

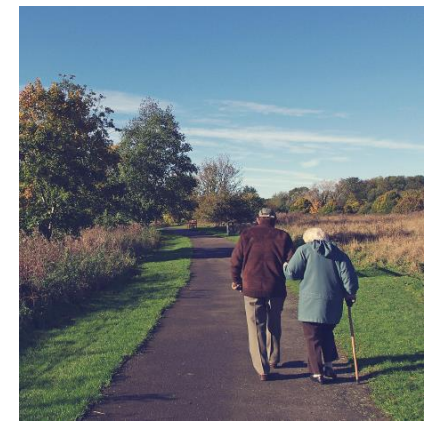
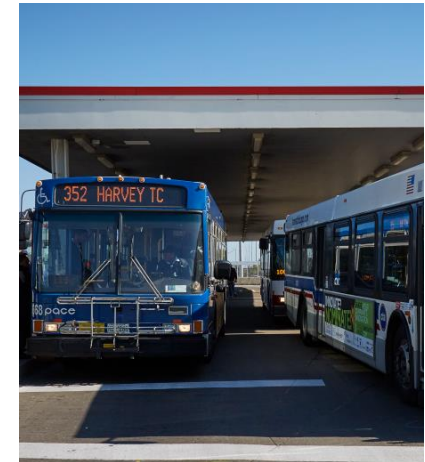


Chicago Metropolitan
Agency for Planning



Regional water demand and NWPA Water Supply Sustainability Plan updates

NWPA TAC Meeting
April 22, 2025



What was uncovered

ISWS's Kane County shallow groundwater study revealed that CMAP had an additional ~1.5 MGD of reported shallow withdrawals in their IWIP data analysis

Some deep aquifer withdrawals were categorized as shallow aquifer withdrawals, and vice versa

What does this mean for the Water Demand Forecast and Water Supply Sustainability Plan?

- Historic and forecasted shallow and deep aquifer demands have shifted at the county level
- Some shallow demands have been shifted to deep aquifer demands, and vice versa
- 2018 withdrawal totals will only include reported withdrawals
- Forecasted water demands by county remain the same
- **Sustainable supply-to-demand ratios shift**
- **Potential water savings by county remain the same**

Figure 2.4. Water sources used by NWPA municipalities with PWS systems

Water sources used by NWPA municipalities with PWS systems

- Groundwater, sandstone
- Groundwater, shallow bedrock/glacial
- Mixed groundwater sources, shallow/sandstone
- Mixed sources, Fox River/groundwater
- Surface water, Lake Michigan
- Municipality with planned source switch

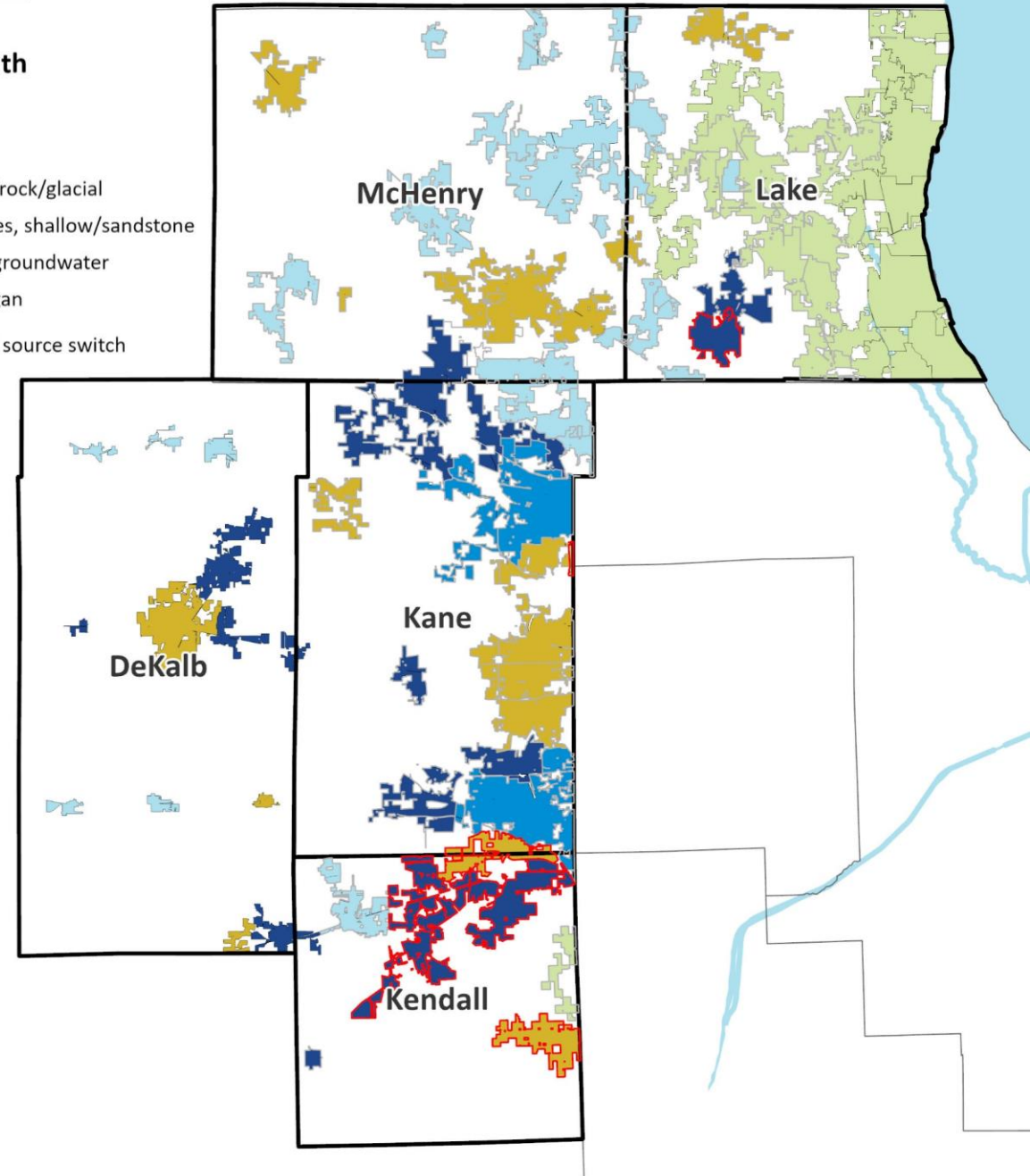
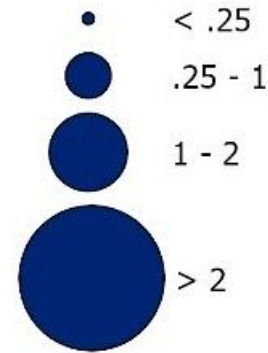


Figure 2.12. Demand-to-sustainable-supply ratio for shallow groundwater, 2050

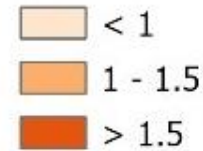
Shallow groundwater demand compared to sustainable supplies

Shallow groundwater, 2050

Municipal public water system demand



Demand-to-supply ratio



Municipality with shallow groundwater well

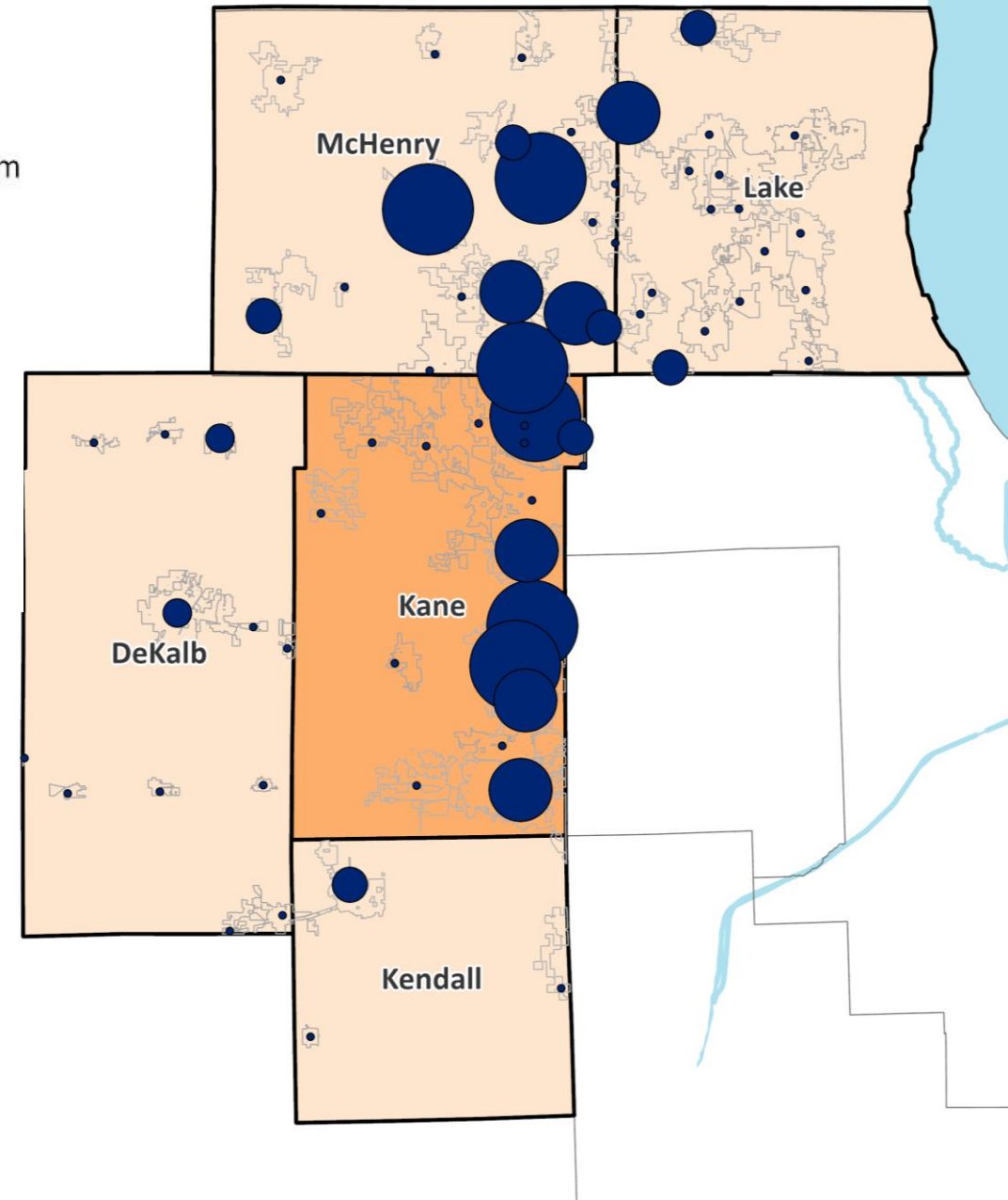
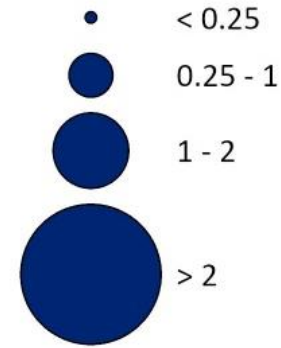


Figure 2.13. Demand-to-sustainable-supply ratio for deep groundwater, 2050

Shallow groundwater demand compared to sustainable supplies

Sandstone groundwater, 2050

Municipal public water system demand



Demand-to-supply ratio

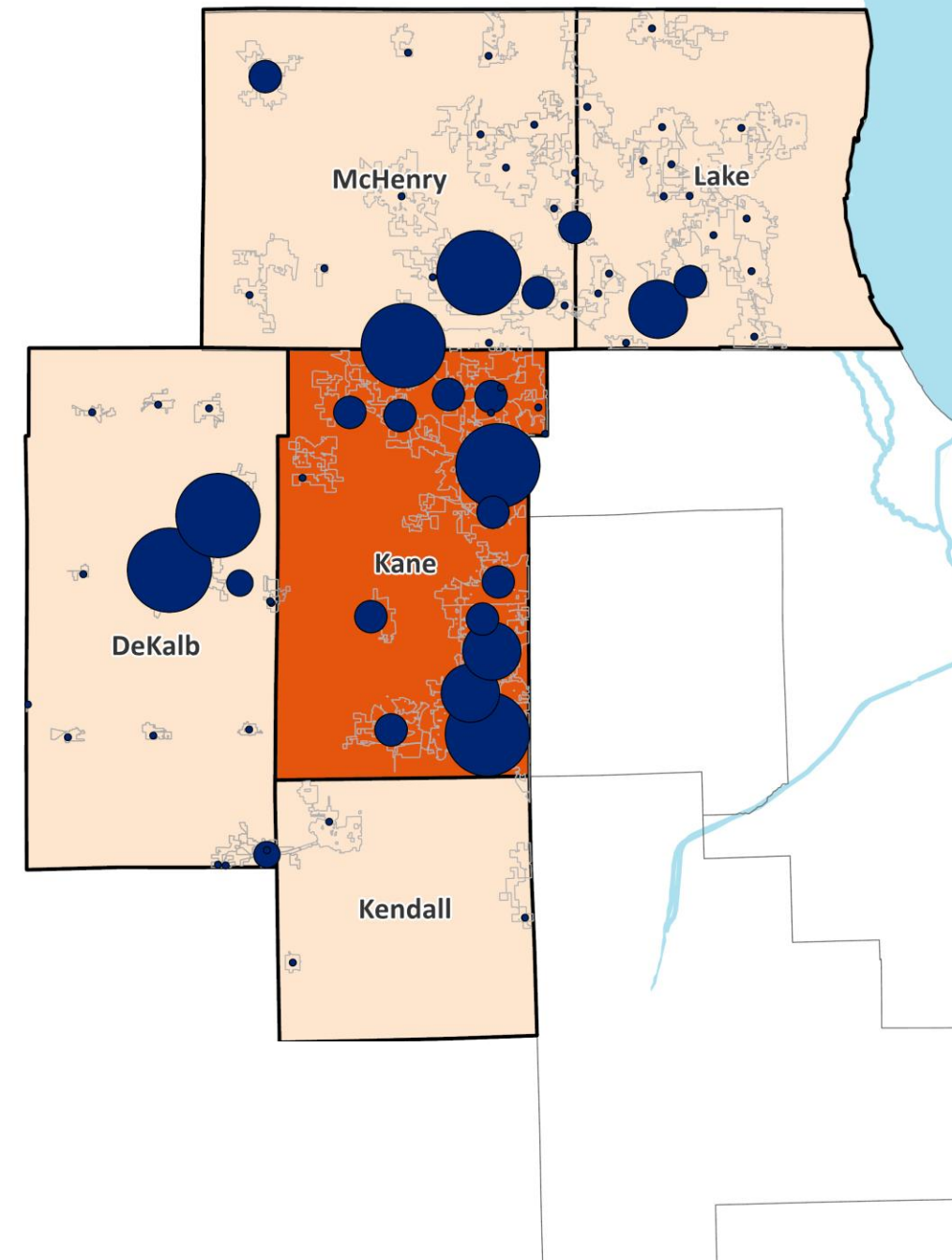
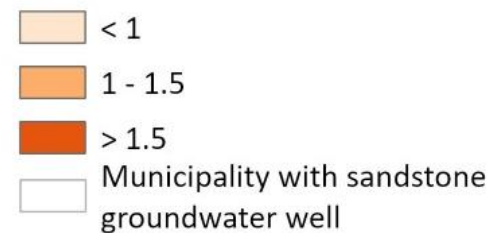


Figure 2.14 Demand reduction needed to align with shallow and sandstone sustainable supply estimates in the NWPA region, 2050

County	Reduction needed (MGD) - March Plan	Reduction needed (MGD) - April Updates
DeKalb	- *	- *
Kane	12.6	12.2
Kendall	- *	- *
Lake	0.1	- *
McHenry	- *	- *
NWPA region	12.7	12.2

Note: *Demand-to-supply ratios at the county scale will not capture localized mismatches between demand and supply.

Source: CMAP and IISG, 2024.



Figure 3.3 Demand reduction after savings achieved from prioritized water conservation strategies under the high conservation scenario, in MGD

County	Reduction needed to align with groundwater sustainable supply estimates	Groundwater savings estimates (100% program participation)	Reduction remaining to align with groundwater sustainable supply estimates
DeKalb	- *	2.1	-
Kane	12.2	9.4	2.8
Kendall	- *	3.0	-
Lake		2.1	-
McHenry	- *	6.7	-
NWPA region	12.2	23.3	2.8

Note: Groundwater refers to both shallow and aquifer sources. *Reductions will be needed in local areas facing risks of water stress due to concentrated demand or unique geological features.

Source: CMAP and IISG, 2024.

Updates by NWPA

WSSP chapter

Chapter	Updates applied
Executive summary	Yes
1	None
2	Yes
3	Yes
4	One (minor)
5	None

Key changes: Chapter 2

Water sources and sectors

- Figure 2.4 Water sources used by NWPA municipalities map (pg. 13)
- Figure 2.10 Percent change in water demand by NWPA county and corresponding text (pg. 21)
- Figure 2.11 Percent change in withdrawals by source for NWPA counties (pg. 22) and corresponding text (pg. 21)
- Figure 2.12 Demand-to-sustainable-supply ratio for shallow groundwater (pg. 23)
- Figure 2.13 Demand-to-sustainable-supply ratio for sandstone groundwater (pg. 24)
- Figure 2.14 Demand reduction needed to align with groundwater sustainable supply (pg. 25) and corresponding text (pg. 22)

Key changes: Chapter 3 and 4

Chapter 3 – Comparison of sustainable supply and combined savings

- Figure 3.3 Demand reduction remaining after savings achieved from conservation and efficiency scenario (pg. 31) and corresponding text (pg. 30)
- Comparison of sustainable supply and combined savings text (pg. 32)

Chapter 4 – Calculating potential water savings

- Baseline water use text (pg. 34)

Next steps

- Update the regional water demand forecast on CMAP's website
- Send a revised, more detailed dataset to ISWS
- Share updated NWPA Water Supply Sustainability Plan with TAC and EC before EC's May meeting



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Thank you

Kelsey Pudlock

kpudlock@cmap.Illinois.gov

Margaret Schneemann

mschneemann@cmap.Illinois.gov

[@cmapillinois](https://twitter.com/cmapillinois) |    

