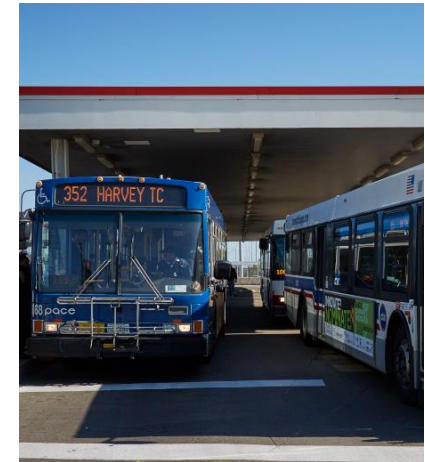


Regional water demand forecast Update 2024

January 28, 2025



Project team

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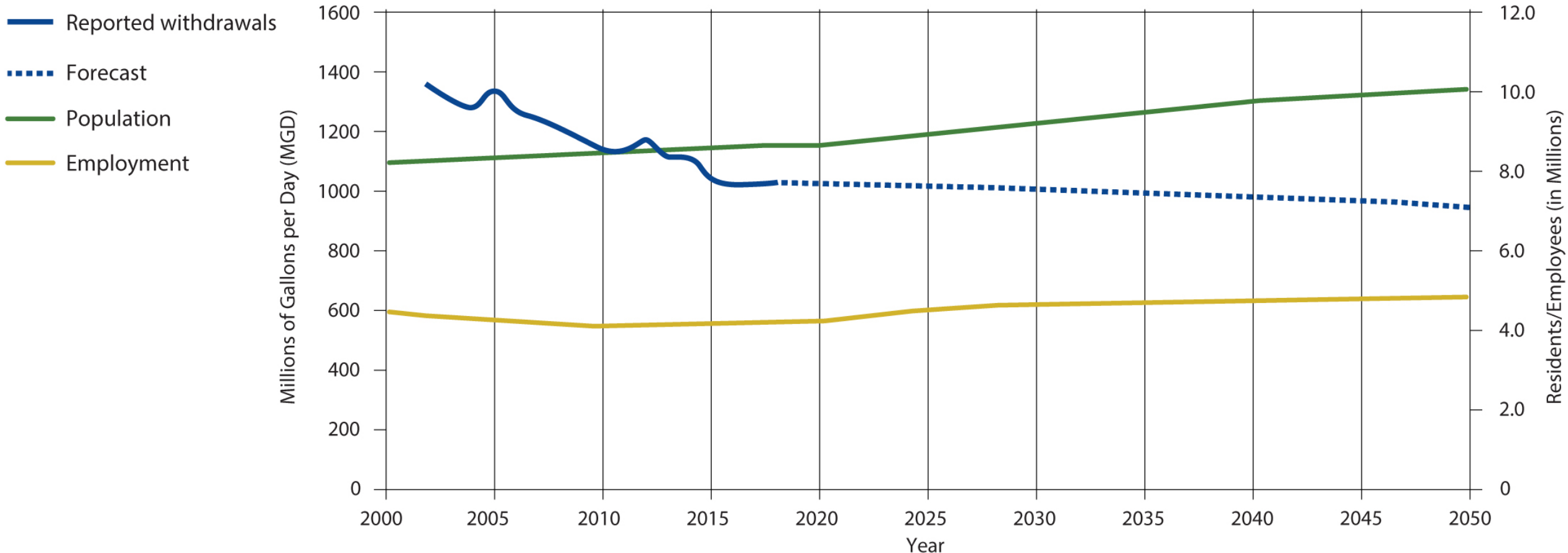
Water demand by 2050 for the Northeastern Illinois Region

Unit Use:

- Gallons per capita per day
- Gallons per employee per day
- Gallons per acreage per day

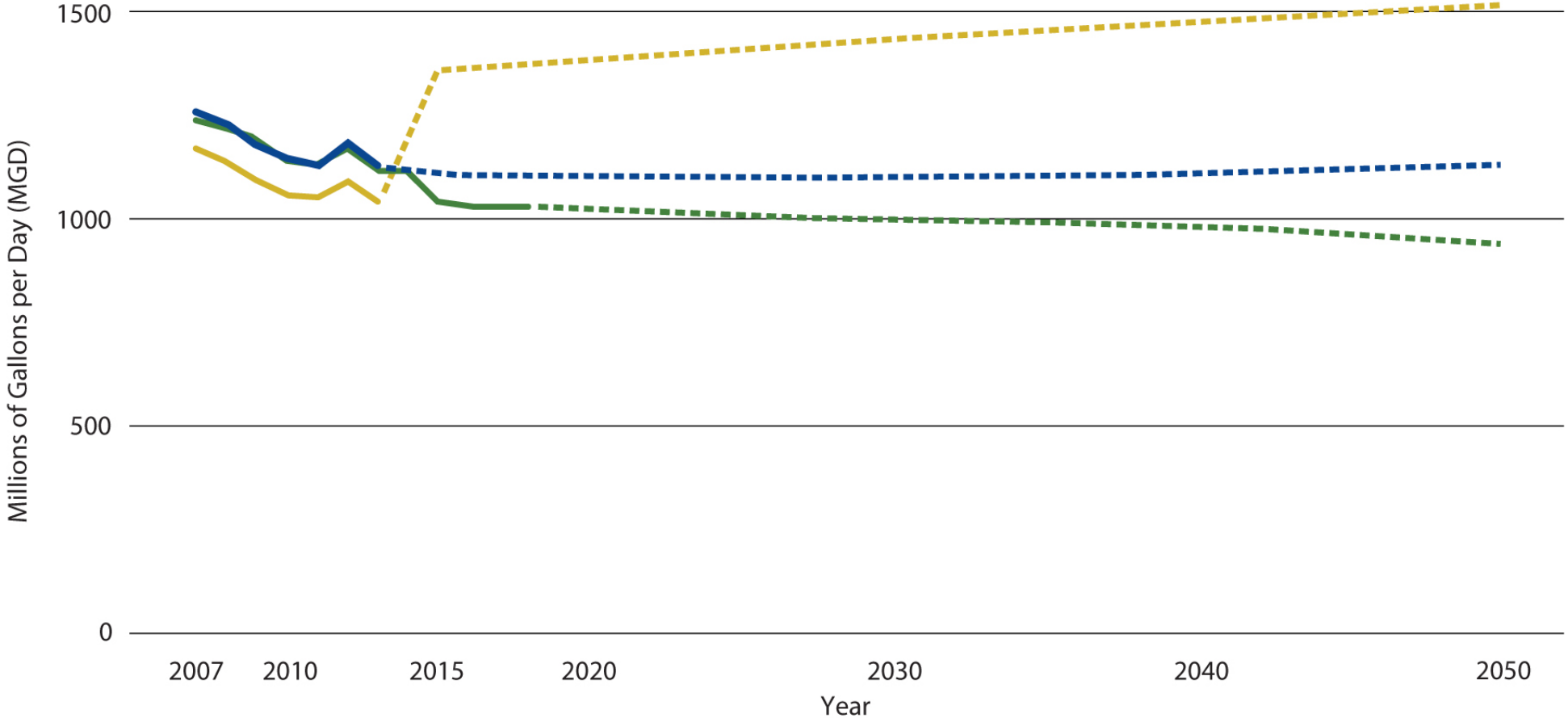
Assumes an annual reduction in unit use based on conservation trends

2024 regional water demand forecast and 2022 socioeconomic forecast



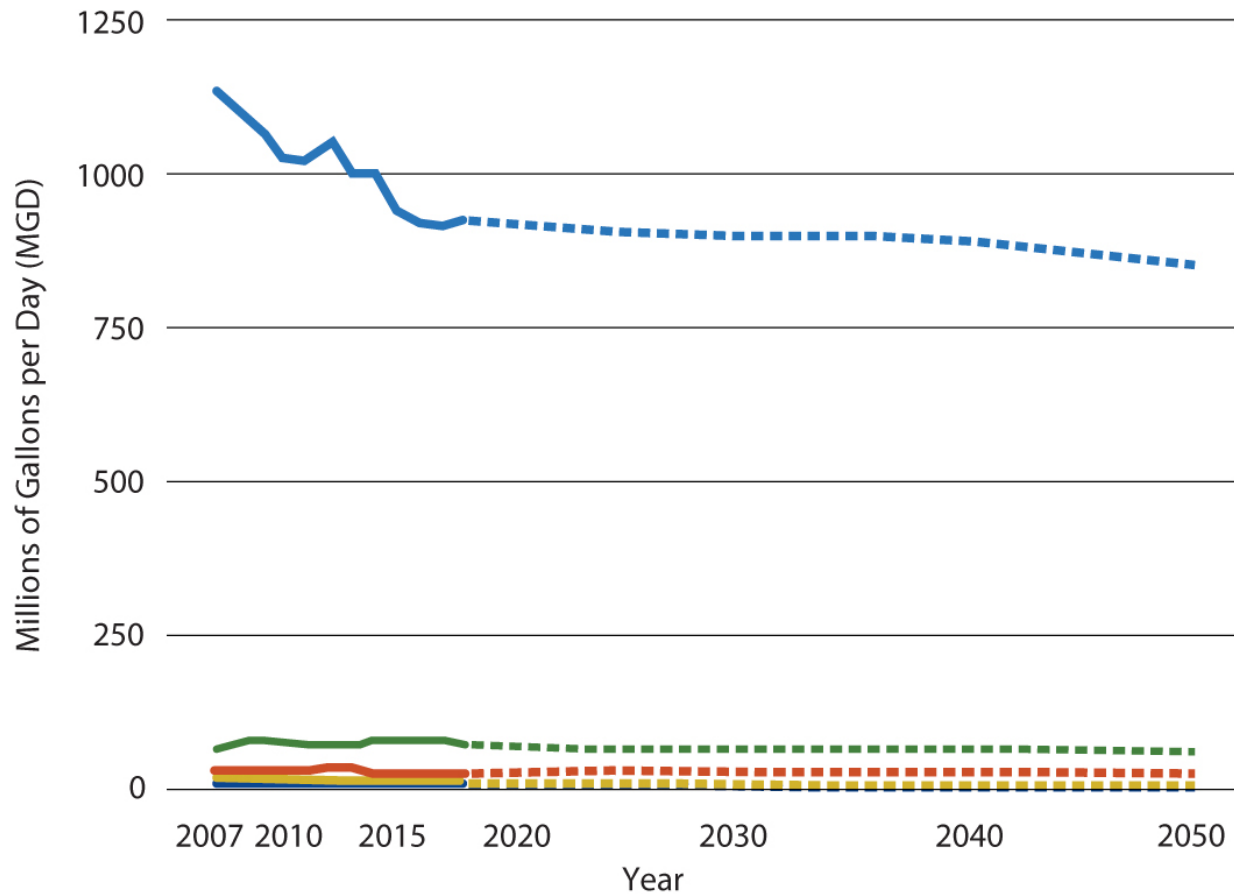
Comparison of recent water demand forecasts

- 2018 forecast
- 2024 forecast
- Water 2050 - Least resource intensive scenario



Total demand by sector, MGD

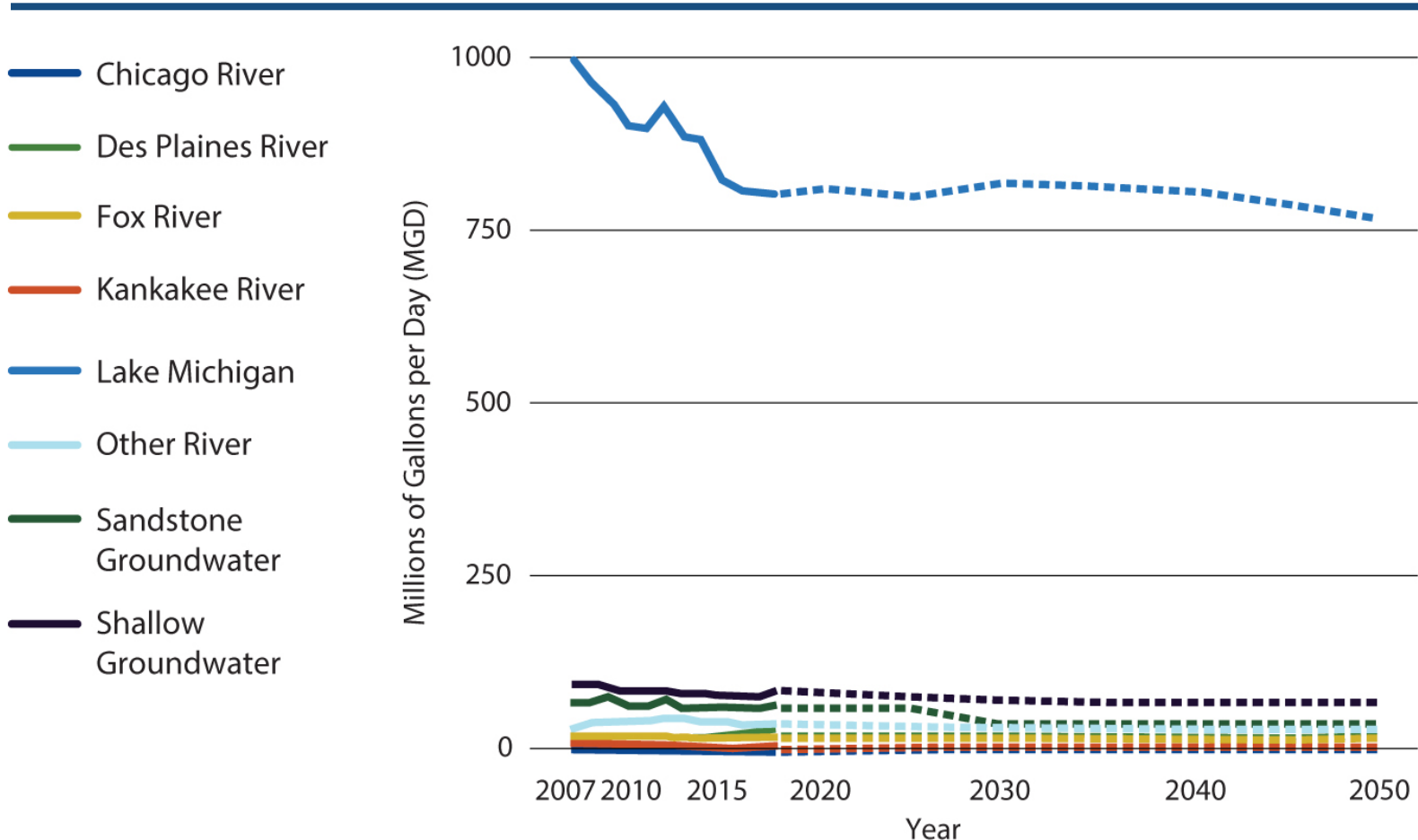
- Agriculture
- Industrial, institutional, and commercial
- Municipal domestic self supply
- Municipal public water system
- Smaller scale community water system



Sector	2018 MGD	2050 MGD	% Change
Municipal Public Water System	924.0	852.2	-7.3%
Municipal Domestic Self Supply	6.21*	4.66	-25.0%
Industrial, Institutional, & Commercial	66.4	56.4	-15.1%
Smaller Scale Community Water Systems	23.1	20.2	-12.2%
Agriculture & Irrigation	4.9	4.7	-4.25%

*Municipal Domestic Self supply 2018 value reflects an estimate; all other 2018 values are reported

Total demand by source, MGD



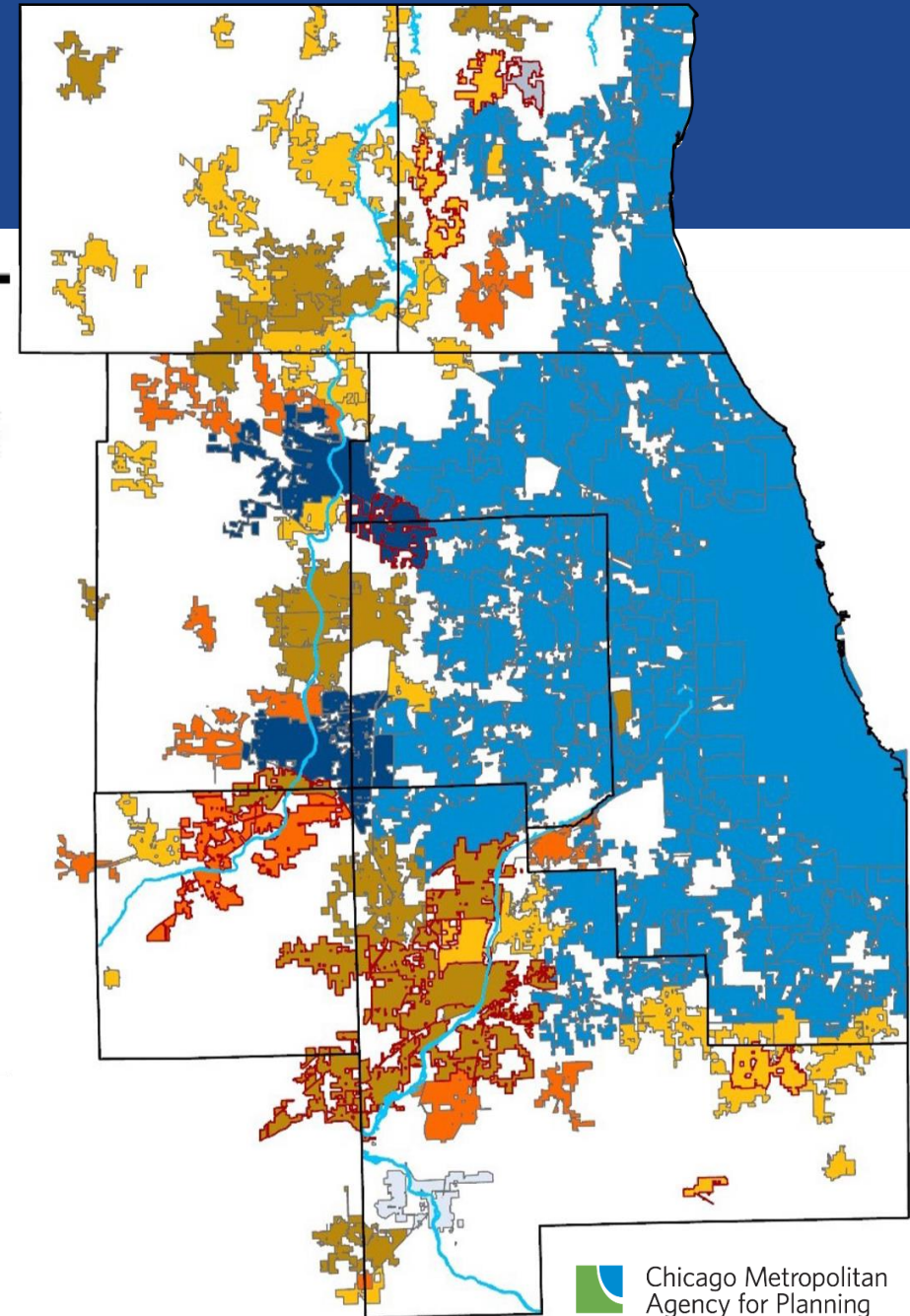
Source	2018 Total use, MGD	2050 Total use, MGD	% Change
Lake Michigan	804.0	768.1	-4.6%
Shallow GW	77.7	68.9	-12.8%
Deep GW	62.1	36.7	-69.2%
Other River	36.4	28.7	-26.8%
Fox River	16.9	16.0	-5.6%
Des Plaines R.	20.6	16.5	-24.9%
Kankakee R.	0.7	3.2	+78.1%

Municipal water sources

Future Source	Year	Municipalities
Lake Michigan	2020	Bartlett, Lake Villa, Lindenhurst, Volo, Wauconda
	2030	Channahon, Crest Hill, Joliet, Minooka, Oswego, Romeoville, Shorewood, Yorkville
	2035	Montgomery
Kankakee River	2020	University Park, Peotone

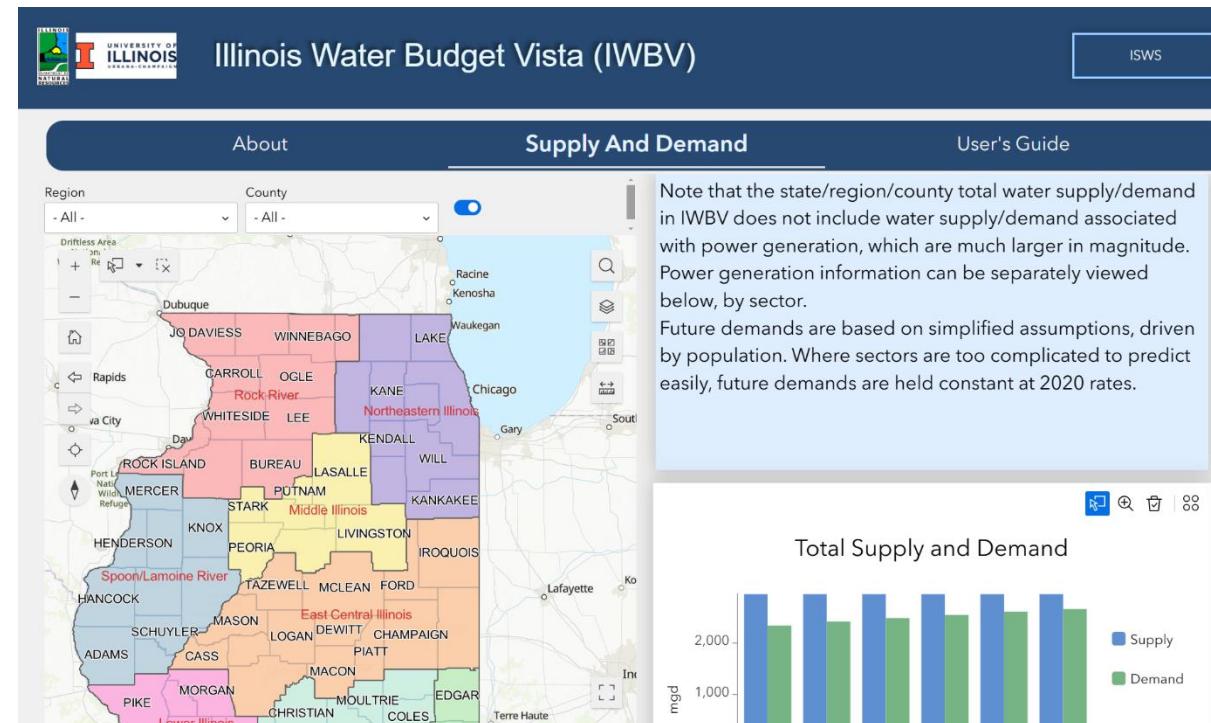
Municipal water sources, average source mix, 2013-2018

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



ISWS sustainable Supply estimates

- **Deep sandstone:** focuses on limiting desaturation. Calculated as the theoretical maximum water that can enter the aquifer via vertical leakage.
- **Shallow groundwater:** focuses on reducing impacts to aquatic ecology. Estimates are based on avoiding more than a 15% reduction in natural groundwater discharge to streams.

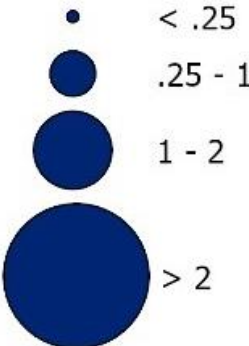


Distribution of shallow groundwater demand is not uniform

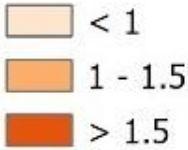
Resolution of the county comparison means we will not capture differences in conditions **within** counties.

Shallow groundwater, 2050

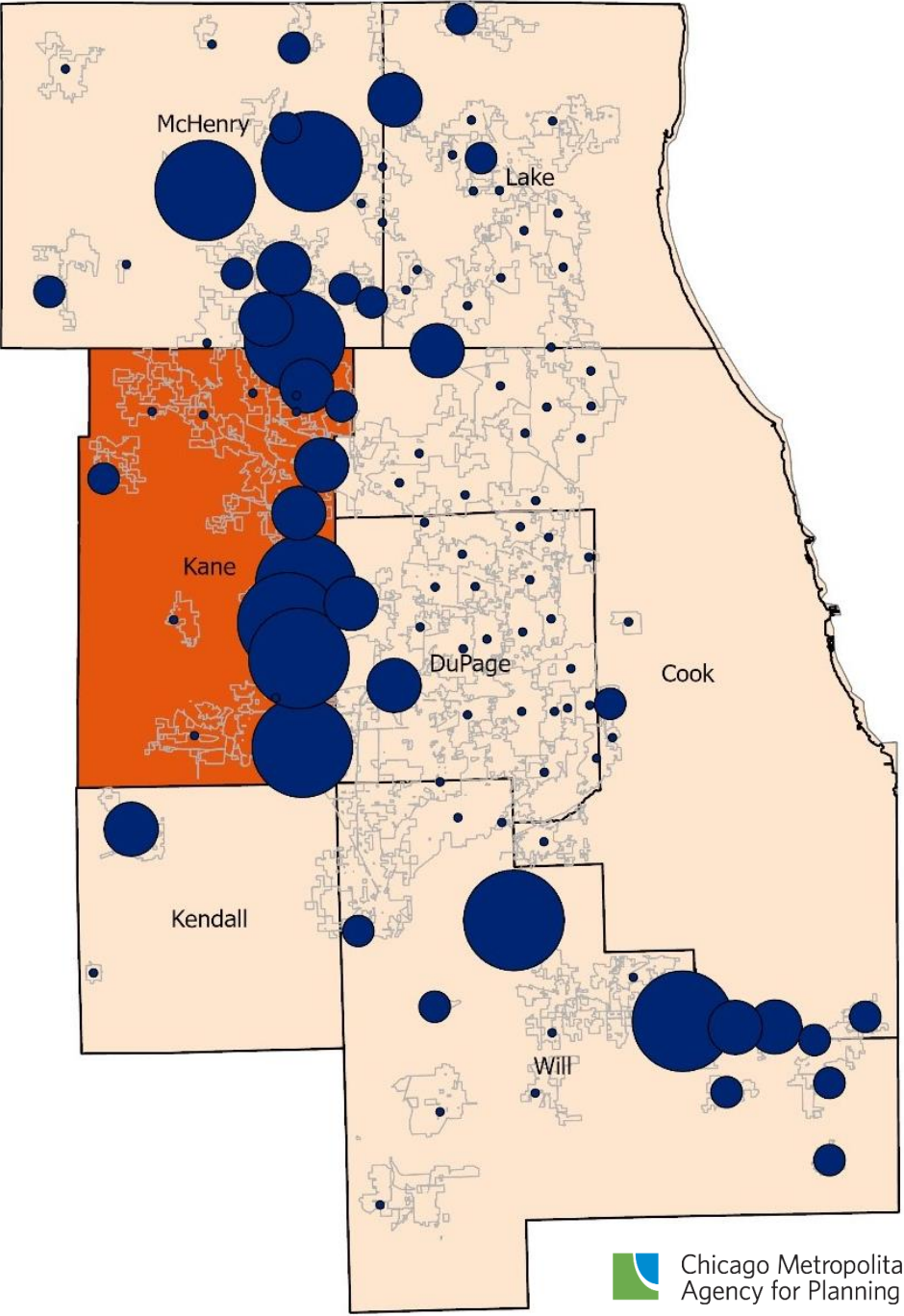
Municipal public water system demand



Demand-to-supply ratio



□ Municipality with shallow groundwater well

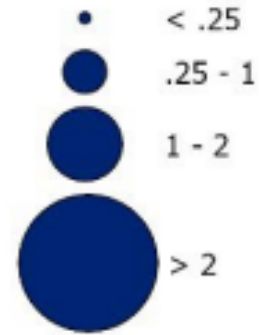


Distribution of sandstone groundwater demand is not uniform

Resolution of the county comparison means we will not capture differences in conditions **within** counties.

Sandstone groundwater, 2050

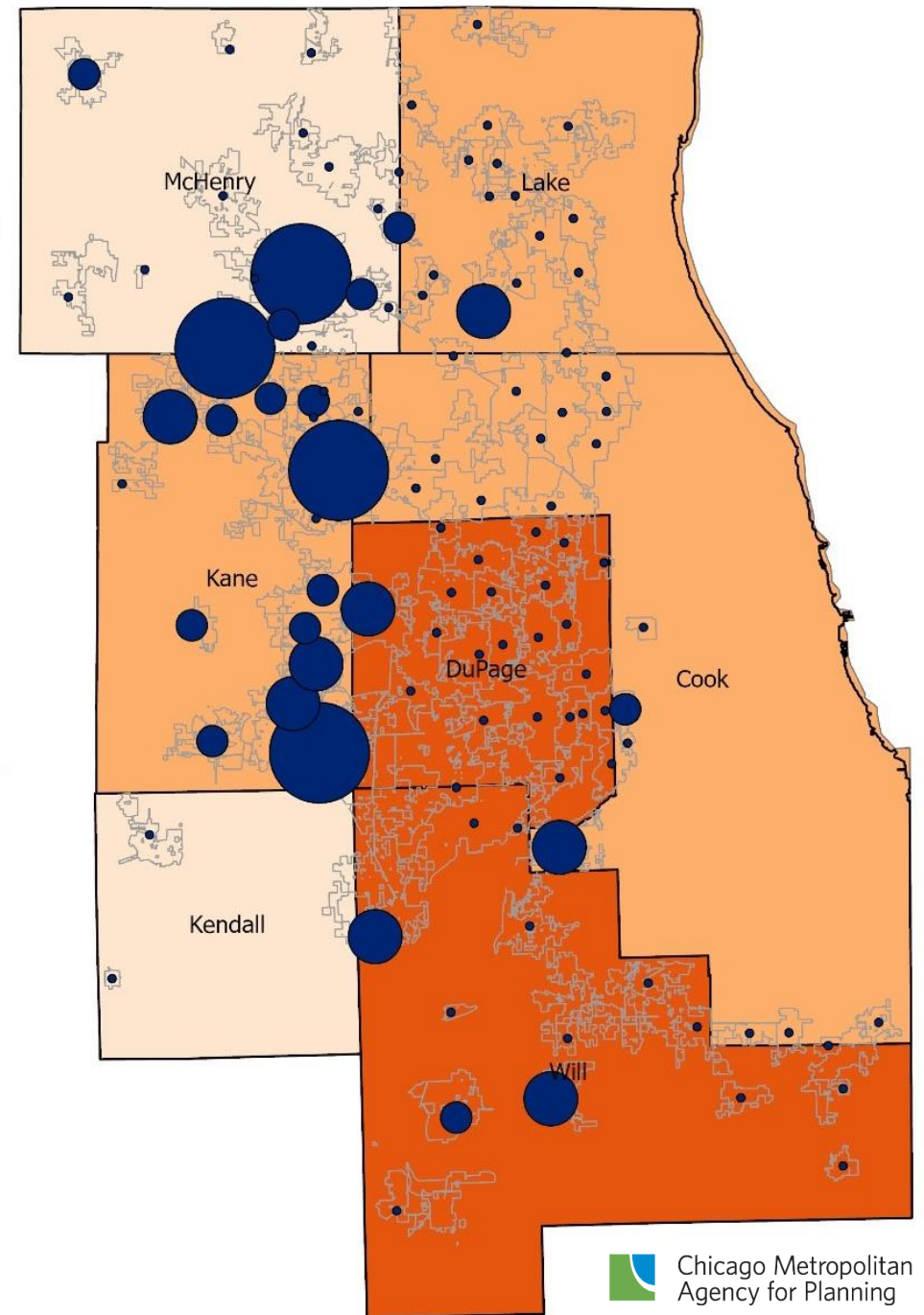
Municipal public water system demand



Demand-to-supply ratio



□ Municipality with sandstone groundwater well



Demand exceedances in shallow and sandstone sources by county, 2050

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

Data available on CMAP Datahub



Chicago Metropolitan Agency for Planning



New ▾

3

Milo ▾



Regional Water Demand Forecast for Northeastern Illinois, 2020-2050



Sean Connelly
Chicago Metropolitan Agency for Planning



Summary

Tables containing reported and projected water withdrawals at the region and county level. Part of the Regional Water Demand Forecast for Northeastern Illinois, 2020-2050.

Completed in 2024, this regional water demand forecast is for the seven-county CMAP region: Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will Counties. The forecast was created using public water supply, industrial, institutional, and commercial self-supply self-reported data to the Illinois Water Inventory Program.

[Download an Excel workbook](#) for a formatted version of this data.

For more information on the forecast results and methodology, see the Regional Water Demand Forecast for Northeastern Illinois, 2020-2050 (INSERT LINK HERE).

**All values are in Millions of Gallons per Day (MGD) unless otherwise noted.*

[Read Less](#) ^

<https://cmappik.maps.arcgis.com/home/item.html?id=181a1a2f719342eab04560f91c6b546b>

Details



Map
Feature Service



January 21, 2025
Date Updated



December 17, 2024
Published Date



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Metrics

Only showing data for the last 30 days

Forecast Limitations

Domestic self supply

CMAP Forecast: domestic self-supply sector within municipalities without PWS

USGS Forecast: domestic self-supply sector based on population not served by PWS

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

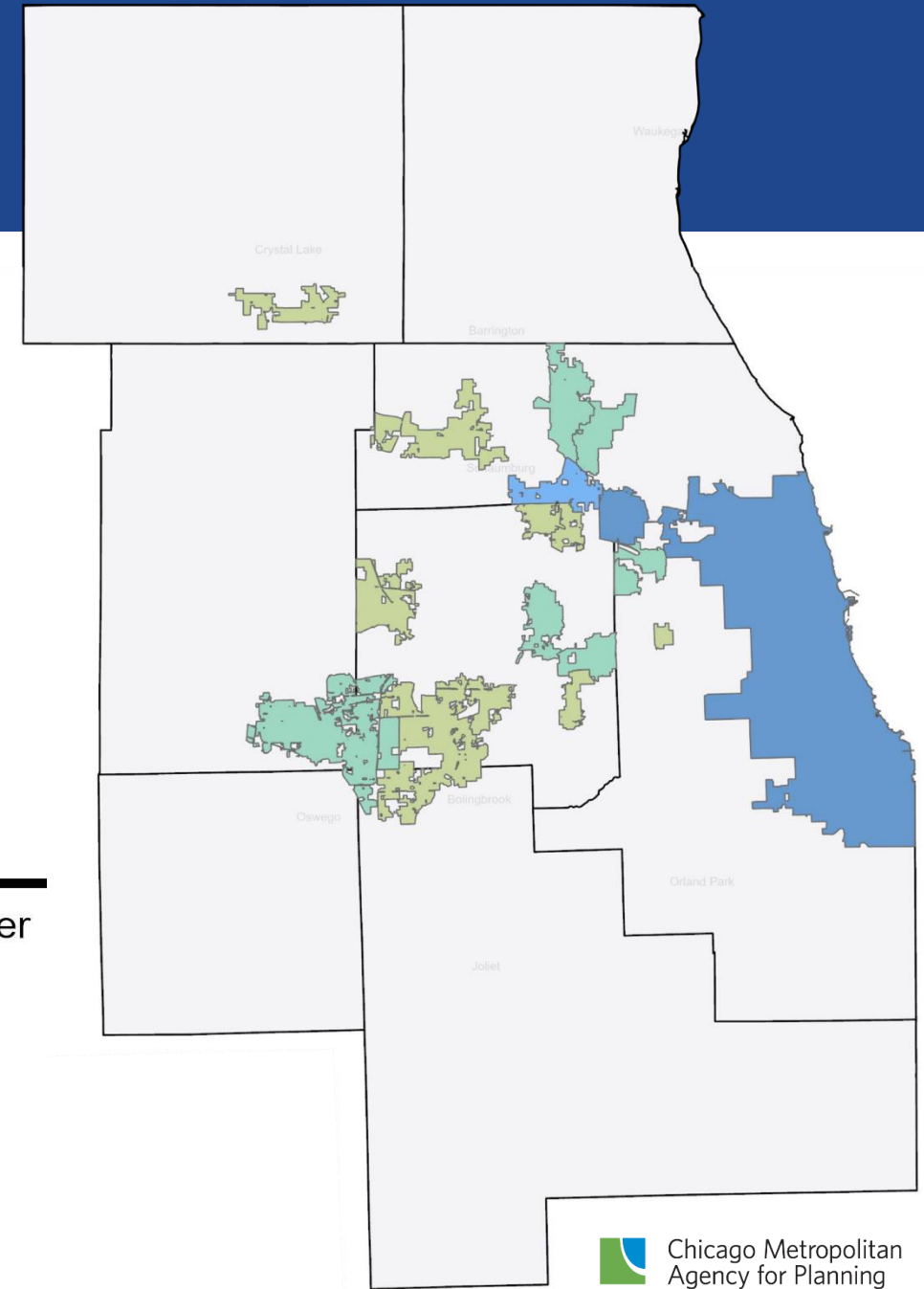
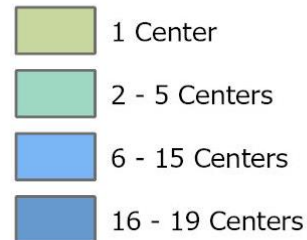
66 operational

13 planned centers

Water Sources

- Purchase water from municipal PWS
- Unknown self supply

Number of data centers per municipality, 2024





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