasibility study for this project and believe it aligns with the Water Supply Planning Program. Walt Kelly (retired ISWS) commented that project is being led by Devin Mannix of ISWS so if you have specific questions please reach out to him directly. Peter Wallers (MWCOG/EEI) questioned the timeframe of the project. Walt Kelly (retired ISWS) it is just a modeling study. Wei Han (IDNR) commented that first is the water quality and second is water quantity. He also noted that the Army Corp of Engineers (ACOE) is interested in this project.

Dean Farr (Izak Walton League) commented on the data centers being brought in and they are a growing challenge for municipalities. Nora Beck (CMAP) definitely want to understand data centers more, looking to work with Current on this topic and see if they can take this topic further than the resources at CMAP.

Presentation: *"NWPA Water Supply Sustainability Plan: Incorporation of Stakeholder Feedback":* Kelsey Pudlock (CMAP) presented this topic to the group.

She went through the plan feedback that had been received since the November TAC meeting from McHenry, Kane and Kendall County representatives, ISWS staff and two municipal PWS communities. Along with additional feedback/review from IISG and NWPA TAC co-chairs.

The feedback received was: need for more explanation of the ISWS's sustainable water supply estimates, including their constraints and limitations; need for more emphasis on the uncertainty and challenges water quality poses on water quantity; interest in a clearer presentation of the demand and supply data; need for stronger narrative prompting communities to take water conservation and efficiency actions.

Key revisions included: reordering the plan chapters and most of the revisions were done in Chapters 2, 3, and 4.

Chapter 2: NWPA Profile which outlines the NWPA region's characteristics relevant to water demand

Items that were changed are noted below:

- Further described relationship between community characteristics and water use
- Added demographic info (e.g., population and employment projections by County)
- Added land use and housing information for NWPA's 5-County region
- Further described other water sectors (in addition to municipal PWS sector)
- Updated municipal PWS systems count based on updated Regional Water Demand Forecast for Northeastern Illinois, 2020-2050

- Updated/clarified water source map (Jeff Freeman (EEI) commented that Lake Zurich is planning to make the switch to Lake Michigan water. Kelsey Pudlock (CMAP) will need to double check this information. Nora Beck (CMAP) commented they didn't include this in the Water Demand Forecast.)
- Added subheadings clearly denoting key challenges: excessive drawdown, degraded water quality, regulatory and financial information
- Expanded explanation of the challenges across all water sources (as applicable)
- Added ISWS definitions and assumptions)including ISWS' tiered approach) for supply estimates
- Shifted to tables and maps to communicate regional water demand and sustainable water supply

NWPA regional water demand, 2018 and 2050

County	Total use, MGD		Change in demand	
	2018	2050	MGD	Percent
DeKalb	8.3	10.0	+1.7	+20.7%
Kane	45.2	47.9	+2.7	+6.0%
Kendall	8.5	10.2	+1.7	+19.8%
Lake	73.0	64.0	-9.0	-12.3%
McHenry	24.6	24.0	-0.6	-2.6%
Total	**159.6**	**156.1**	**-3.5**	**-2.2%**

Note: DeKalb County demand estimates from ISWS, Water Budget Vista, 2024, which uses a different forecasting methodology and does not account for passive conservation trends.

Source: CMAP and IISG, 2024; ISWS, 2024.

Water source	Total use, MGD		Change in demand	
	2018	2050	MGD	Percent
Rivers	23.4	19.2	-4.1	-17.7%
Lake Michigan	51.7	56.4	4.7	9.2%
Sandstone aquifer	37.9	31.6	-6.2	-16.5%
Shallow aquifer	46.7	48.8	2.1	4.6%
Total	**159.6**	**156.1**	**-3.5**	**-2.2%**

Note: DeKalb County demand estimates from ISWS, Water Budget Vista, 2024, which uses a different forecasting methodology and does not account for passive conservation trends.

Source: CMAP and IISG, 2024; ISWS, 2024.

Reminder that ISWS Tier 1 definitions for sustainable water supply estimates are now included in the report.

Tier 1 sustainable supply estimates for the NWPA region

County	Shallow groundwater	Deep groundwater	Rivers	Lake Michigan	Total
DeKalb	11.3	11.3	n/a	n/a	22.6
Kane	11.3	11.3	14.8	2.3	39.8
Kendall	5.1	5.1	n/a	2.6	12.7
Lake	8.1	2.3	n/a	73.5	83.9
McHenry	26.9	17.8	0.1	n/a	44.8
Total	**62.7**	**47.8**	**14.9**	**78.4**	**203.8**

Note: Lake Michigan values reflect existing allocations as of 2017 and do not include planned source switches by several NWPA communities. They also do not consider the Illinois Water Inventory Program purchase network, which accounts for the purchasing or selling of water by municipal PWS systems or water commissions that supply water to multiple municipal PWS systems. Therefore, the Lake Michigan value in Kane is associated with demand in Hoffman Estates and the value in Kendall is associated with demand in Plainfield. The ISWS plans to update these estimates to reflect the purchase network work in the future.

Will be utilizing the same maps that are included in the Water Demand Forecast for the seven counties.

Demand reduction needed to align with groundwater sustainable supply, 2050

County	Reduction needed (MGD)
DeKalb	-
Kane	12.6
Kendall	-
Lake	0.1
McHenry	-
NWPA region	**12.7**

Chapter 3: Water conservation and efficiency framework revisions include

Items that were changed are noted below:

- Flipped order of chapters
- NEW subsection: Comparison of sustainable supply and combined savings; provided water savings by at the County and source level
- New subsection: Act locally (preview to Chapter 5)

Greatest potential water savings across groundwater sources

County	Groundwater savings estimates, (100% program participation), MGD	Fox River savings estimates, (100% program participation), MGD	Lake Michigan savings estimates, MGD(100% program participation), MGD	Total, MGD
DeKalb	2.1	0.0	0.0	2.1
Kane	9.4	3.3	0.0	12.7
Kendall	3.0	0.1	0.1	3.2
Lake	2.1	0.0	11.7	13.8
McHenry	6.7	0.0	0.0	6.7
NWPA region	23.3	3.4	11.8	38.4

Groundwater savings can significantly cut demand reduction needed

County	Reduction needed to align with groundwater sustainable supply estimates, MGD	Groundwater savings estimates (100% program participation), MGD	Reduction remaining to align with groundwater sustainable supply estimates, MGD
DeKalb	-	2.1	-
Kane	12.6	9.4	3.2
Kendall	-	3.0	-
Lake	0.1	2.1	0
McHenry	-	6.7	-
NWPA region	12.7	23.3	3.2

Greatest water savings strategies vary by County (under 100% program participation)

County	Residential retrofits savings estimates	Outdoor landscape efficiency savings estimates	New residential development savings estimates	Water loss savings estimates	CII conservation programming savings estimates	Total
DeKalb	0.6	0.1	0.4	0.7	0.3	2.1
Kane	3.2	0.3	2.9	4.3	2.1	12.7
Kendall	0.6	0.1	1.3	0.8	0.4	3.2
Lake	3.9	0.4	1.4	5.5	2.6	13.8
McHenry	1.8	0.2	2.0	1.9	0.9	6.7
NWPA Region	10.1	1.1	7.9	13.1	6.2	38.4

Potential water savings from water loss control techniques:

County	Groundwater savings estimates, 100% scenario	Fox River Savings Estimates, 100% scenario	Lake Michigan Savings Estimates, 100% scenario	Total
DeKalb	0.7	0.0	0.0	0.7
Kane	3.1	1.1	0.0	4.3
Kendall	0.8	0.0	0.0	0.8
Lake	0.8	0.0	4.6	5.5
McHenry	1.9	0.0	0.0	1.9
NWPA region	7.4	1.1	4.7	13.1

Chapter 4: Water conservation strategies and potential water savings

Items that were changed are noted below:

- Shifted from showing 10-50% program participation to 50-100%
- Renamed conservation scenarios; moderate conservation (50% program participation) and high conservation (100% program participation)
- Water loss strategy savings methodology adjusted to reflect IDNR's goal for non-revenue water

Potential water savings achieved by prioritized strategies

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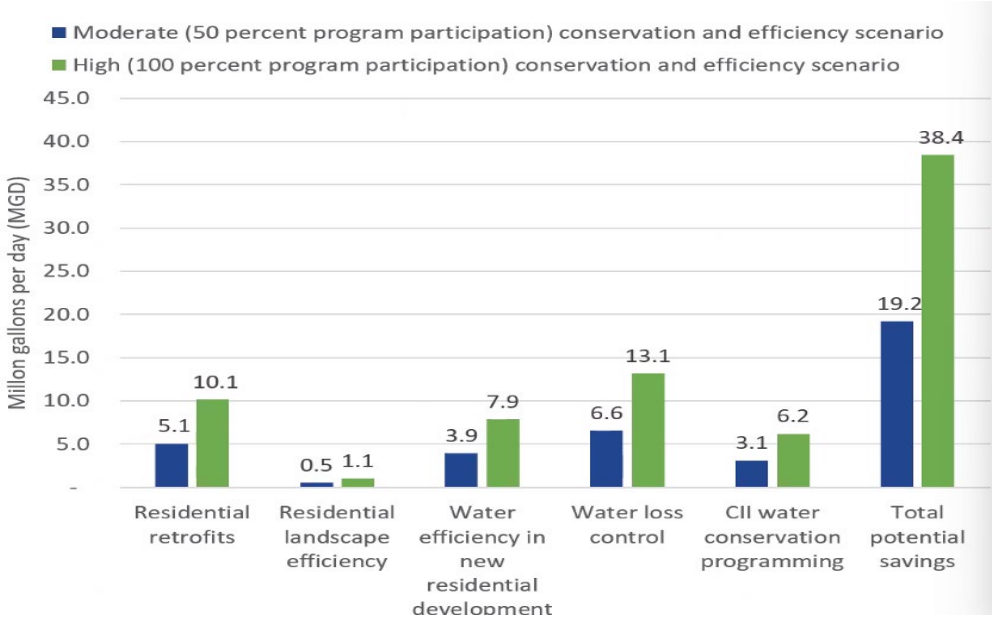

Key revisions by chapter

Chapter 2: NWPA Profile

- Improved description of supply challenges
  - Emphasis on water quality and its potential impact on water quantity
- Added water supply sustainability estimate definitions, assumptions
  - Description of ISWS Tier 1,2,3 assessments
- More description of the regional water demand forecast
- Provide a clearer comparison of NWPA's demand and supply

Chapter 3: Water conservation and efficiency framework (previously Ch. 4)

- Brought vision and goals to top of chapter
- Added combined strategy savings by county by water source and by county

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Chapter 4: Water conservation strategies and potential water savings (previously Ch. 5)

- Water savings estimates shown at a 50% and 100% program participation standard (previously 10% and 50%)
- Water loss strategy based on IDNR's goal of non-revenue water being no greater than 10 percent of a utility's net pumpage

Chapter 5: Guide to local action in the NWPA region (previously Ch.3)

- Highlights the need for local actions
- Refined steps for getting started

Next steps: present to the Executive Committee meeting on Thurs., Jan. 30th and then provide the final draft plan to review and provide written feedback; Executive Committee meeting in February to review plan and discussions and Executive Committee meeting in March for potential adoption. Note: February and March meetings will be special added meetings for the report.

Scott Kuykendall (McHenry County) stated he appreciates being heard and changes being incorporated. The Village of Union lost one of their most productive aquifers due to a business dumping their solvents onto the ground. A similar issue happened in Marengo as well. Would like to see a highlight on contamination on the groundwater aquifer and the correlation between protecting the source with pollution prevention. Kelsey Pudlock (CMAP) commented that we can certainly work with Scott to make sure this has some more emphasis. Scott Kuykendall (McHenry) reported that Boone County just authorized spending a significant amount of money for a three dimensional project of their aquifers with the hopes of protecting their groundwater from contamination.

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

CMAP (Update): Kelsey Pudlock (CMAP) no other updates at this time.

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

ISAWWA (Update): Jeff Freeman (EEI) mentioned there are some fun social events coming up in February and WATERCON in April.

ISWS (Update): Walt Kelly (Retired ISWS) nothing to add at this time. Peter Wallers (MWCOG/EEI) asked Walt to pass along to his colleagues we would like to see one of them attend a future meeting.

IDNR (Update): Wei Han (IDNR) reported that Terra McParland has been promoted and that she will be responsible for leading water supply planning. Rick Pohlman is the acting director at the Office of Water Resources. CMAP's contract to assist NWPA is being renewed. The new contract will start in April.

USGS (Update): No update.

SGTWA (Update): Jerry Elliott (Sugar Grove Water Authority) commented that Blackberry Creek is iced over at the moment. The shallow aquifers are at their low levels which is normal for this time of the year. Aurora 101 well is not pumping today and it is back to normal level.

Other Business:

Scott Kuykendall (McHenry County) stated that there will be an open house on Sat., March 8th from 10 AM – 2 PM at the Wings and Wheel Museum in https://emails.illinois.edu/newsletter/49/1288357949.html to help raise awareness for the Boone County project that will be starting. ISWS, PRI and others from the County will be on-site. Governor Pritzker may also attend along with other elected officials.

The next meeting will be held online on February 25, 2025.

The meeting was adjourned at 11:23 AM.

Submitted by Angie Smith, EEI