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Why include water in land use plans?

September 12, 2019

ON TO 2050

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Integrated approach to water resources
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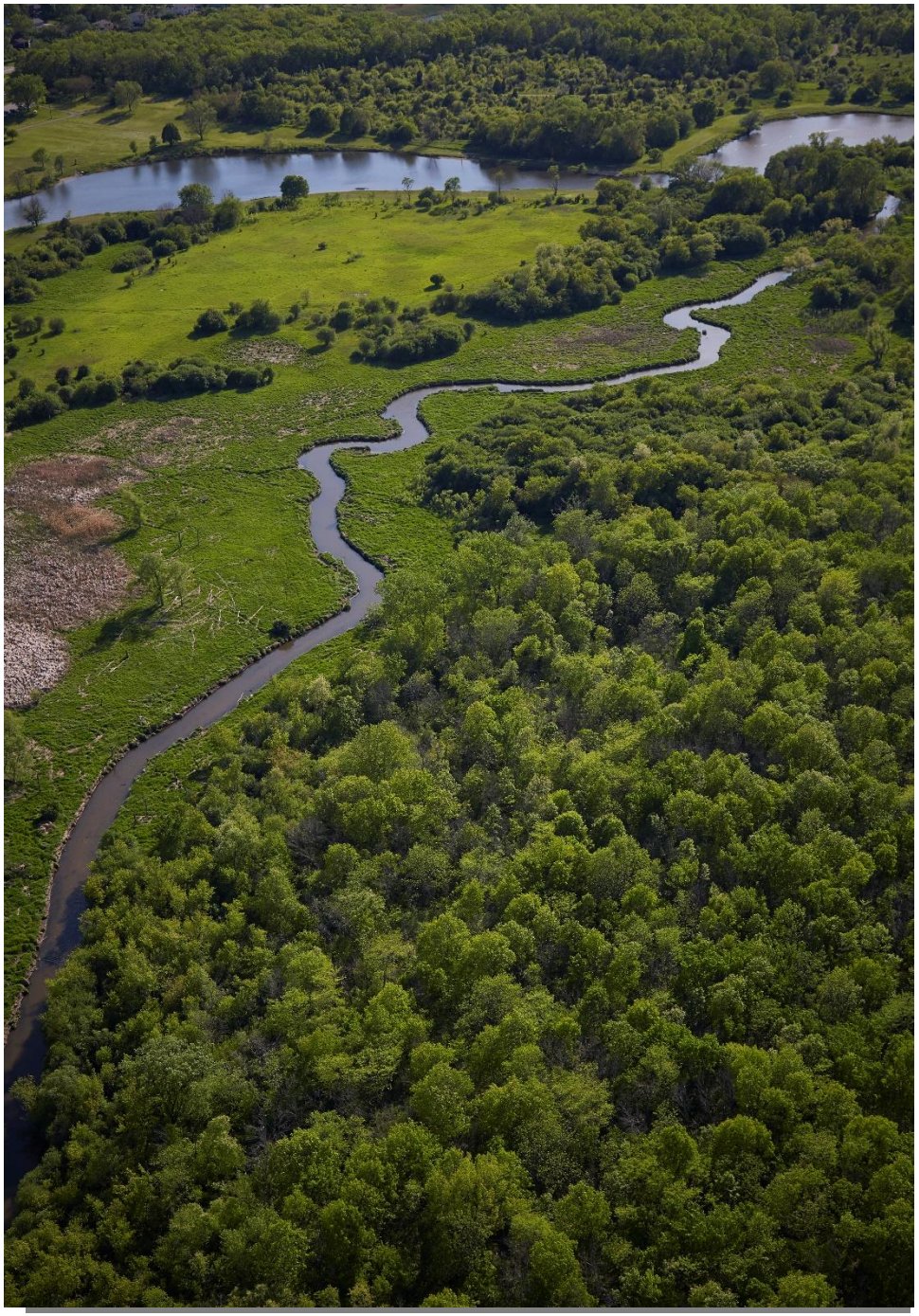
Incorporate water supply and demand considerations into local planning

How land use decisions impact water supply

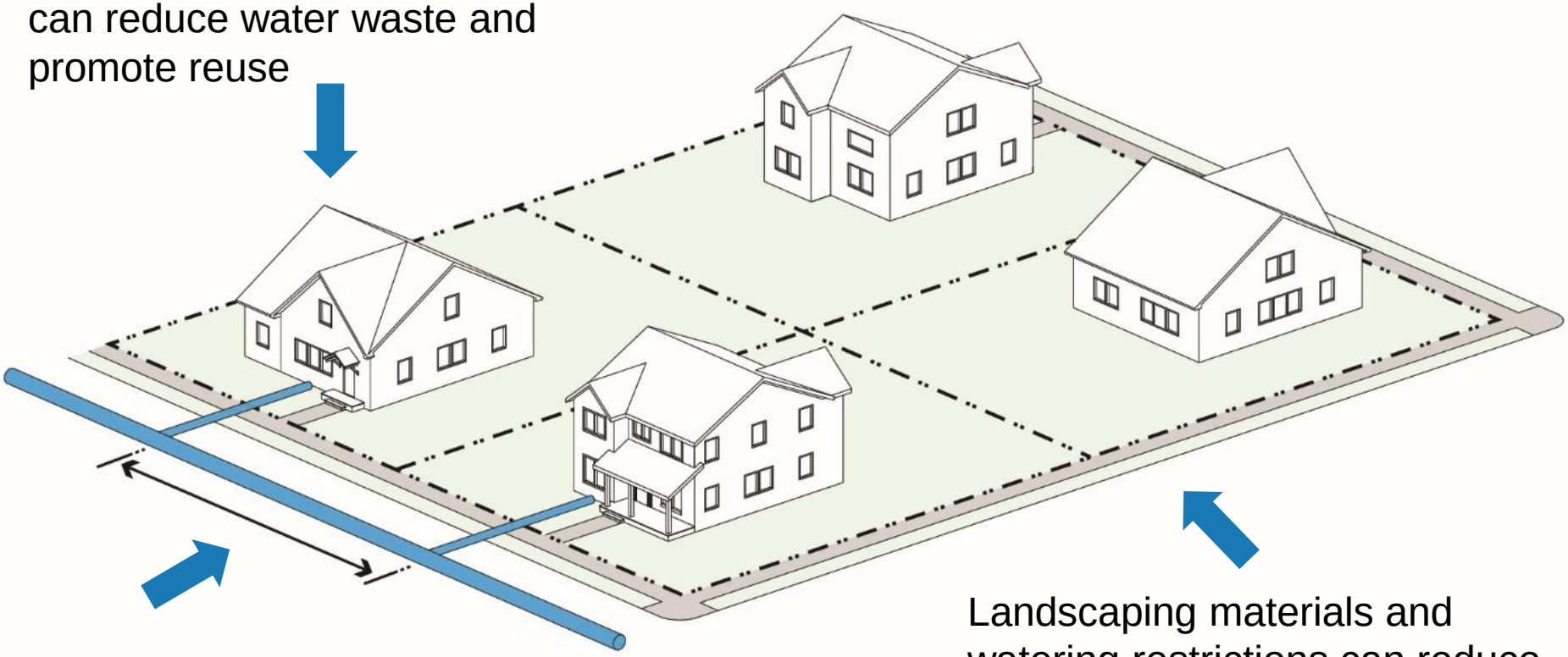
How land use decisions impact water supply

Protect the quantity and quality of drinking water sources



Reduce water use and infrastructure costs

Water efficient plumbing fixtures can reduce water waste and promote reuse



Compact development can minimize the amount of infrastructure needed per household

Landscaping materials and watering restrictions can reduce water use

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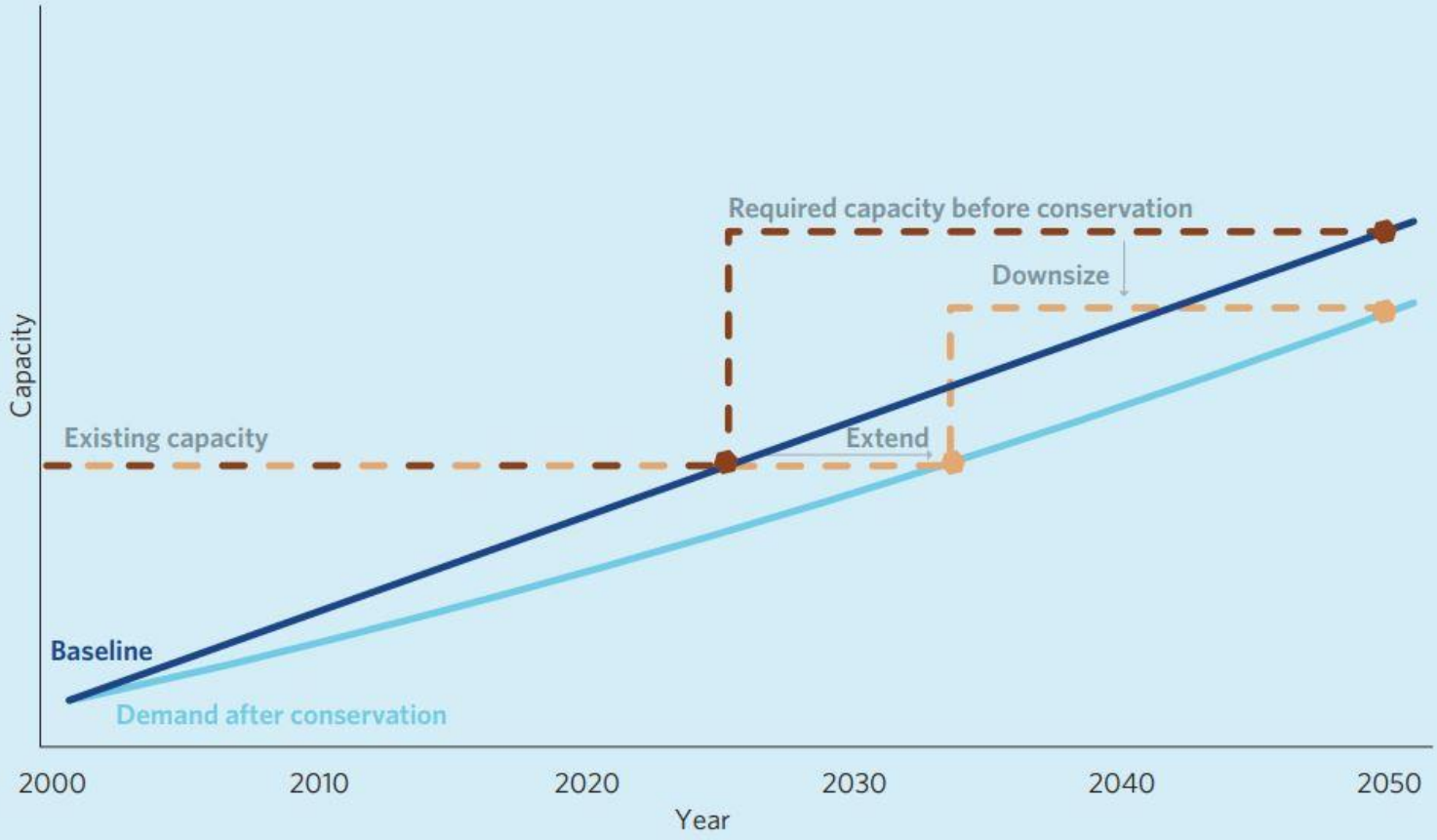
Conservation can delay and minimize expensive infrastructure investments

Example of extending or downsizing a capital facility, peak demand/capacity in million gallons per day

Source: American Water Works Association, 2006. Water Conservation Programs - A Planning Manual. AWWA Manual M52, First Edition, page 75.



Water demand by 2050 for the Chicago region

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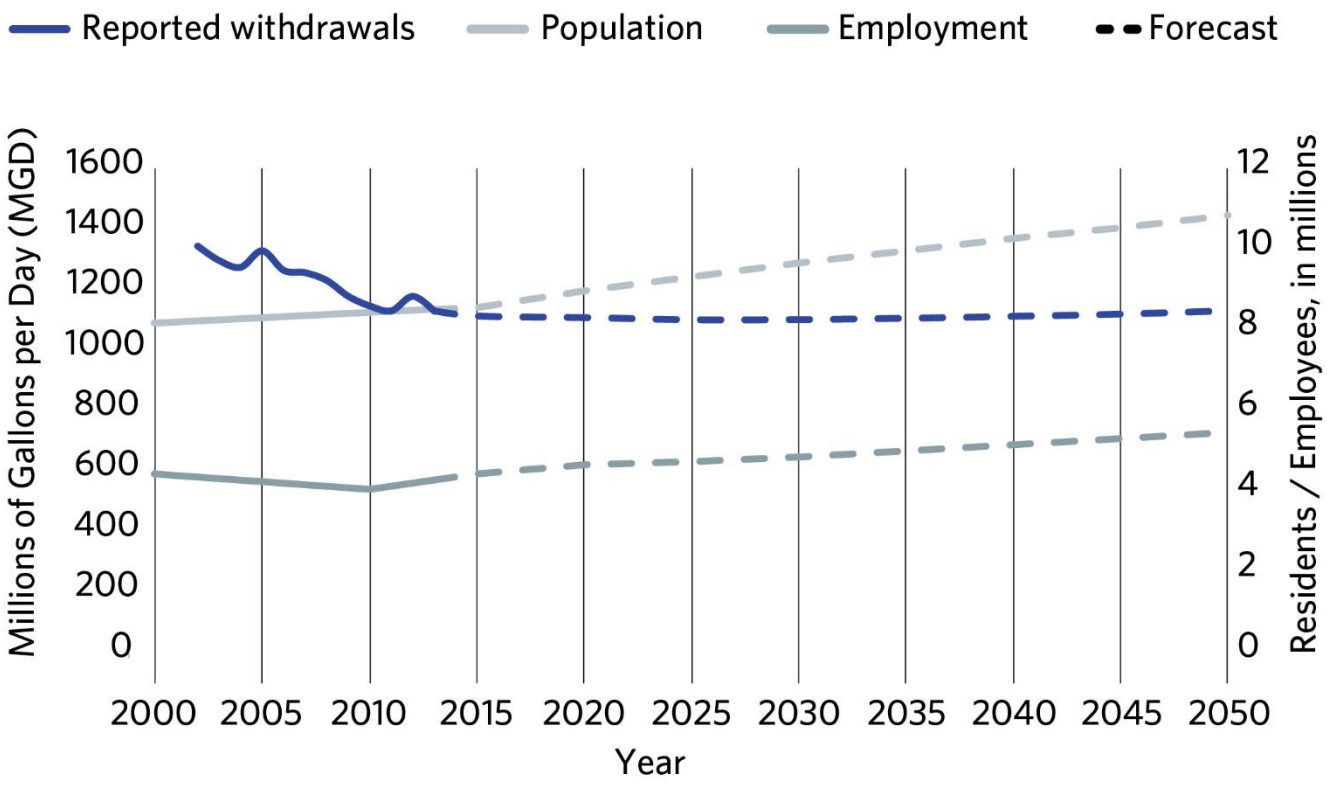
Regional demand for water by 2050

Regional Water Demand and Socioeconomic Forecast



Note: Private residential wells are not included.

Source: CMAP ON TO 2050 Regional Water Demand Forecast CMAP ON TO 2050 Socioeconomic Forecast.

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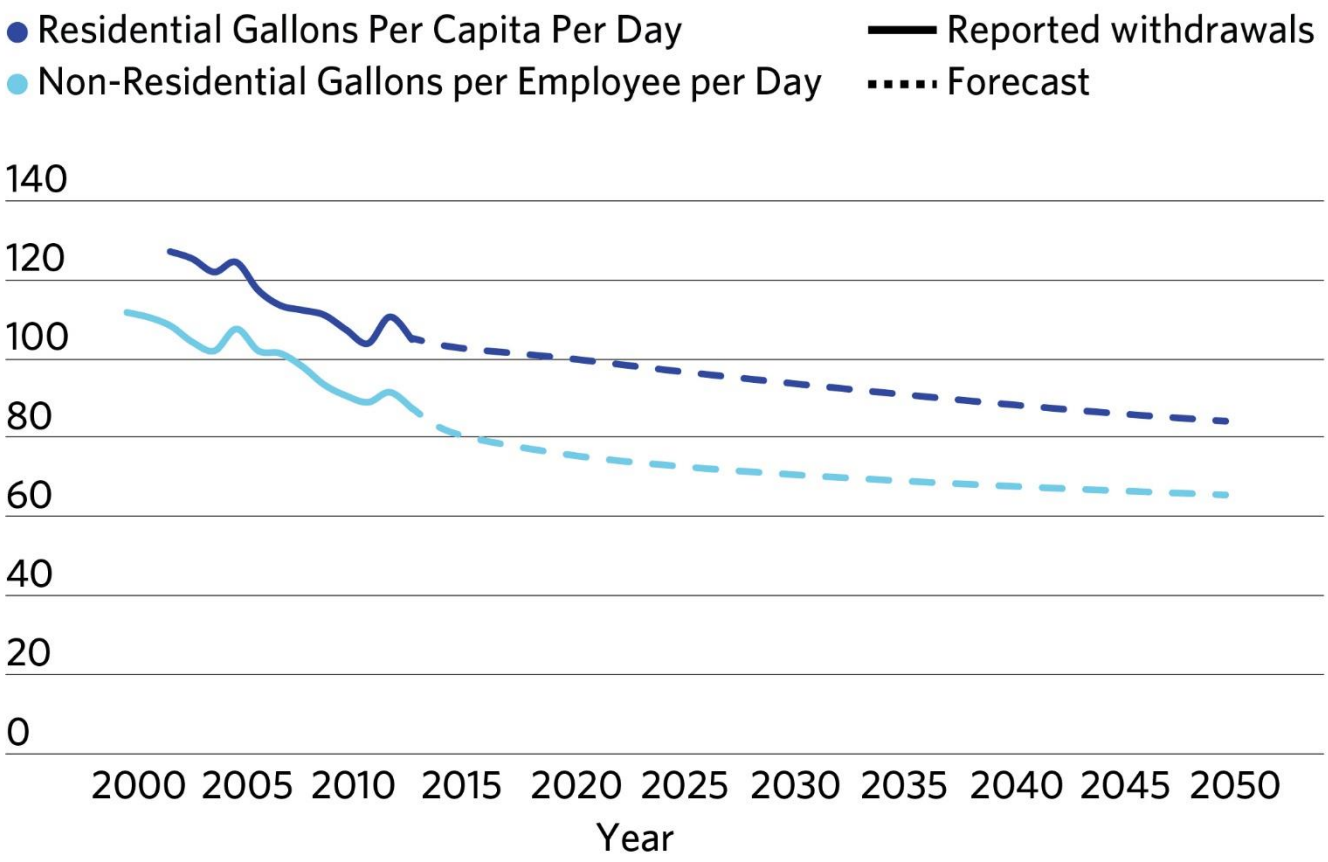
Conservation and efficiency continues

Daily per capita / employee water use by sector



Source: CMAP ON TO 2050 Regional Water Demand Forecast.

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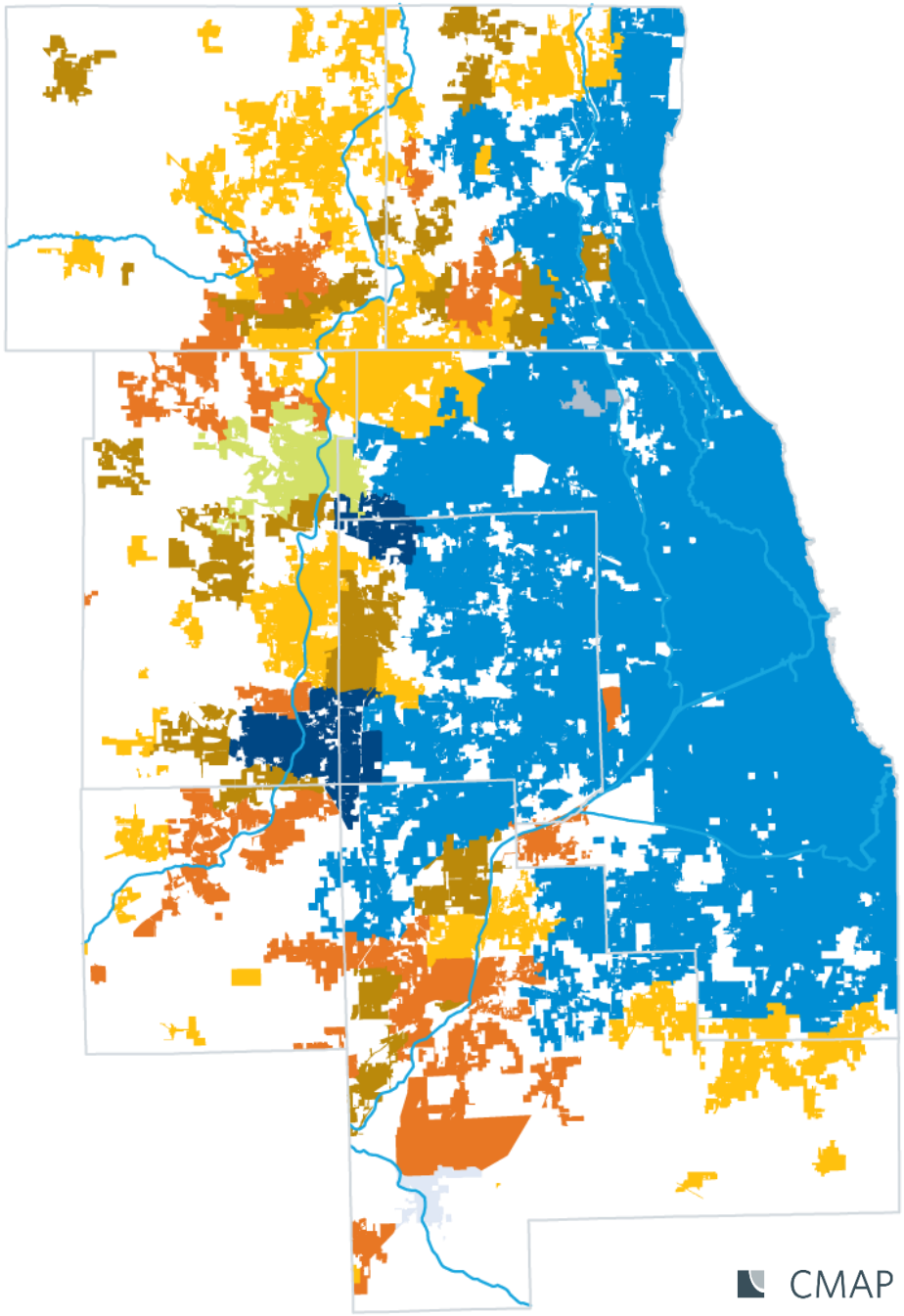
Water source by locale

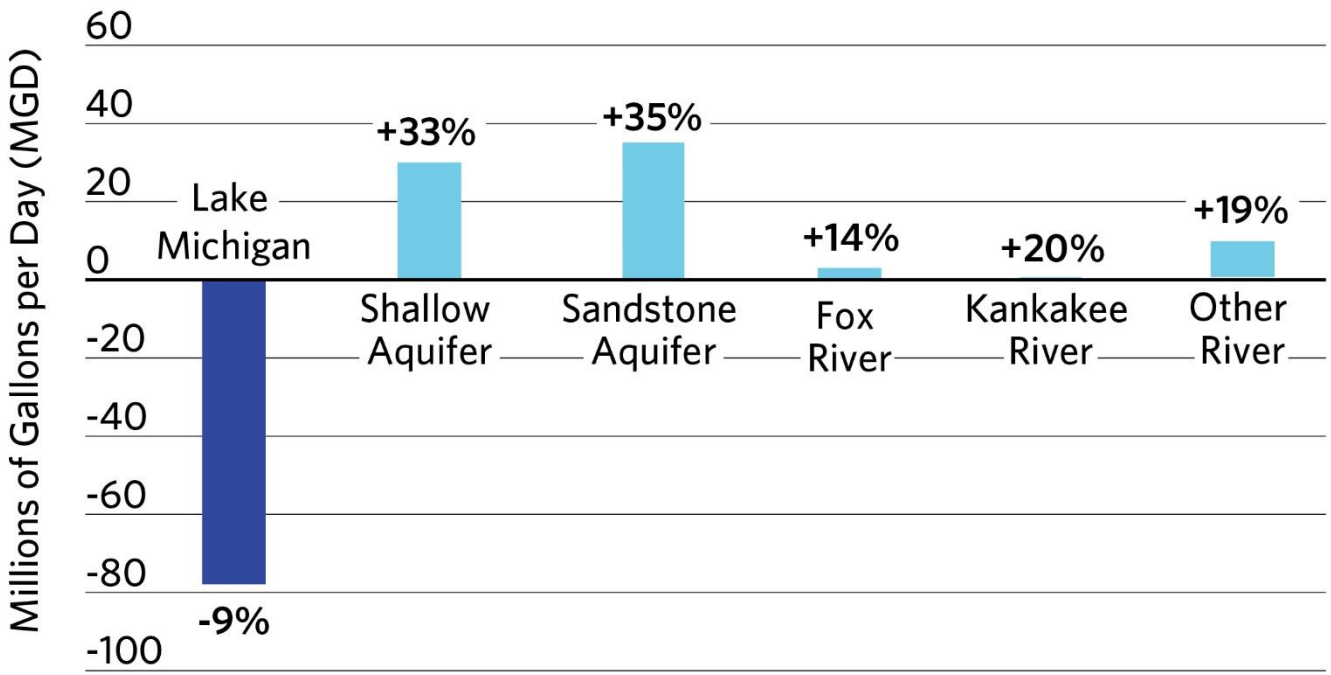
- Groundwater, shallow bedrock/glacial
- Groundwater, sandstone
- Mixed groundwater sources, shallow/sandstone
- Mixed sources, Fox River/groundwater
- Mixed sources, Lake Michigan/groundwater
- Surface water, Lake Michigan
- Surface water, Fox river
- Surface water, Kankakee River

Source: Illinois State Water Survey, 2014



Forecasted demand exceeds groundwater supplies

Projected changes in water demand by water source, 2011-50



Source: CMAP ON TO 2050 Regional Water Demand Forecast.

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Forecasted 2050 water demand for groundwater dependent municipalities

- Demand decreased between 2011-50
- Demand increased between 2011-50
- Surface water
- Groundwater

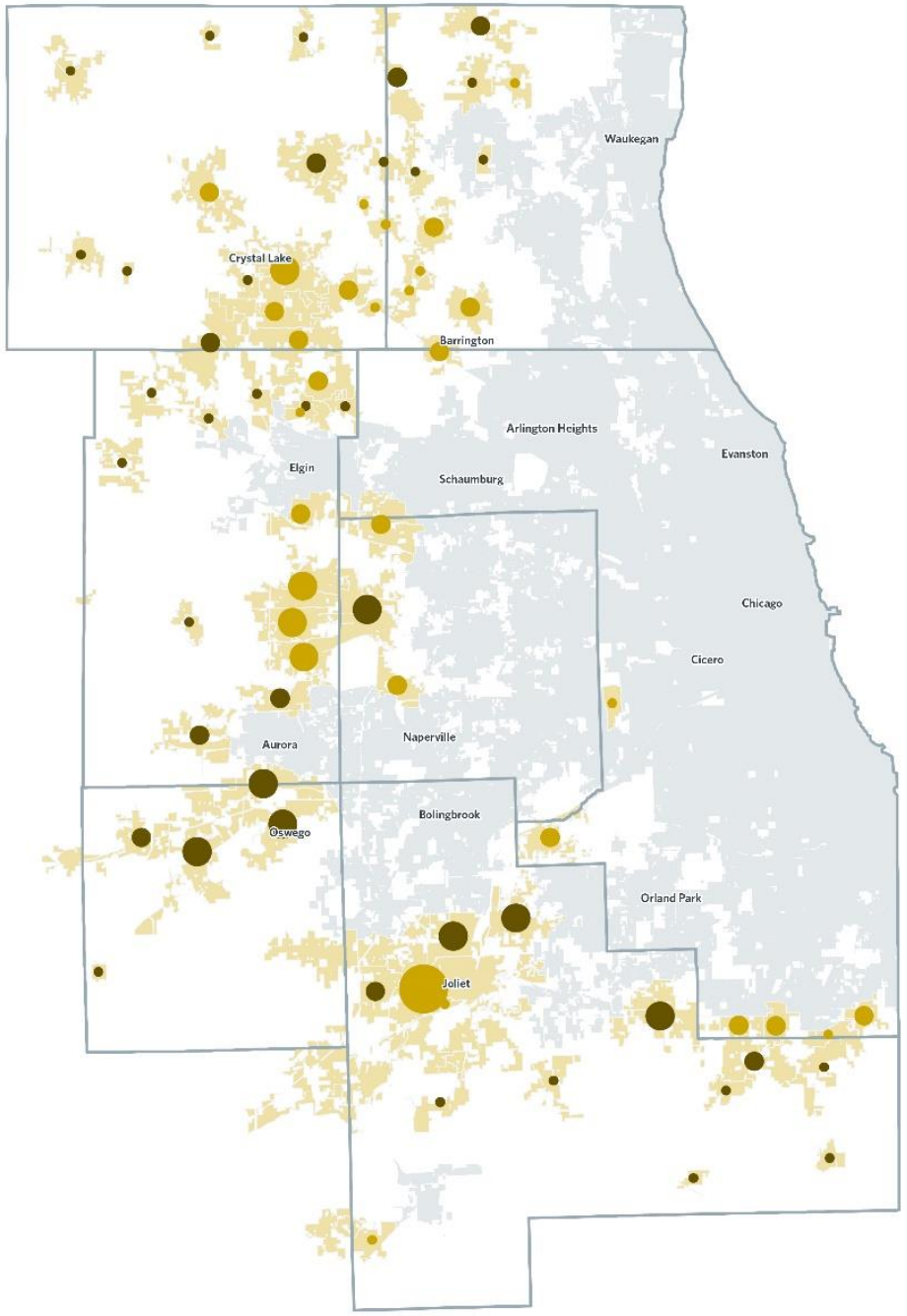
Demand (MGD)

0 to 1

1.1 to 3

3.1 to 5

5.1 to 20



Source: CMAP ON TO 2050 Regional Water Demand Forecast.

Projected change in demand for Lake Michigan and river dependent municipalities, 2011-50 (MGD)

- Demand decreased between 2011-50
- Demand increased between 2011-50
- Groundwater
- River
- Lake

Demand (MGD)

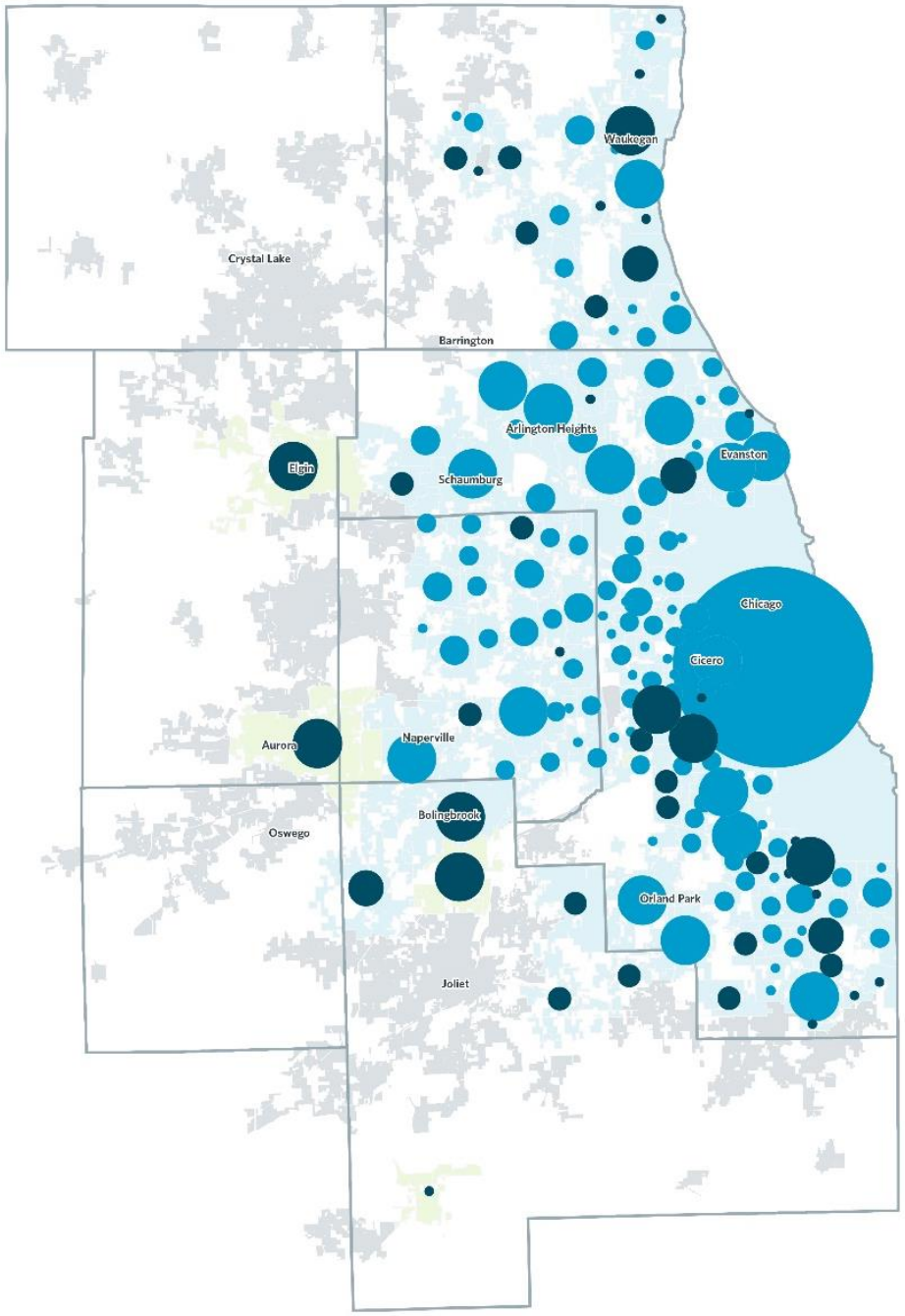
0 to 1

1.1 to 3

3.1 to 5

5.1 to 25

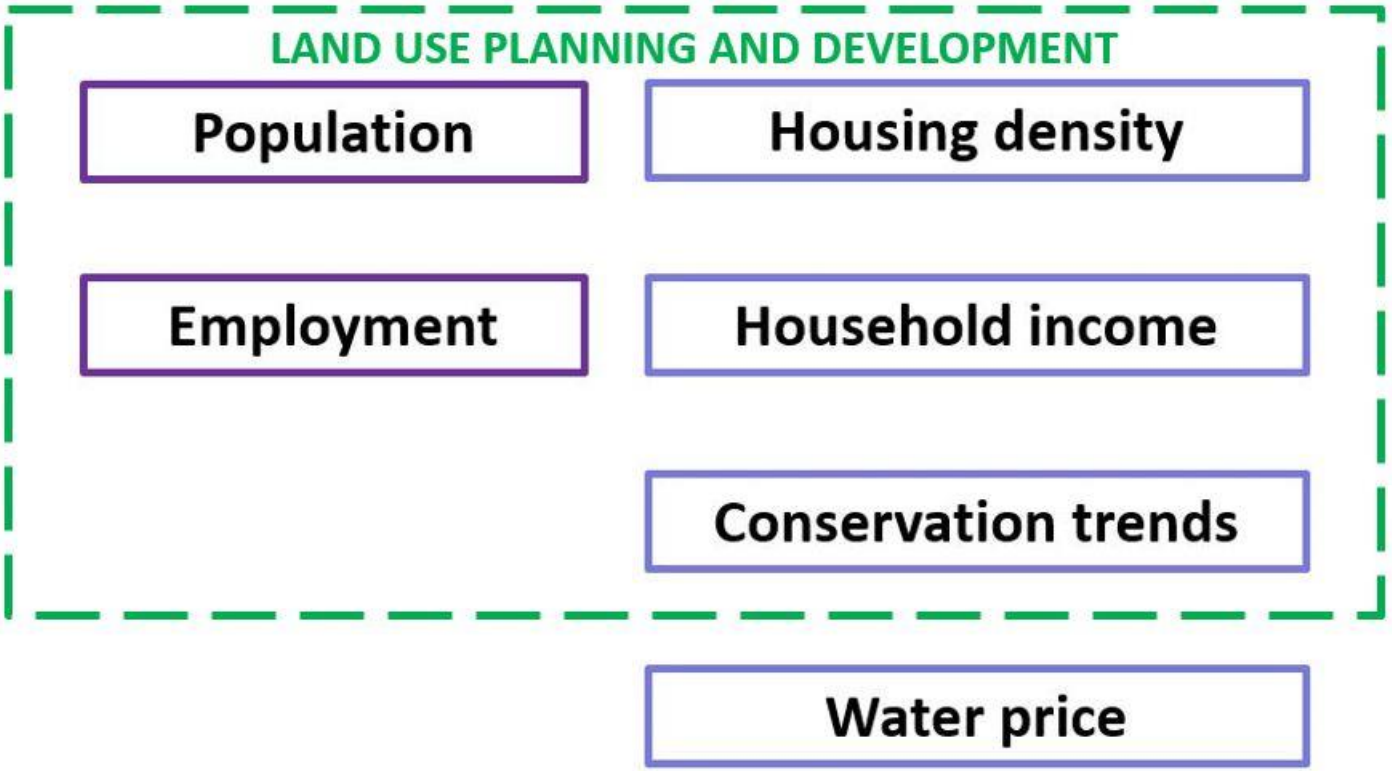
Largest symbol size (Chicago) represents 432 MGD



Factors of water demand

- Population
- Employment
- Housing density
- Household income
- Conservation trends
- Water price

Integrate water and land use decisions



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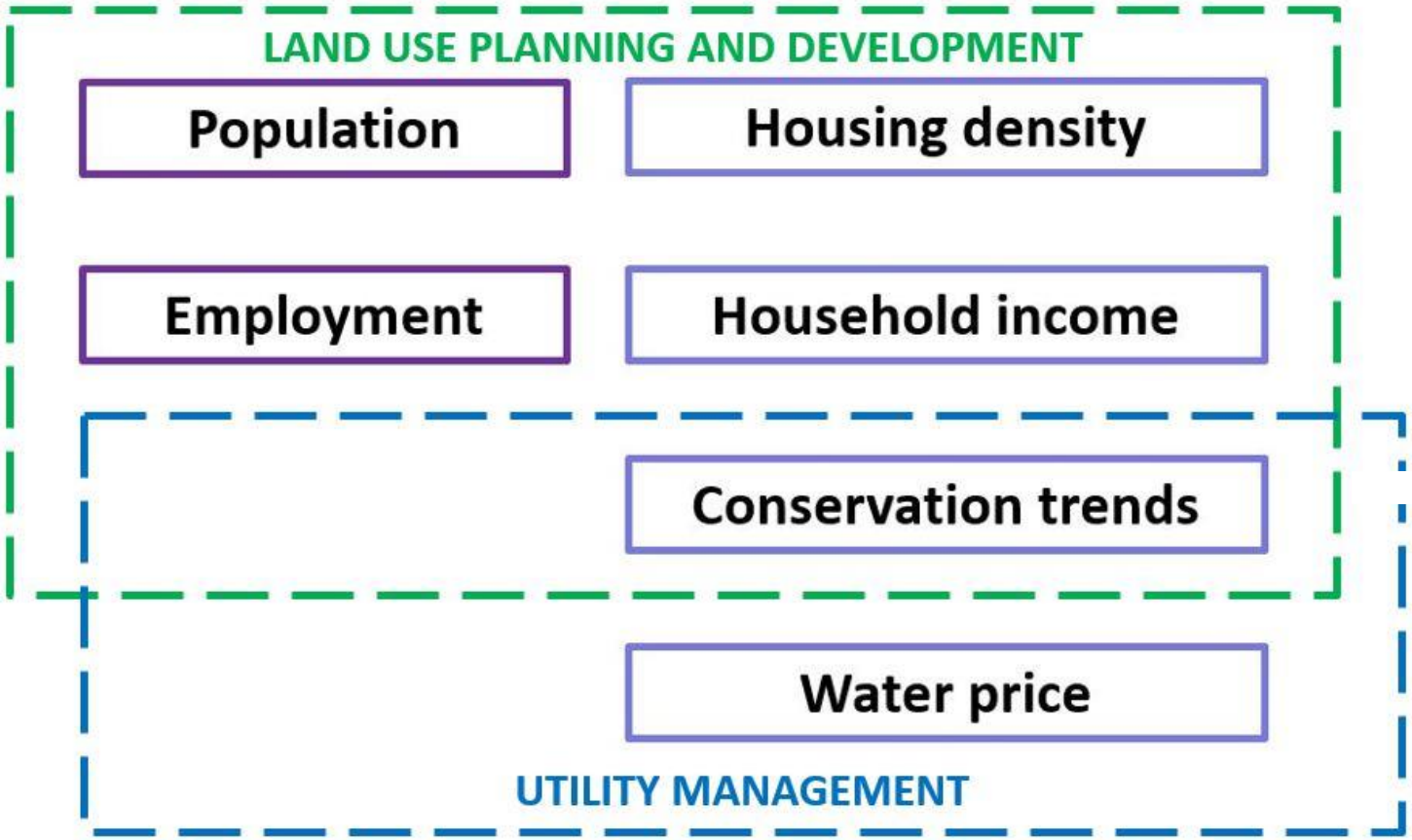
Integrate water and land use decisions



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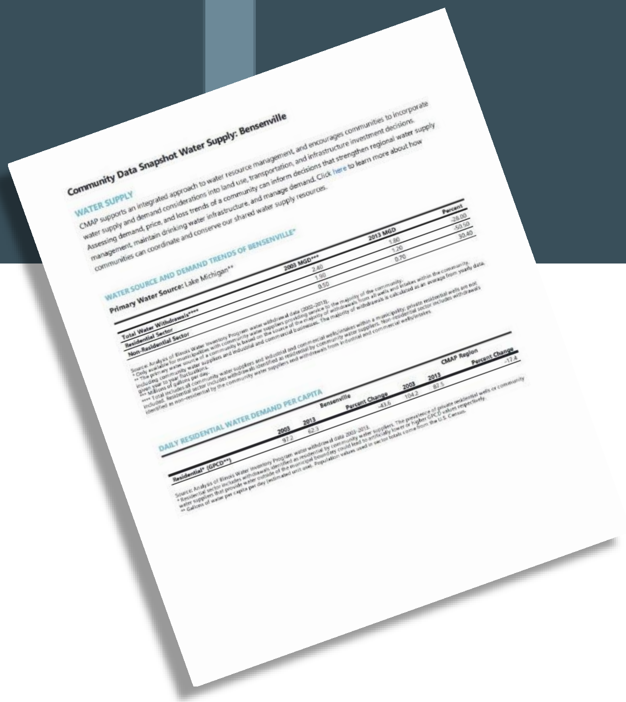
Available Resources

Community Data Snapshots


Community Data Snapshot Water Supply: Bensenville

WATER SUPPLY

CMAP supports an integrated approach to water resource management, and encourages communities to incorporate water supply and demand considerations into land use, transportation, and infrastructure investment decisions. Assessing demand, price, and loss trends of a community can inform decisions that strengthen regional water supply management, maintain drinking water infrastructure, and manage demand. Click here to learn more about how communities can coordinate and conserve our shared water supply resources.

WATER SOURCE AND DEMAND TRENDS OF BENSENVILLE*

Primary Water Source: Lake Michigan**

	2003 MGD***	2013 MGD	Percent
Total Water Withdrawals****	2.40	1.80	-28.00
Residential Sector	1.90	1.20	-50.50
Non-Residential Sector	0.50	0.70	30.40

DAILY RESIDENTIAL WATER DEMAND PER CAPITA

	Bensenville			CMAP Region		
	2003	2013	Percent Change	2003	2013	Percent Change
Residential* (GPCD**)	97.2	62.3	-43.6	104.2	87.5	-17.4

www.cmap.illinois.gov/data

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Changing water demand:
Projecting water use in the Chicago region to 2050

Download data at

www.cmap.illinois.gov

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CMAP's Planning Program

CALL FOR PROJECTS

Community Planning and Partnership Programs

September 17 – October 17

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SMALL PLANS, BIG IDEAS

ON TO 2050 Forum Series

www.cmap.illinois.gov/2050/forums

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