rethink water JOLIET

VIRTUAL STAKEHOLDER MEETING

June 17, 2021
1:00 pm to 2:30 pm

Welcome

rethink water JOLIET

Brian Kazyak
Stantec

Allison Swisher
City of Joliet

Joe Johnson
Stantec

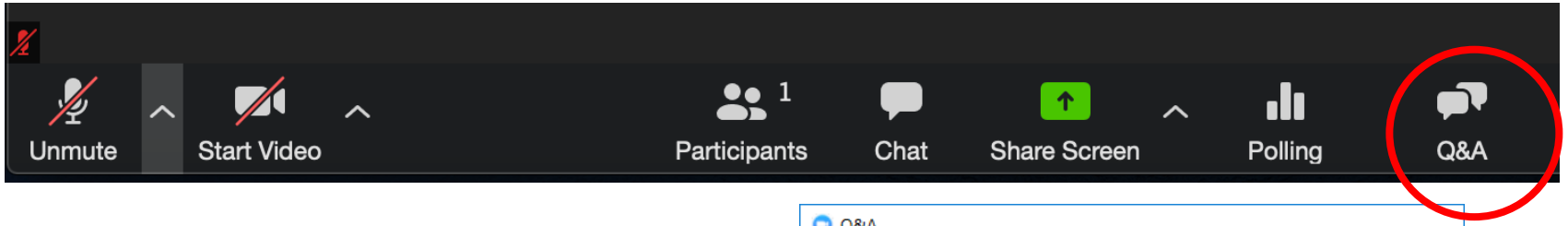
Theresa O'Grady
Crawford, Murphy & Tilly (CMT)

VIRTUAL STAKEHOLDER MEETING

June 17, 2021 1:00 to 2:30 PM

QUESTION & ANSWER SESSION

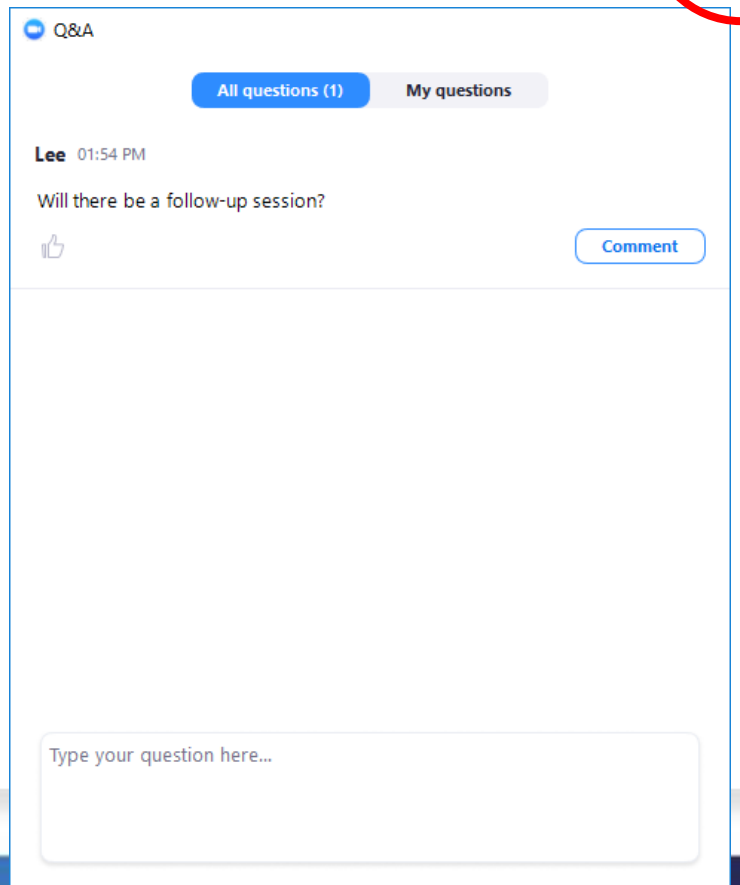
How to Ask a Question



Please use the Q&A functionality in Zoom instead of chat.

The Q&A window can be used to ask questions of the panelist(s). The questions will be reviewed by a moderator.

Your questions may then be answered live, in discussion or via the Q&A window.



MEETING **AGENDA**

- 1:00 pm to 1:05 pm — **Welcome, Introductions, Meeting Ground Rules** – Brian Kazyak, Stantec
- 1:05 pm to 1:15 pm — **Alternative Water Source Program (AWSP) Update** – Allison Swisher, City of Joliet
- 1:15 pm to 1:25 pm — **Joliet Lake Michigan Allocation Update** – Allison Swisher, City of Joliet
- 1:25 pm to 1:45 pm — **Regional Coordination/Water Commission Formation** – Theresa O'Grady, CMT
- 1:45 pm to 1:55 pm — **AWSP Funding and Affordability Strategies** – Joe Johnson, Stantec
- 2:55 pm to 2:10 pm — **AWSP Public Outreach Strategy** – Allison Swisher, City of Joliet
- 2:10 pm to 2:30 pm — **Questions & Answers Panel** – Moderator – Brian Kazyak, Stantec;
  Panelists - Allison Swisher, City of Joliet; Joe Johnson, Stantec; Theresa O'Grady, CMT

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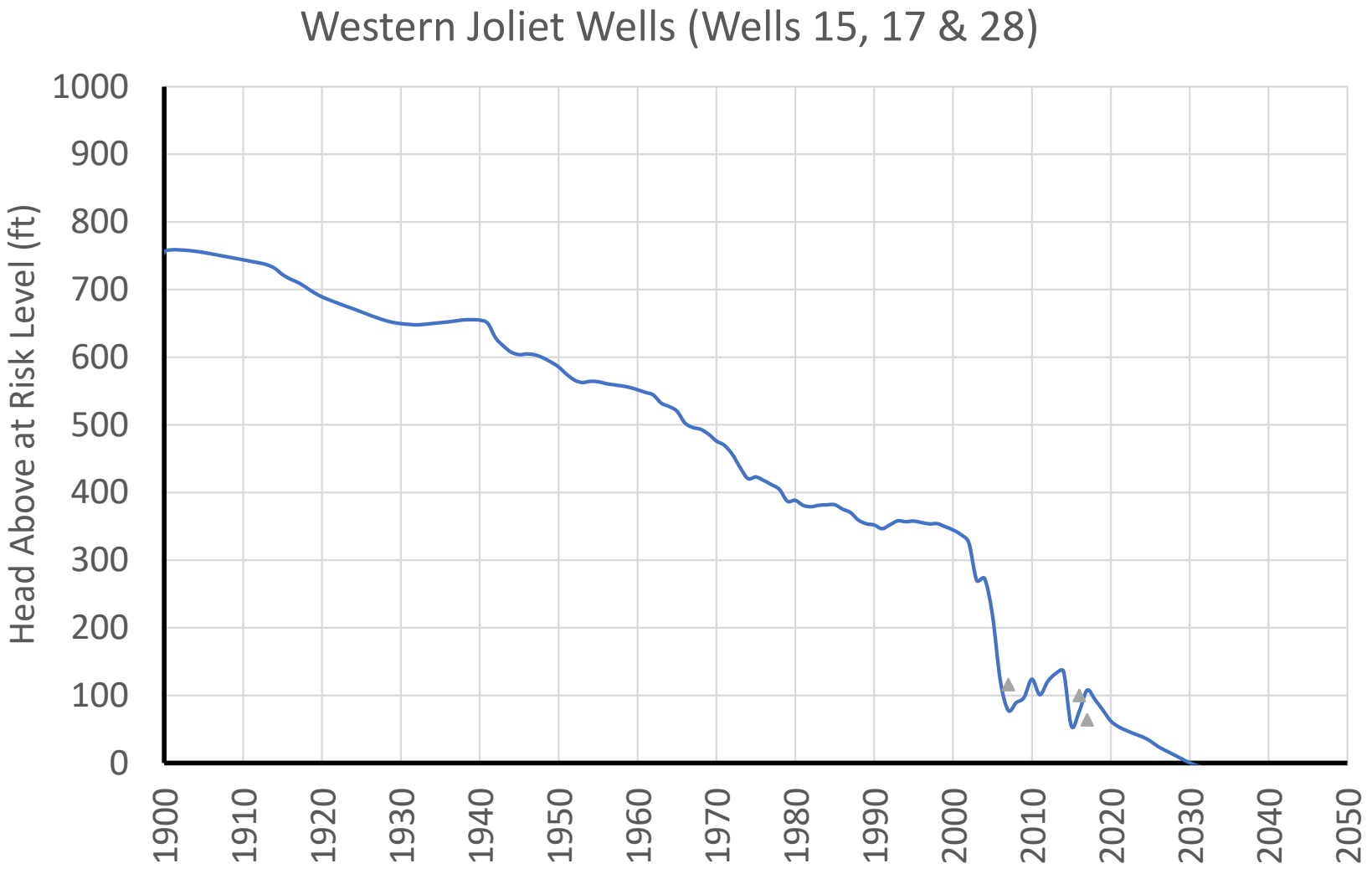
Alternative Water Source Program (AWSP) Update

Allison Swisher, City of Joliet

CURRENT **PROBLEM**

Groundwater modeling completed by ISWS in Fall 2018, and updated in Spring 2020, found that at current usage rates **the City's existing water source, the deep sandstone aquifer, will not meet maximum day demands by 2030.**



STUDY **HISTORY**

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PHASE I:

2018

Phase I Report

AUG 2018 – JAN 2019

- Evaluation of **14 water source alternatives**
- Evaluation Criteria
  - **Quality**
  - **Quantity**

PHASE II:

2019

Phase II Report

FEB 2019 – JAN 2020

Further evaluation of **5 water source alternatives** for 30 MGD and 60 MGD Demand Scenarios

2020 EVALUATION:

2020

Prospectus Documents
Basis of Design Report
Comparison Document

APRIL 2020 – JAN 2021

Further evaluation of **2 water source alternatives** for 30 MGD and 60 MGD Demand Scenarios

1. **LAKE MICHIGAN**
   Chicago Department of Water Management
2. **LAKE MICHIGAN**
   New Indiana Intake

JOLIET CITY COUNCIL **DECISION**

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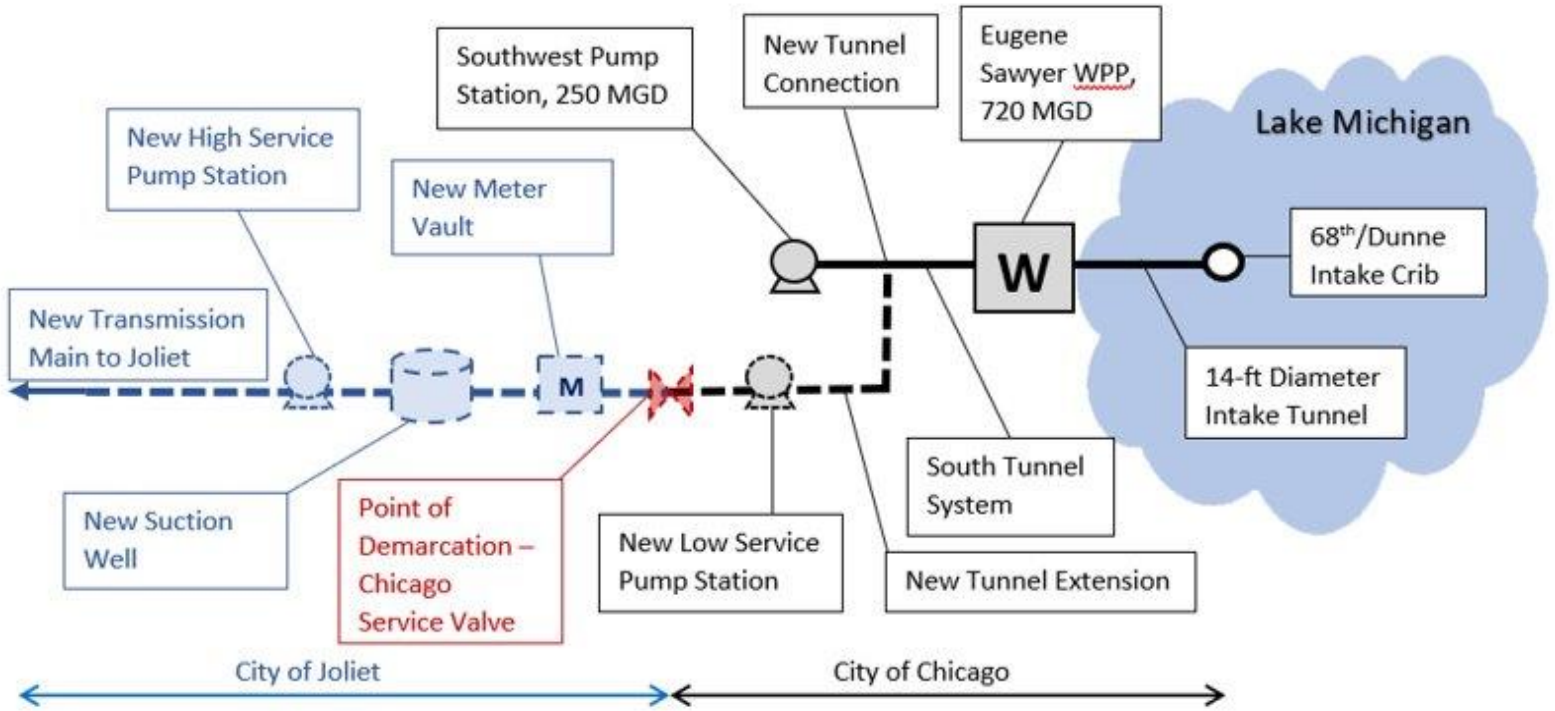
JANUARY 28, 2021

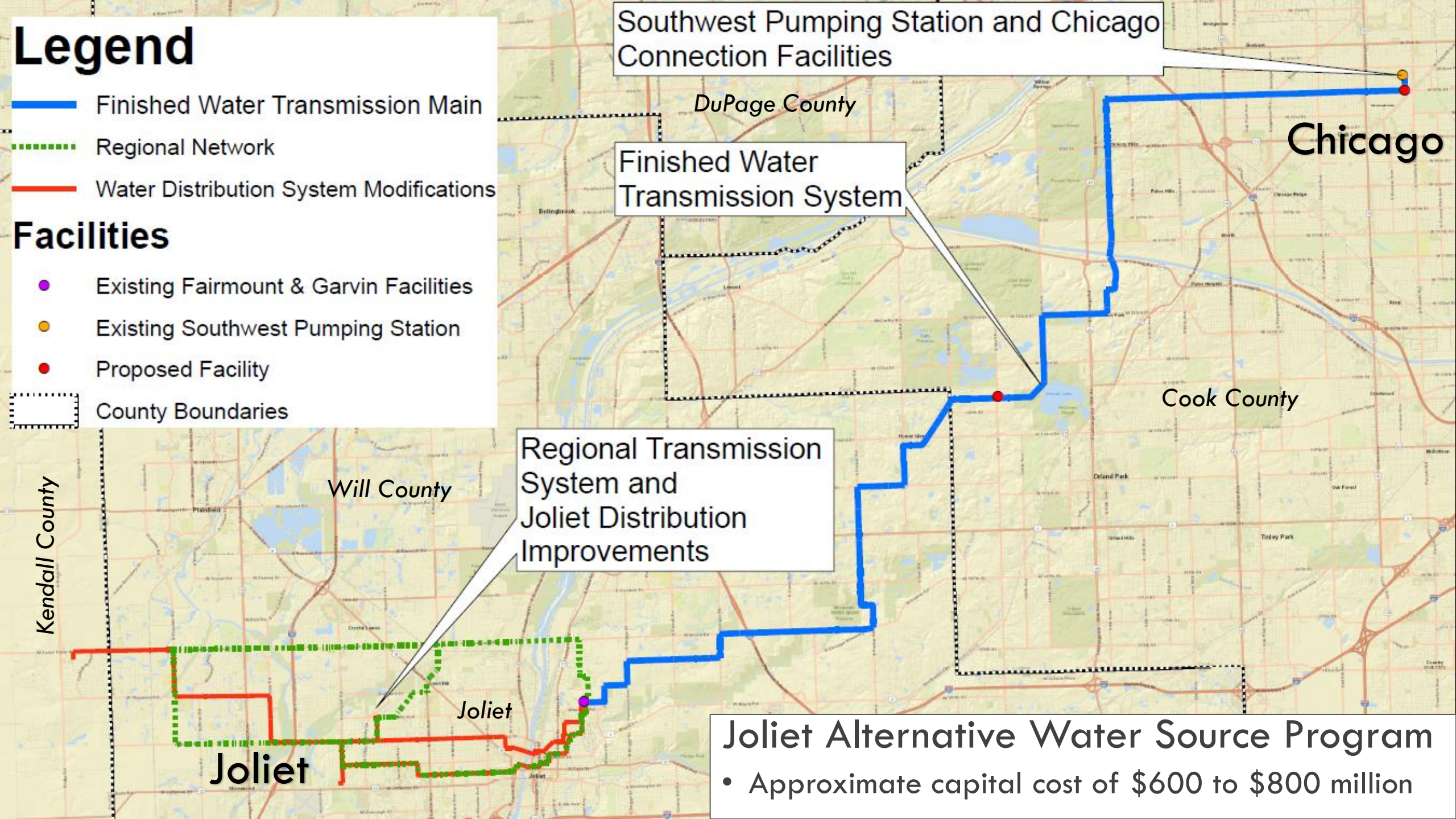
SELECTION OF NEW WATER SOURCE ALTERNATIVE

- ✓ Purchasing treated water from the City of Chicago and pumping ~31 miles to the City of Joliet for distribution

PROGRAM HIGHLIGHTS

- Purchase treated Lake Michigan water from City of Chicago
- Pump treated water approximately 30 miles to Joliet area
- Distribute treated water throughout Joliet distribution system

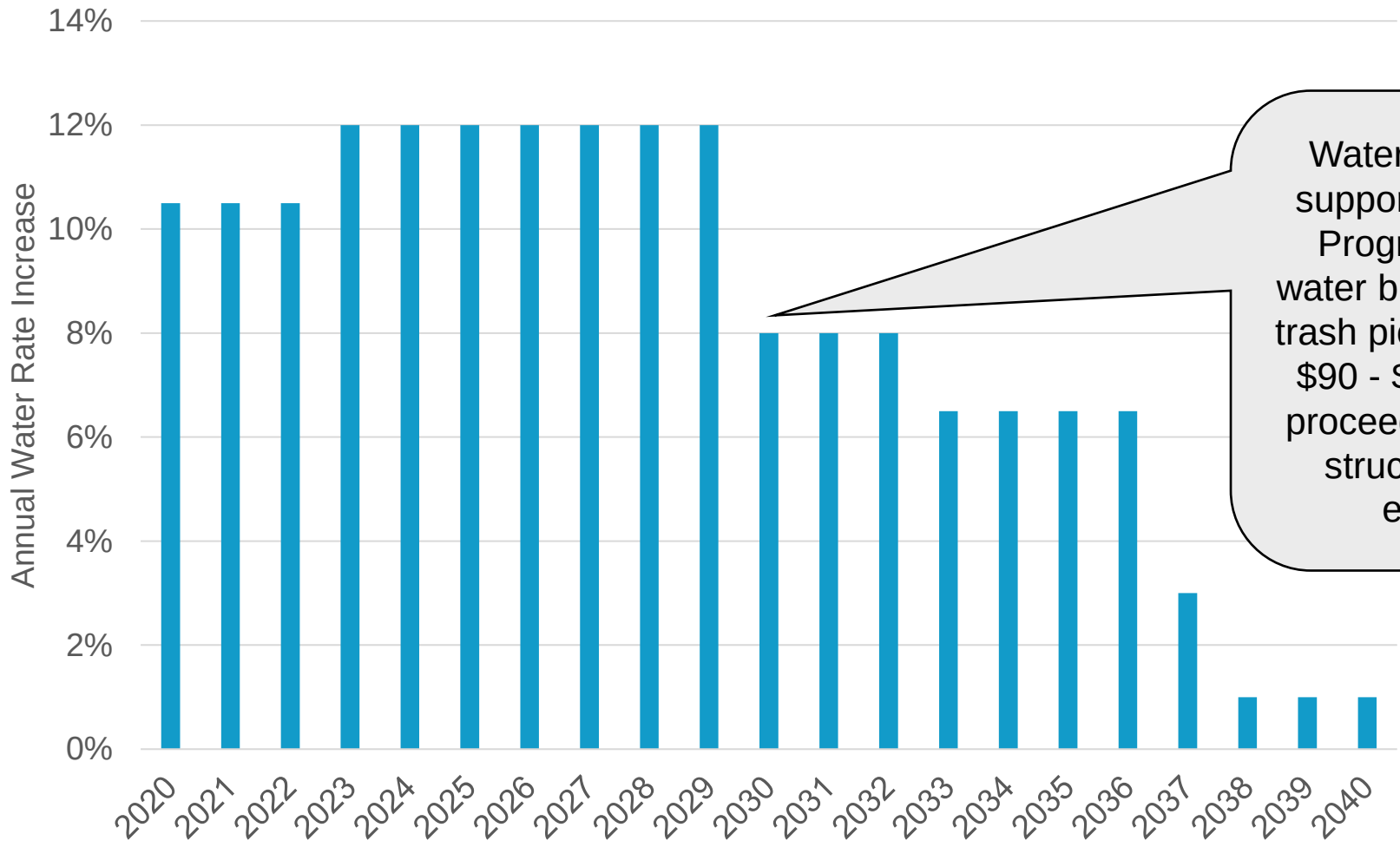




Joliet Alternative Water Source Program

- Approximate capital cost of $600 to $800 million

IMPACT TO **WATER RATES**

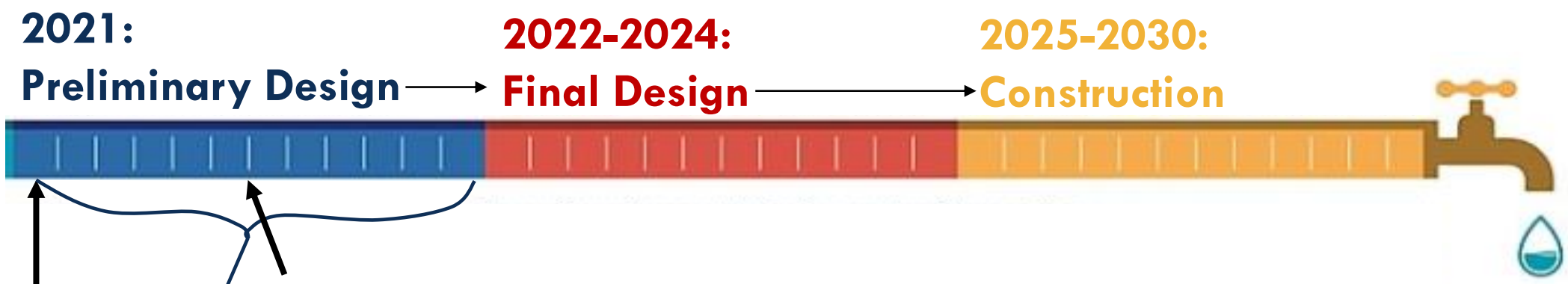


Water rates will need to increase to support the Alternative Water Source Program. A 2021 average monthly water bill of $34 (not including sewer or trash pickup) is projected to increase to $90 - $93 per month by 2030 if Joliet proceeds on its own. Under a regional structure, the 2030 average bill is estimated to be $75 - $79.

BENEFITS OF CHICAGO WATER

- Chicago is an **established water supplier** with **high quality** source
- The new treated Lake Michigan Water supply will have a more aesthetically pleasing water quality, with **lower hardness** and less potential for scaling of water fixtures
- For water customers that have **home water softeners,** these will **no longer be necessary**
- Cost of purchased water includes **rate caps** and is based on **cost-of-service methodology** which means Joliet is only paying for facilities and their associated O&M required to supply water to Joliet.
- Chicago's proposed **Advisory Council** offers Joliet the opportunity to provide meaningful input
- Improvements can be completed in time to allow for new water source to be **online by 2030**

PROGRAM **SCHEDULE**



STRATEGIC PLAN

- The **Vision Statement** for the Alternative Water Source Program is:

  To be recognized by our customers, employees, elected officials, regulatory agencies, regional partners and the water industry as a leader in providing sustainable, reliable and high-quality water in an innovative and efficient manner for our community.

- The **Mission Statement** for the Alternative Water Source Program is:

  *To provide a **sustainable, reliable** and **high-quality water** supply for Joliet and potentially the region **by 2030** in order to support the public health, safety and economic interests of the community.*

PROGRAM TEAM

- We have a **team of experts** working on the implementation of the Alternative Water Source Program (Preliminary Design, Final Design, Construction and Start-up/Commissioning)
- Core members of the Team have been involved since the start of the Phase 1 Alternative Water Source Study in 2018.
- The Stantec Project Team includes the following team members:

Stantec | CMT | Engineering Enterprises, inc. Outstanding Service – Every Client – Every Day | STRAND ASSOCIATES® | CORNWELL ENGINEERING GROUP | IMAGES INC | V3

- Additional support for the program is being provided by:
  - Barbara Adams, Special Legal Counsel (Donohue & Rose)
  - Barnes and Thornburg – Advocacy
  - Burns & McDonnell – Rate Consultant

PRELIMINARY DESIGN – ENGINEERING

- Adoption of Design Standards and Preferences
- Siting and Routing Analyses
- Land Acquisition
- Survey and Field Investigations
- Preliminary Design Engineering
- Contract Definition and Sequencing

PRELIMINARY DESIGN – **FUNDING**

Baseline Expenditure Schedule

Funding Strategy Update

Affordability Strategy

WIFIA Loan Application

SRF Project Plan

PRELIMINARY DESIGN – OTHER ACTIVITIES

- Obtain Lake Michigan Allocation Permit
- Continue Governmental Outreach & Advocacy
- Negotiate/ Approve Water Supplier/ Water Access Final Agreement
- Perform Water Audits & Track Non-Revenue Water Reduction
- Continue Public Engagement

Joliet Lake Michigan Allocation Update

Allison Swisher, City of Joliet

WATER **ALLOCATION PERMIT**

An allocation permit is required for any regional organization, municipality, political subdivision, agency or instrumentality, or any other organization, association or individual desiring to use water from Lake Michigan under the *Level of Lake Michigan Act. (Section 3730.301)*

- Amount of the allocation
- Starting date of the allocation
- Duration of the allocation
- Conditions required for receipt and maintenance of the allocation

LAKE MICHIGAN ALLOCATION APPLICATION STATUS

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Draft Allocation Application Submittal

Sept 21, 2020

☑

Application Pre-Hearing

Dec 21, 2020

☑

Final Application Submittal

Jan 19, 2021

☑

Application Hearing

April 13, 2021

☑

Approval of Allocation Permit

TBD

COMMITMENT TO GOOD STEWARDSHIP

Lake Michigan is a precious resource that is relied on by many communities and industries in the Region

- Water Conservation
  - Ordinances
- Non-Revenue Water Reduction
  - Cannot exceed 10%

Water Conservation Efforts

JOLIET'S **WATER CONSERVATION** INITIATIVES (through the Water Conservation Subcommittee)

- **Incentivize** – Rain Barrel Subsidy and Low Flow Toilet Replacement Programs
- **Empower** – Restaurant Initiative
- **Educate** – Water Conservation Educational Materials through Local School Districts
- **Motivate** – Materials, such as shower timers, to remind and encourage people to take action

JOLIET WATER CONSERVATION MEASURES

The City is now partnering with several organizations to **expand the reach of the water conservation effort.**

The City has **increased its outreach** on social media and with other advertising campaigns such as the Pace Bus advertising.

The City recently became a **WaterSense Partner,** an ambassador promoting the value of water efficiency and use of WaterSense labelled products.

JOLIET'S COMMITMENT TO IMPLEMENTATION OF WATER CONSERVATION

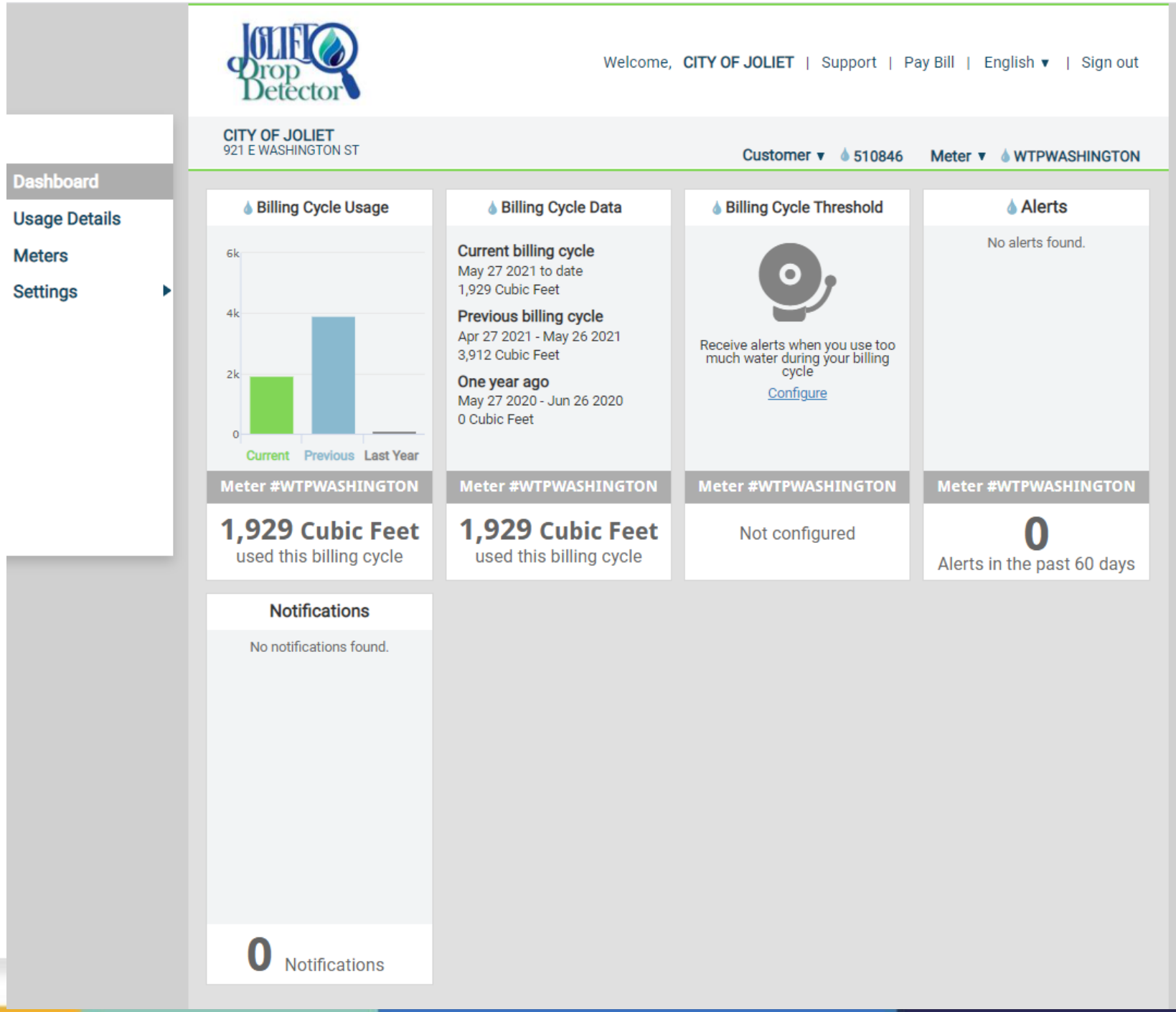
- Updated City Codes, approved on August 18, 2020, to incorporate several water conservation-oriented regulations for Lake Michigan Water users.
  - **Section 31-27** - City's Department of Public Utilities is assigned to **monitor and correct leakage** for water storage, transmission & distribution systems.
  - **Section 31-82** – Metering requirements for all water use in the City, including use of **hydrant meters** for construction and **bulk water purchase** at filling stations.
  - **Section 31-92** – Changes refine the requirement for **sub-metering** in multi-tenant buildings.
  - **Section 31-126** – Changes include clarifications to the City's lawn watering restrictions (**Outdoor Water Conservation Measures**) as well as the addition of **Indoor Water Conservation** measures to include the use of WaterSense labeled plumbing fixtures.

HOW CAN **RESIDENTS** CONSERVE?

- Take advantage of the programs offered by the City (**rain barrel subsidy** & **low flow toilet rebate** programs)
- **Turn off the tap** while brushing your teeth
- **Fill up the sink** while scrubbing or washing a lot of dishes
- Run **full loads** in the dishwasher and clothes washer
- Take **shorter showers**

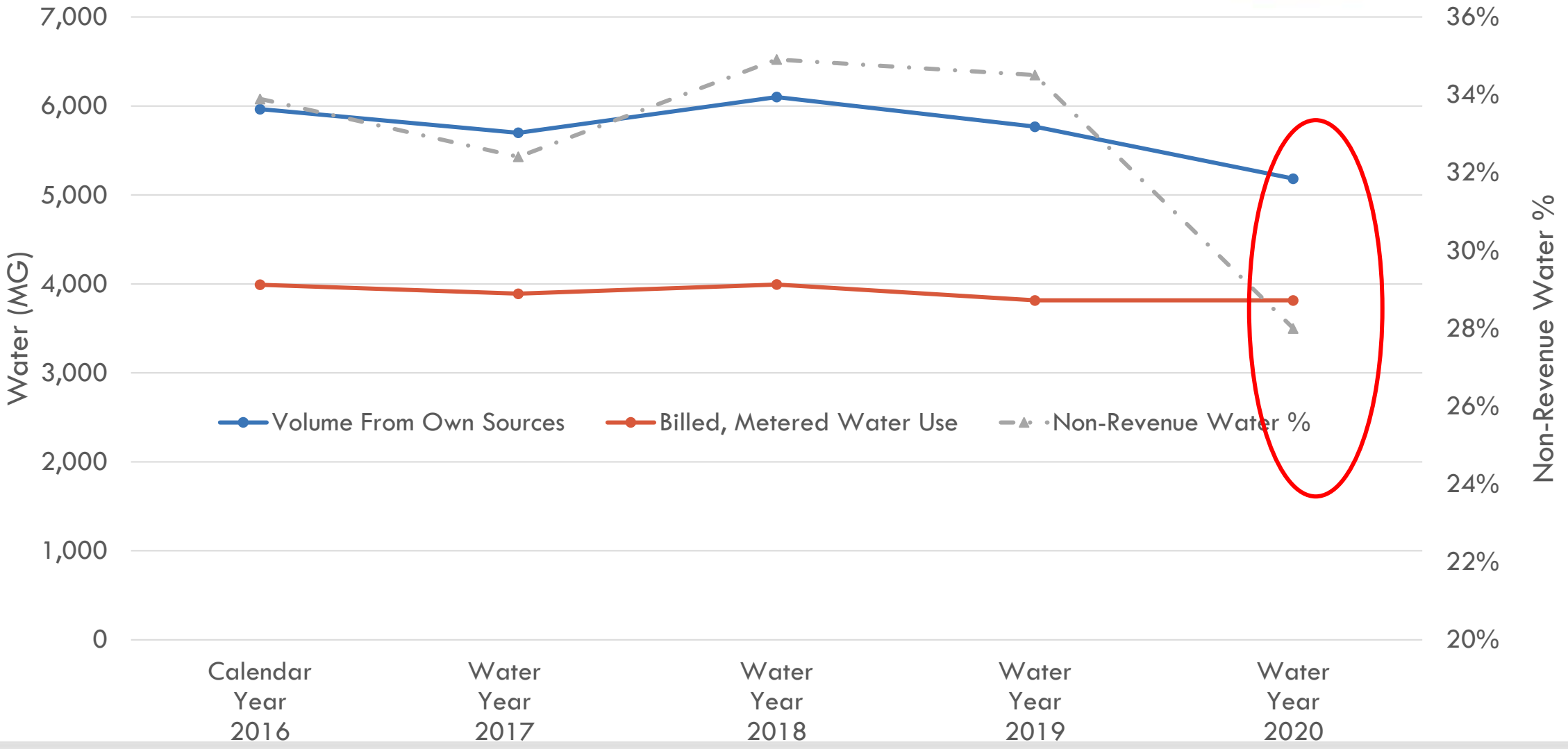
COMING SOON!

- Water Billing Customer Portal **coming later this summer**
- Monitor water usage
- Set water usage alerts



Non-Revenue Water Reduction

HISTORICAL **NON-REVENUE WATER**



JOLIET'S WATER LOSS REDUCTION **EFFORTS TO DATE**

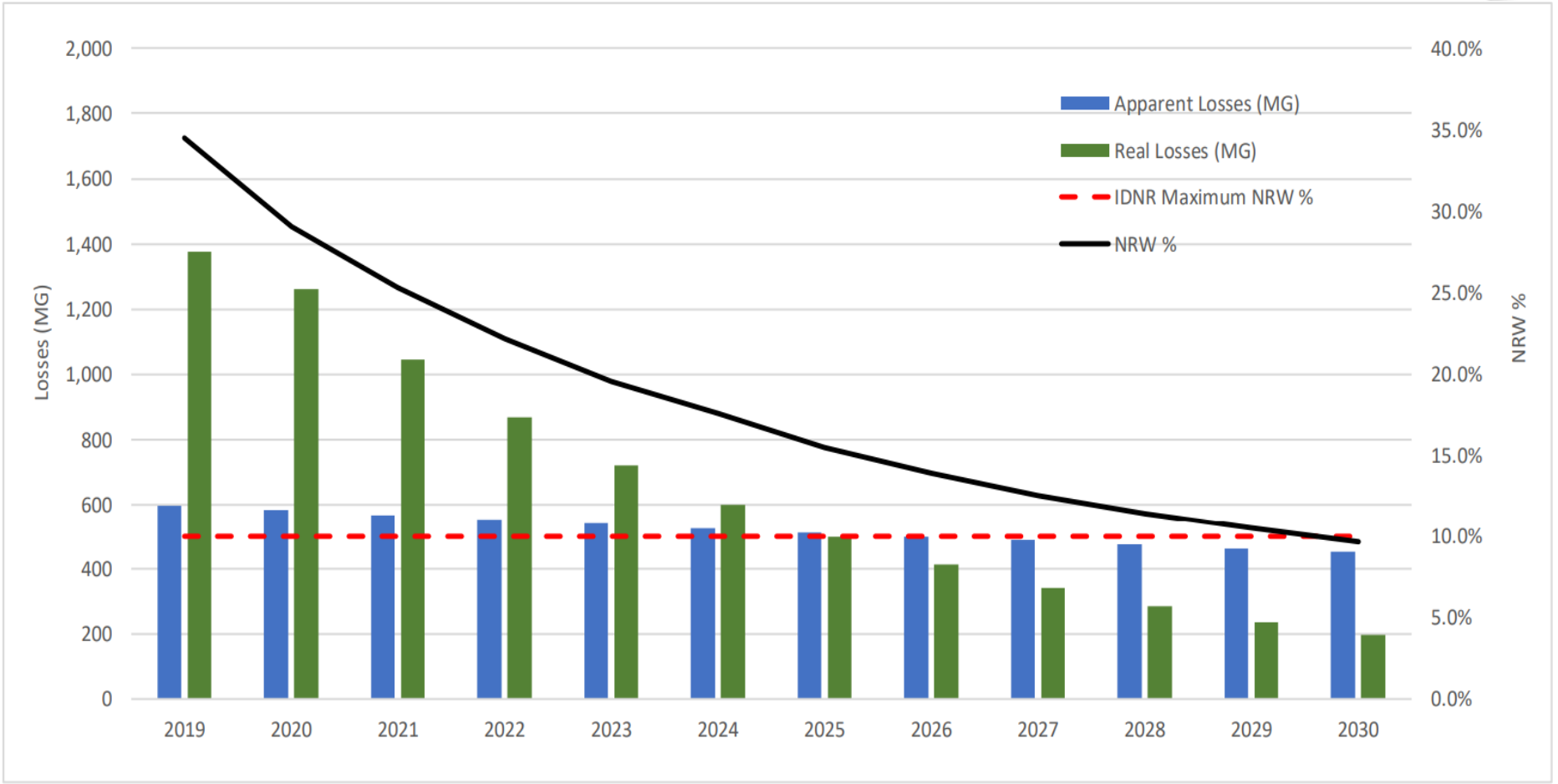
- Appointed a **Water Loss Champion**
- Committed to complete a **Water Audit** on an annual basis
- Established a **Water Loss Task Force** of a diverse group of City Department representatives that meet on a monthly basis
- Implemented an **annual master meter testing program** at distribution entry locations
- Replaced **1% of Water Mains** annually (2017-2021)
- Developed a **residential meter testing and replacement program**
- Conducted **annual leak detection** program

NON-REVENUE WATER **REDUCTION STRATEGY**

Goal – reduce Non-Revenue Water to **less than 10%** by 2030

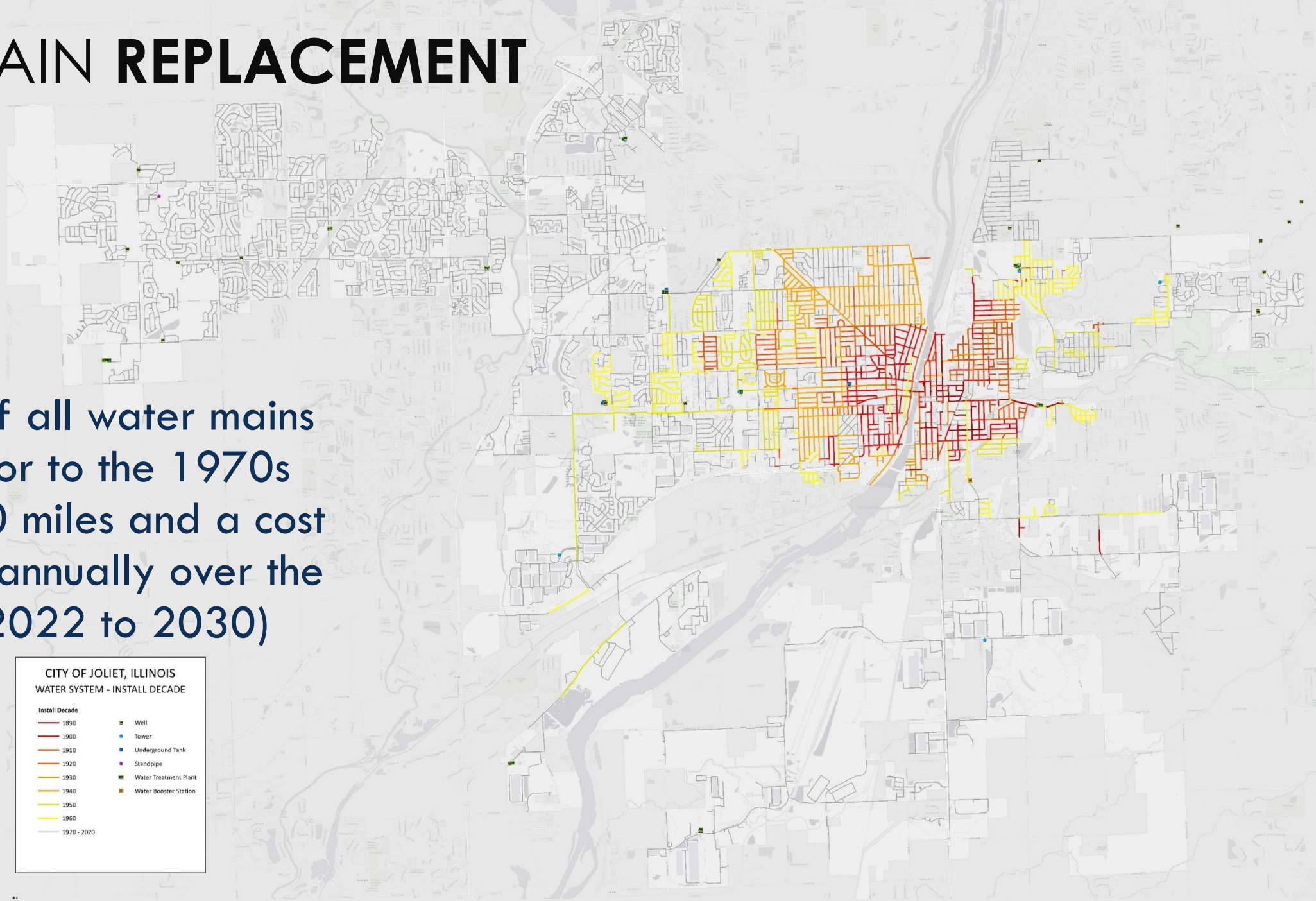
Strategies:

- Increase water main replacement to 3.2% per year
- Analyze metering and accounting systems



WATER MAIN **REPLACEMENT**

Replacement of all water mains constructed prior to the 1970s at a rate of 20 miles and a cost of $34 million annually over the next 8 years (2022 to 2030)



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Regional Coordination/ Water Commission Formation

Theresa O'Grady, CMT

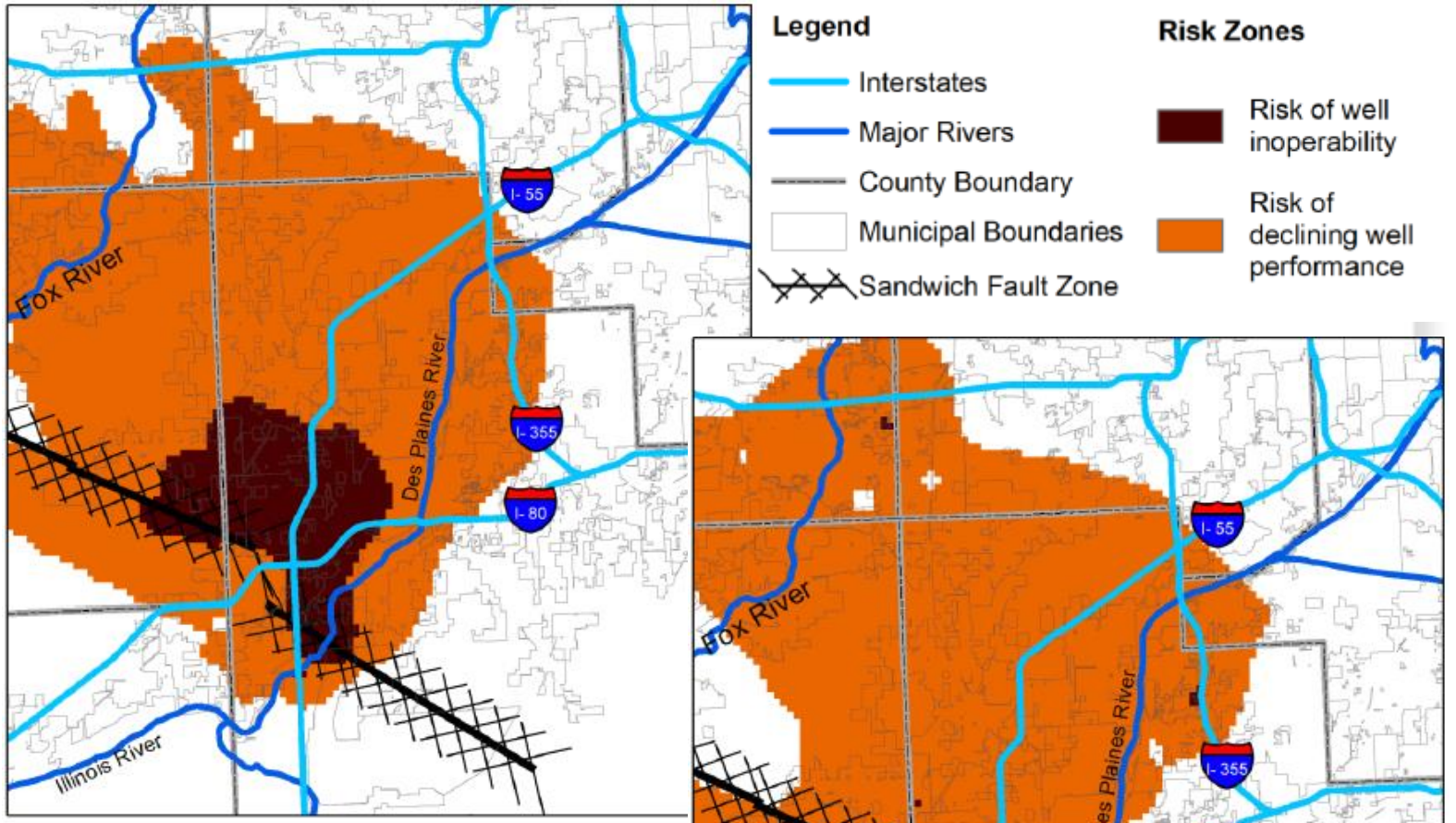
Regional Problem/ Regional Solution

REGIONAL **PROBLEM**

Groundwater sources in the region are in jeopardy

- deep sandstone aquifer is being depleted to the point of inoperability

Joliet switching off the deep sandstone aquifer does not solve the problem.



2029 – Before Joliet switches off the aquifer (From ISWS)

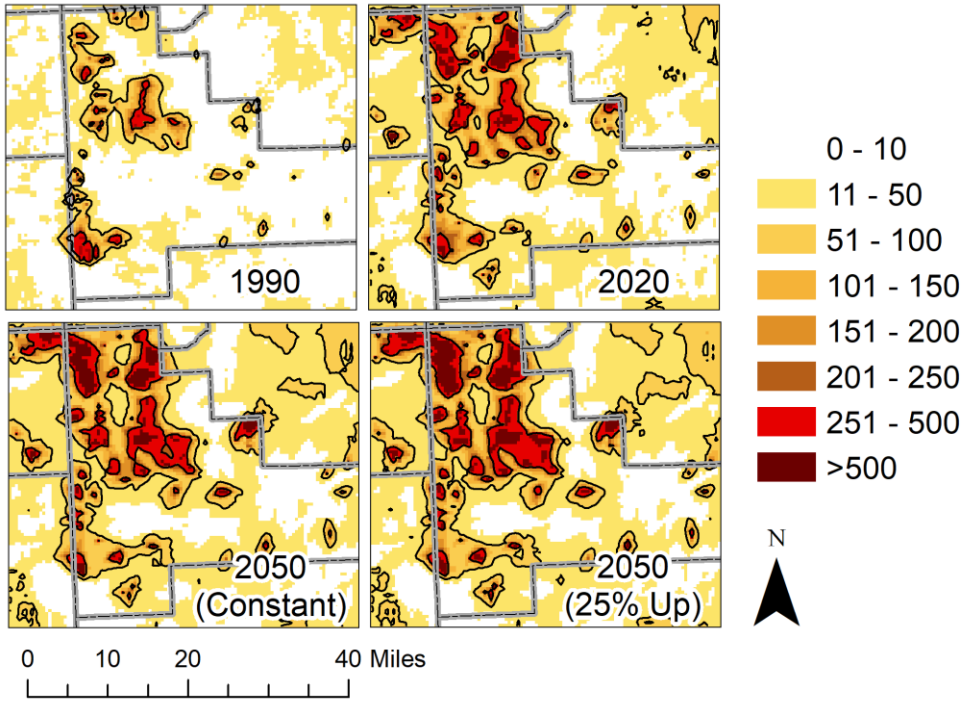
2050 – Peak Pumping (Joliet off aquifer) (From ISWS)

The Illinois State Water Survey has concluded that most sandstone wells in the Will County region are at risk of not meeting supply in the future, and as water levels continue to decline, they will become increasingly vulnerable to new demands in the region.

REGIONAL **PROBLEM**

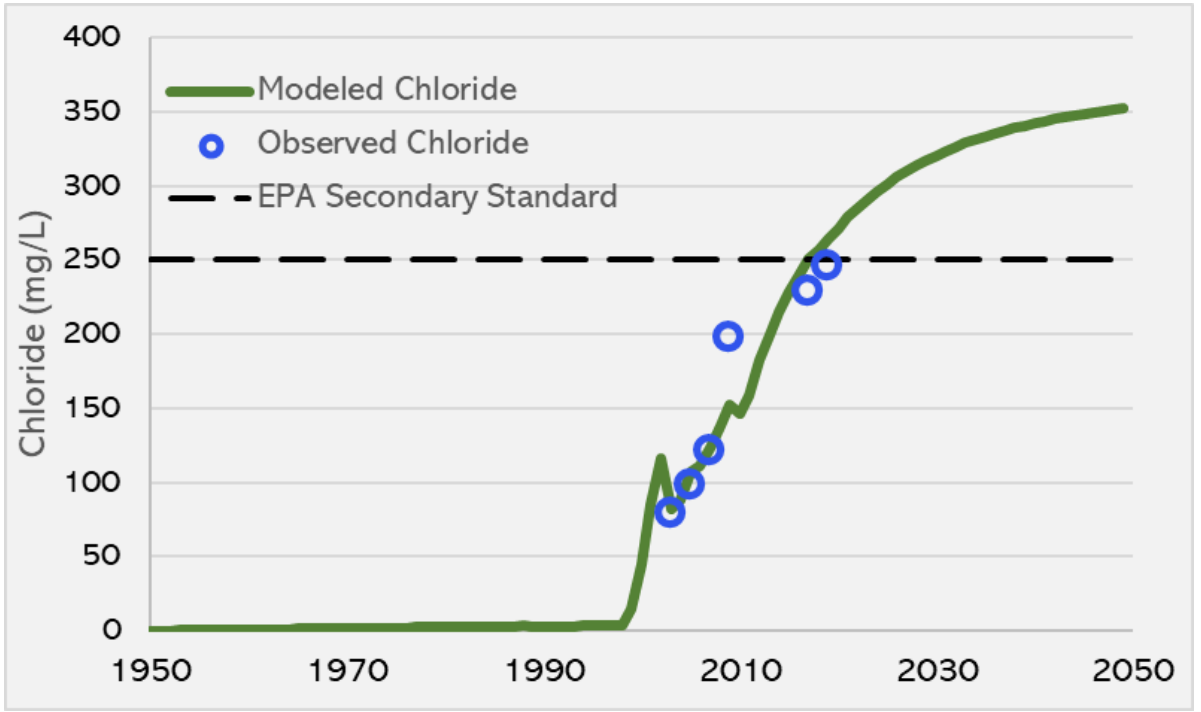
Groundwater sources in the region are in jeopardy

- shallow aquifer water quality is deteriorating due to **increased chloride levels and presence of PFAS**



Red areas depict areas that could have groundwater concentrations approach or exceed the secondary standard (From ISWS)

- ***The Illinois State Water Survey has concluded that chloride has been increasing in the aquifer for decades due to road salt applications, approaching or exceeding the secondary water quality standard in many portions of northern Will County. Some communities may see drinking water quality deteriorate; water would taste salty and possibly be corrosive.***
- ***Recent shallow well testing by IEPA showed presence of PFAS in some wells at levels which may require treatment***

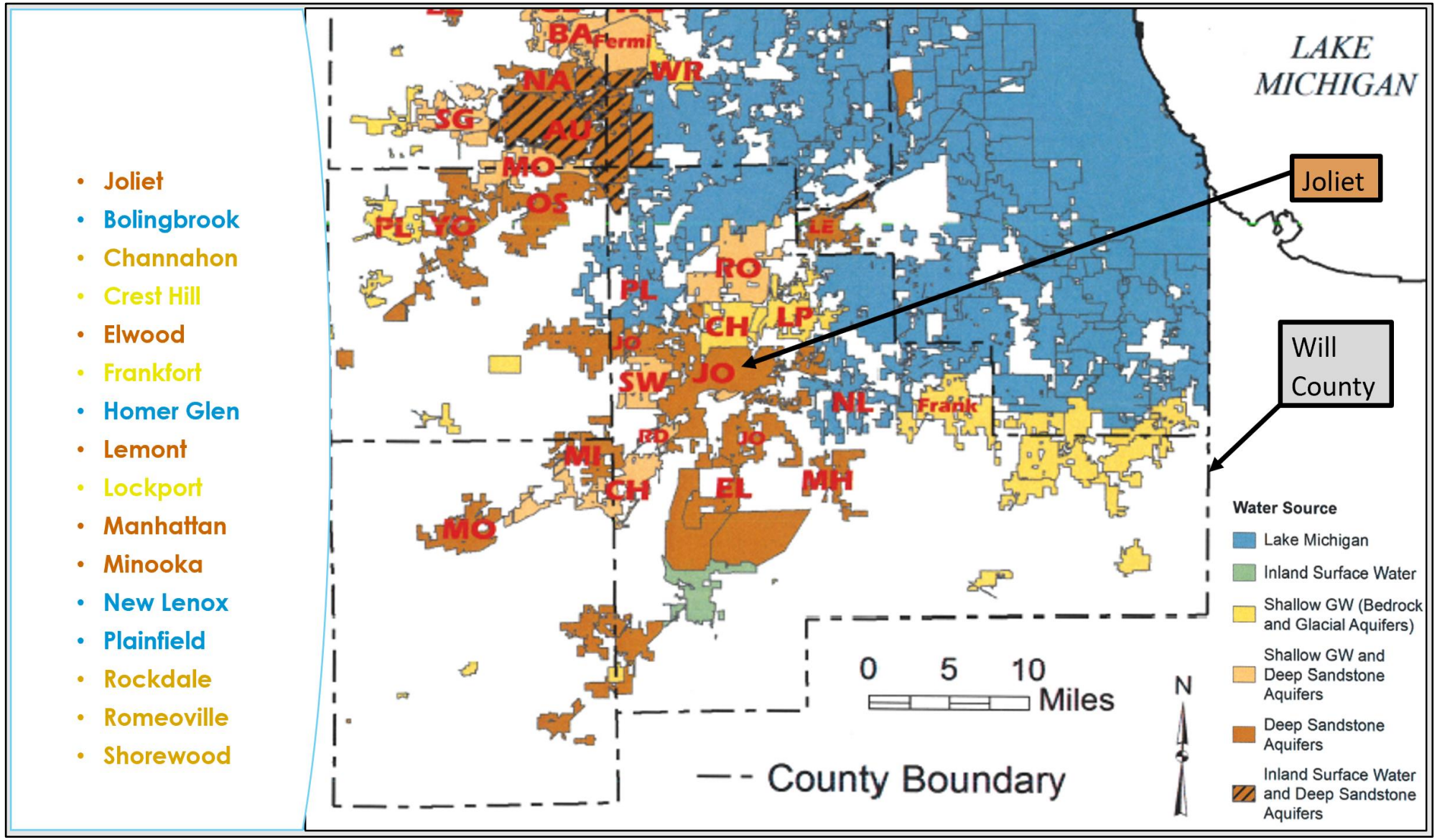


There are observed and modeled increases in chloride levels in regional shallow wells (From ISWS)

REGIONAL **SOLUTION**

From ISWS Fact Sheet 3 from Contract Report 2015-02 – "Sources of Water for Communities in Northeastern Illinois"

- Joliet
- Bolingbrook
- Channahon
- Crest Hill
- Elwood
- Frankfort
- Homer Glen
- Lemont
- Lockport
- Manhattan
- Minooka
- New Lenox
- Plainfield
- Rockdale
- Romeoville
- Shorewood



Bottom Line: This is a regional problem – with the potential for a regional solution.

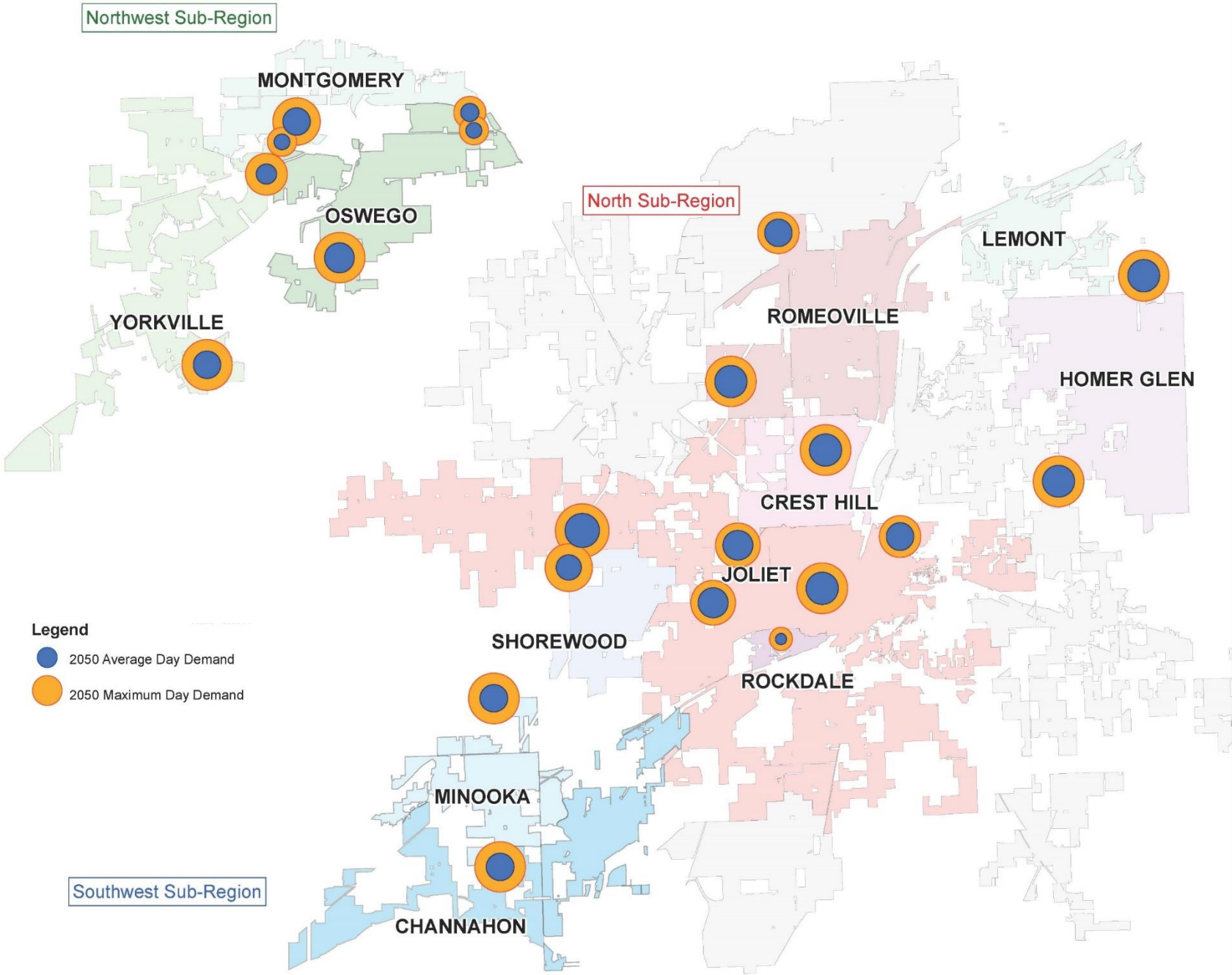
Regional Water Commission Formation

REGIONAL OUTREACH

- Outreach to potential regional partners began in 2019 and continued through 2020
  - July 16, 2019 – Kick-off to Regional Outreach
  - February 13, 2020 – Will County Governmental League Meeting
  - May 27, 2020 – Follow-up Presentation to Mayors & Managers
  - June 2020 through August 2020 - One-on-one meetings between **potential regional community** participants, Joliet Staff and consultant team members (17 communities & 2 industries)
  - October 2020 – Subregional meetings held
  - Regular updates at monthly SWPG Meetings
- **Survey of Potential Regional Partners – January 2021**
  - **11 Responses:** Channahon, Homer Glen, Lemont, Lockport, Minooka, Montgomery, Oswego, Rockdale, Romeoville, Shorewood, & Yorkville
  - 7 Questions to gauge interest of participation in Regional Water Commission and preference on water source

WATER COMMISSION FORMATION MEETINGS

- Technical Advisory Group
  - Monthly coordination and workshop meetings
- Mayors and Managers Group
  - Monthly meetings



DEVELOPMENT OF WATER COMMISSION

Continue discussions with potential regional communities

Discuss and agree on details related to forming a water commission, including Water Commission Legislation and Key Documents:

Delineation of ownership of infrastructure	Optimization of **infrastructure design** based on Commission member participation	Board Make-up and Commission decisions that require **supermajority voting**	Mechanism for **management of the system design and construction** to provide water delivery by 2030	**Operation** of the water commission infrastructure	**Rates:** O&M and capital costs	**Start-up** financing, capital costs and **member contributions**	Availability of possible **future water system capacity** and methodology for payment

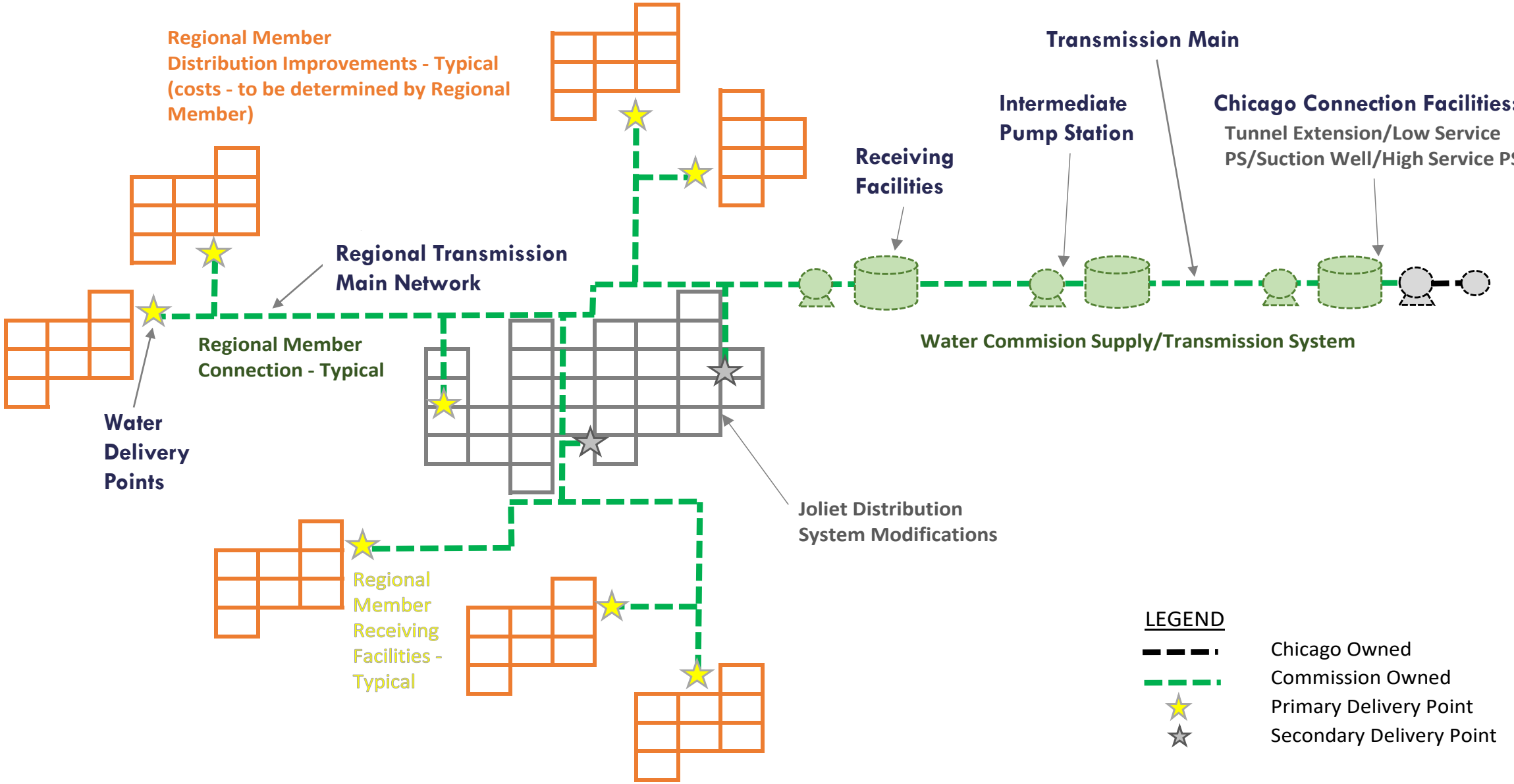
REGIONAL GOVERNANCE

- Recommendation is to form **Water Commission**, based on Division 11-135 of the Illinois Municipal Code with modifications (requiring new state legislation)
- Discussion on Water Commission Governance Key Terms:
  - **Commission Board Make-up**
  - **Technical Advisory Committee**
  - **Joliet Involvement during Program Implementation**
  - **Voting**

WATER COMMISSION INFRASTRUCTURE **DELINEATION OF OWNERSHIP**

- The Water Commission would **construct, own and maintain** all of the common transmission mains and water facilities upstream of each member community delivery/metering point, as mutually agreed
  - There would be a **single delivery/metering point** constructed to each member community
  - Additional delivery points could be added to the Water Commission system at **community member expense**
- Each community would construct, own, operate and maintain its own watermains and metering facilities (and possibly pumping facilities) from the Commission transmission mains **downstream of its delivery/metering point**

WATER COMMISSION INFRASTRUCTURE **DELINEATION OF OWNERSHIP**



WATER **DEMANDS** & SYSTEM DESIGN

- **Average Day Demand** (**ADD**) is the total water usage in a year divided by the number of days in that year
- **Maximum Day Demand** (**MDD**) is the 24-hour water usage during the highest day of water usage in a year
- Water system components (transmission mains, pump stations, etc.) are designed to meet **Maximum Day Demands**
- Each Regional Water Commission member will need to determine their **Contractual Maximum Day Demand** to meet their Maximum Day Demands in 2050. The new water system will be designed and constructed to meet this capacity.

WATER COMMISSION **COST COMPONENTS**

- **Volumetric:** The amount of water used by each community. All commission members would purchase water at the **same volumetric rate** ($/1,000 gallons) based on annual water usage.
- **Capital Cost:** Initial capital costs to build system distributed proportionally based on community's **contractual 2050 Maximum Day Demand** capacity.
- **Commission Administration:** Fixed administration costs to be split equally between Commission Members

REGIONAL WATER COMMISSION **FORMATION TIMELINE**

Resolution of Intent to Negotiate Creation of Water Commission	**Water Commission Enabling Legislation**	**Ordinance to Join Water Commission and Approve Key Terms and Declare Contractual Maximum Day Demand**	**Water Commission Organizational Ordinance (By-laws)**	**Water Commission Water Supply Agreement with Members**
Approved by Potential Municipal Member Board/ City Council Summer 2021	Passage by State Legislators in November/ December 2021	Approved by Joliet City Council by January 31, 2022 (after Governor approval of enabling legislation)	Approved by Water Commission Board of Directors February/March 2022 (First Water Commission Board Meeting)	Approved by Water Commission Board of Directors and Joliet City Council April/May 2022

WATER COMMISSION **BENEFITS**

- **Benefits** of a regional water commission:
  - **Lower water rates** due to cost sharing and economies of scale
  - **Distribution of risk** amongst more entities
  - **Support** of state and federal agencies such as IEPA and USEPA as well as state and federal legislators
  - Ability to **obtain access for construction in rights-of-way** outside of the limits of the City of Joliet

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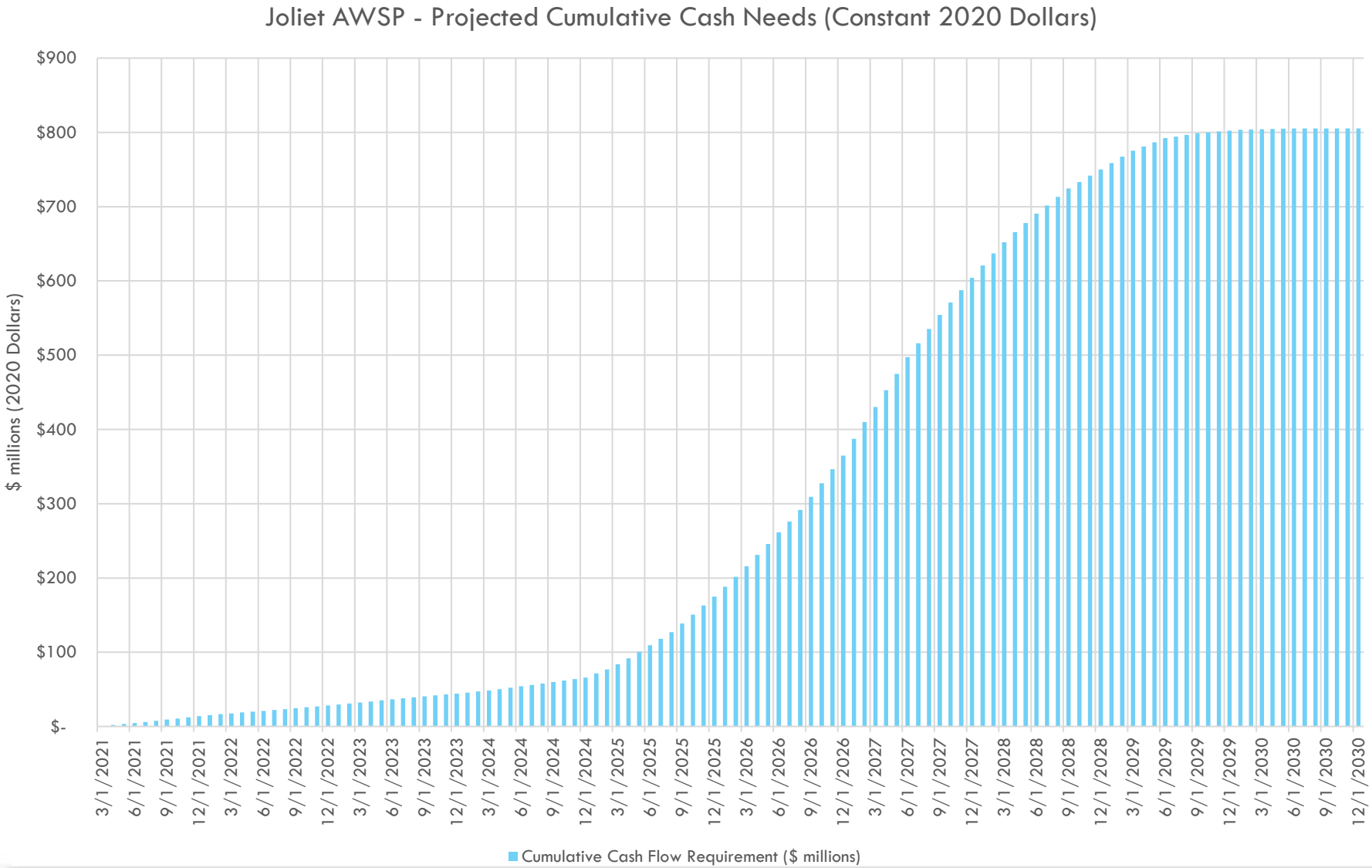
AWSP Funding and Affordability Strategies

Joe Johnson, Stantec

2021 FUNDING **STRATEGY UPDATE**

- CASH FLOW MODEL – How much and when?
- BORROWING – From whom, how much, why?
- TIMING of BORROWING – When?

CASH FLOW PROJECTIONS*



- *Sizing impacts total cost but not development schedule*
- *85%+ of cost is incurred 2025-2028*
- *2021-2024 cost = 10%*

*60 MGD Scenario

FUNDING STRATEGY

- CAPITAL to SUPPORT DEVELOPMENT to meet SCHEDULE
- IDENTIFY and SECURE LOWEST COST CAPITAL
- TARGET FUNDING TERMS that reduce barriers to participation from prospective COMMISSION MEMBERS
- MITIGATE COST IMPACTS on JOLIET CUSTOMERS
- IDENTIFY and IMPLEMENT AFFORDABILITY PROGRAMS

BEST FUNDING CANDIDATES *(currently)*

- **WIFIA** – Low interest, flexible draw down, flexible repayment
- **SRF** – Very low interest, familiar process, good target for stimulus funding
- **REVENUE BONDS** – Shorter issuance process, structuring options, currently lower rates
-

WIFIA FUNDING UPDATE

- **OFF WAITLIST 4/6/2021, Invited to Apply!**
  - Total WIFIA credit available: **$731M**
    - 2019 LOI & Invitation to Apply = $290M
    - 2020 LOI & Invitation to Apply = $441M
- WIFIA can fund AWSP development costs
- WIFIA can be applied to WATER MAIN REPLACEMENT PROGRAM
- There can be multiple WIFIA loan issuances

1. **Submitted 2019 LOI**
2. **2020 Invited to Apply**
3. **Submitted 2020 [Supplemental] LOI**
4. **2021 Invited to Apply**

WIFIA TIMELINE

WIFIA I:

2021

Estimated loan amount
$218 million

Application – June 2021

- Loan Funding for:
  - Water Main Replacement Program (2017 – 2030)
  - AWSP Planning and Design (2018 – 2024)
- Low interest, 30-year term with 5-year payment deferral
- Target for loan execution: Q4 – 2021
- Payment of Application Fee must be approved June 2021

WIFIA II:

2022

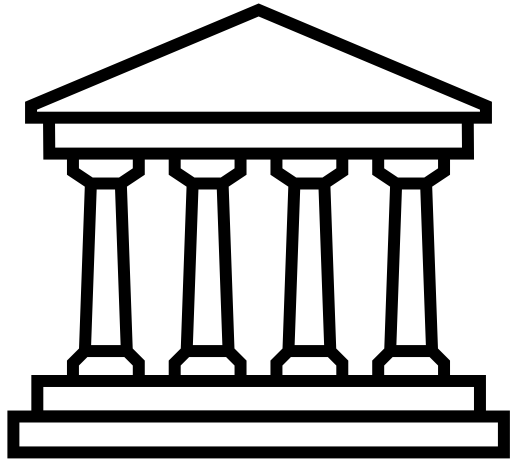
Loan amount will depend upon final system sizing

Application – Q2 2022

- Loan Funding for:
  - AWSP Construction/Start-up (2025 – 2030)
- Will be coordinated with Commission Development
- Low interest, 30-year term with 5-year payment deferral
- Target for loan execution: Q4 – 2022
- To be sculpted to compliment other funding sources

HEADLINES

- American Rescue Plan Act
  - Water Assistance Programs
  - State and Local Government disbursements
- Earmarks
  - Small in FY2022 budget but could be signal?
- *Proposed*: American Jobs Act
  - $111B to Water
    - $45B to Lead Pipes and Service Line Replacement
      - SRF and WIIN grants
    - $55B upgrade and modernize water & wastewater infrastructure
      - Likely channeled through IEPA SRF
- *Requested*: President's FY2022 Budget
  - $3.6B to Water, $625M over 2021 Appropriations
- 2021 Consolidated Appropriations funded WIFIA



Affordability Considerations

- Defining affordability
- Characterizing customer base
- Understanding potential impacts
- Formulating assistance strategies

What is **Affordability?**

Common belief:

- Water should be accessible and low cost

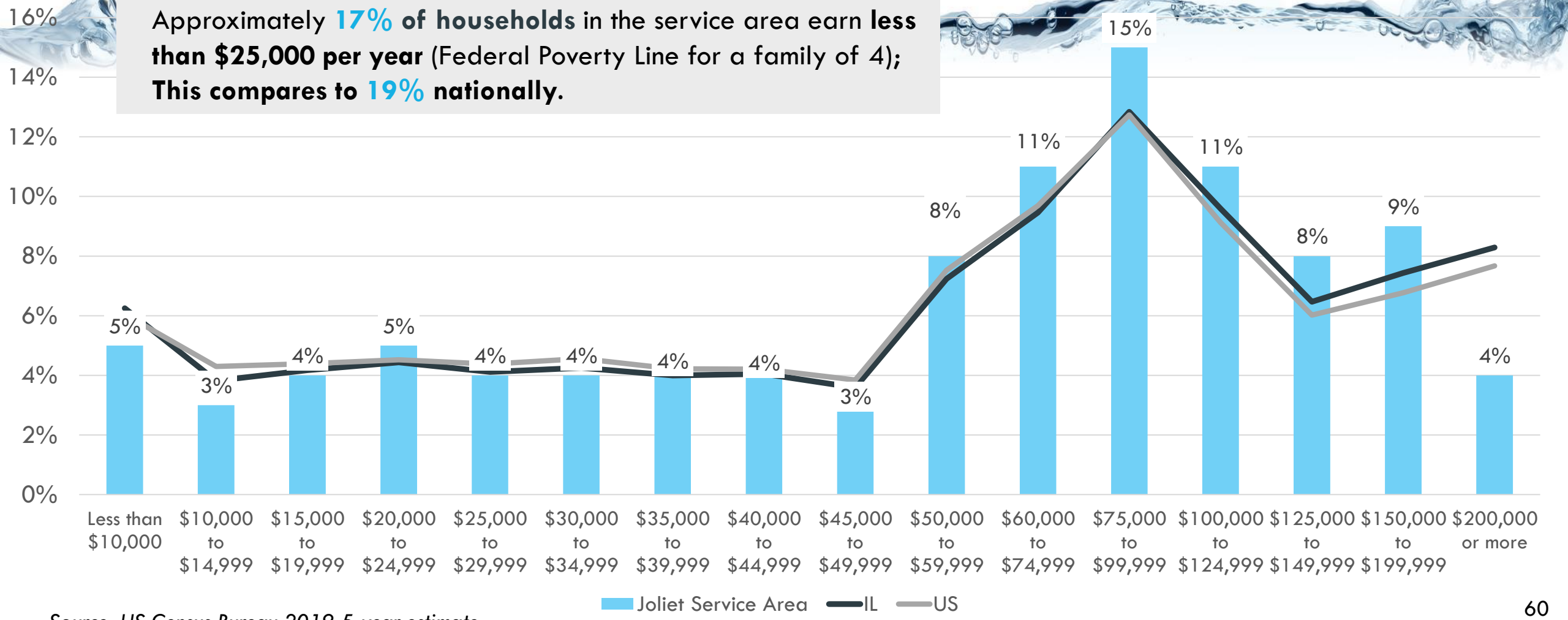
Reality:

- True cost of water must be considered/communicated
- Financial burden of water bill will be greater for some households
- Communities are constrained when burden is not fully understood

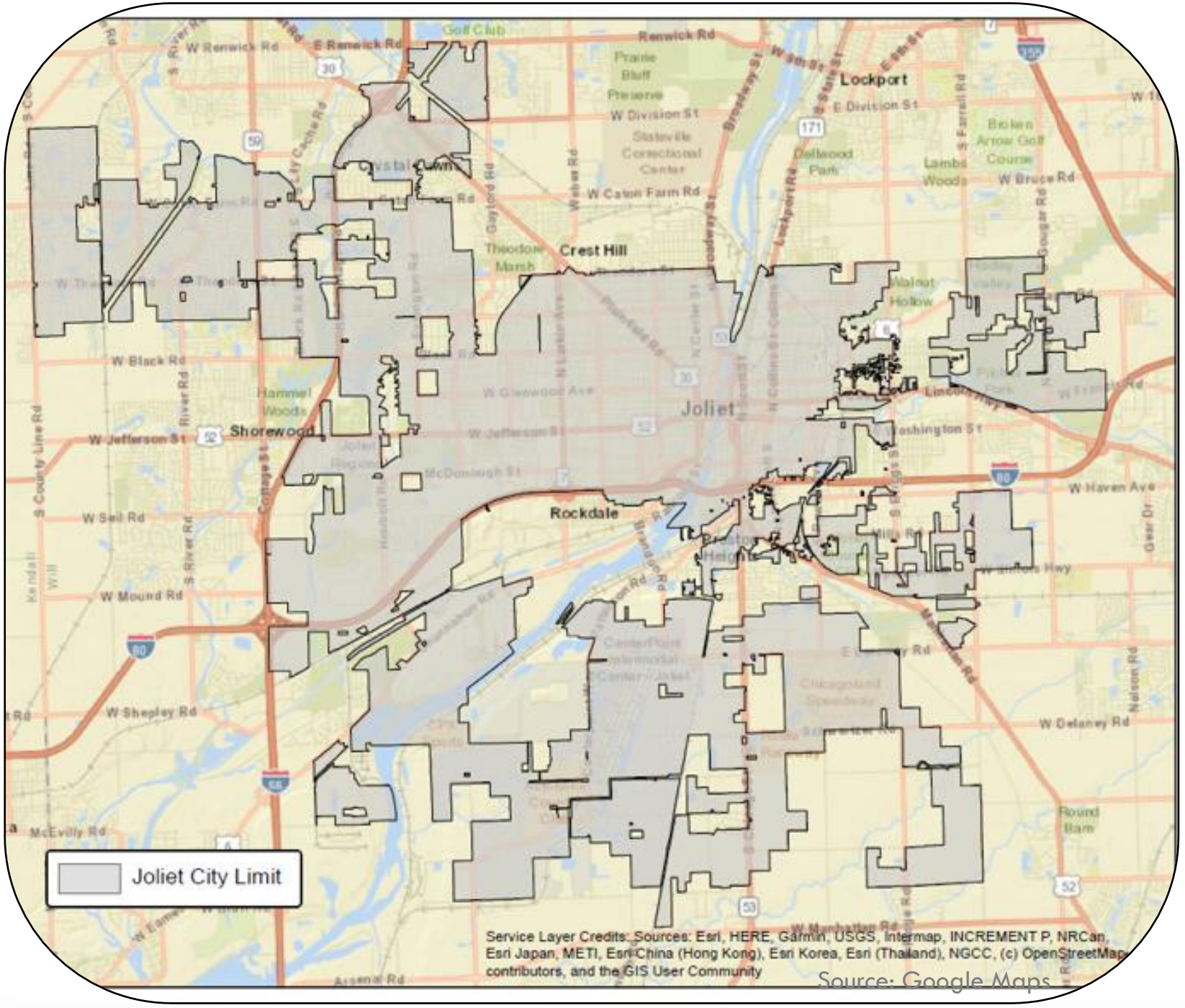
Median Household Income and Income Distribution

Geographic area	MHI (2019$)
Joliet Service Area	$72,975
Illinois	$65,886
United States	$62,843

Approximately **17% of households** in the service area earn **less than $25,000 per year** (Federal Poverty Line for a family of 4); **This compares to 19% nationally.**



Source: US Census Bureau 2019 5-year estimate



Source: Google Maps

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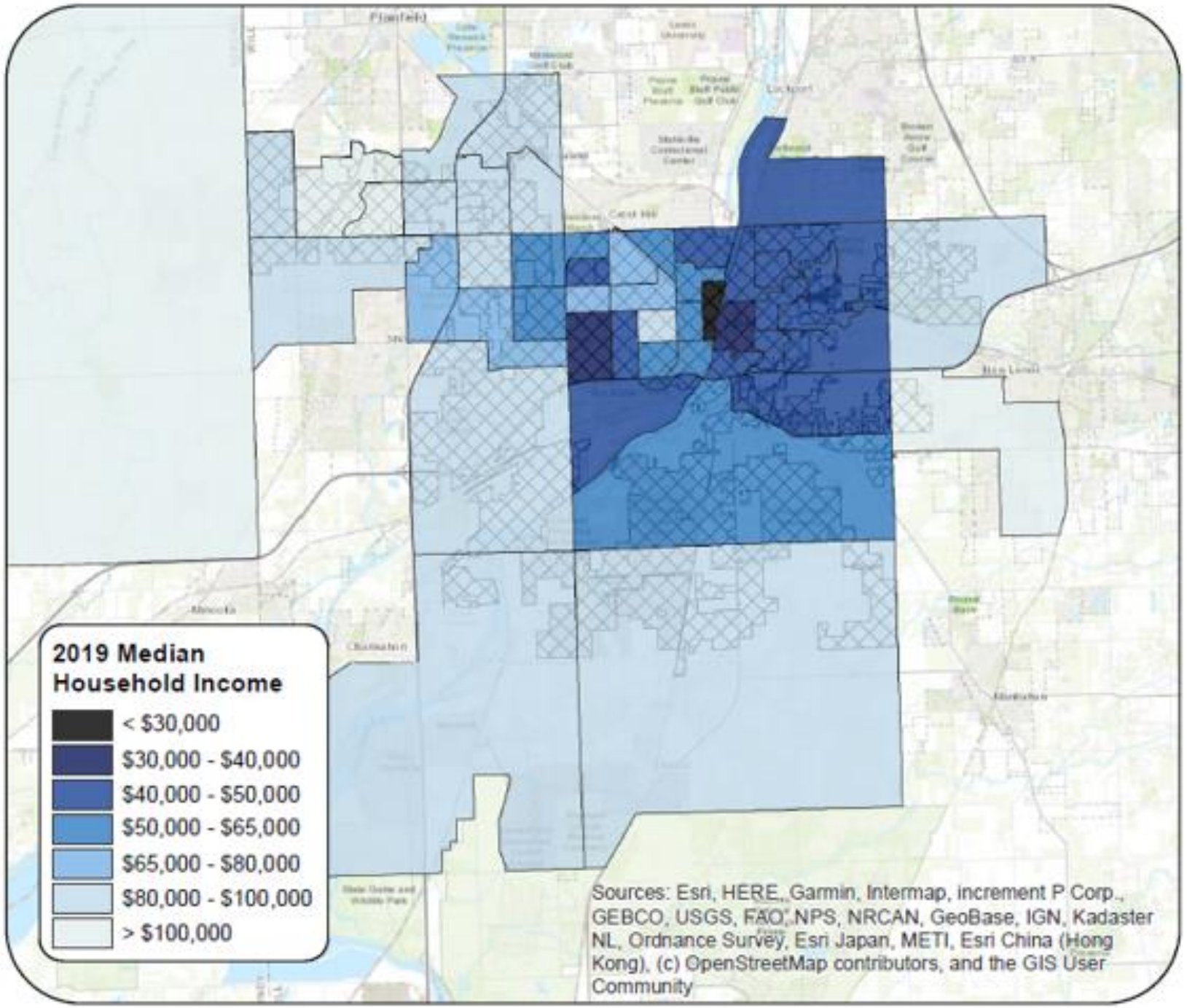
City of **Joliet**



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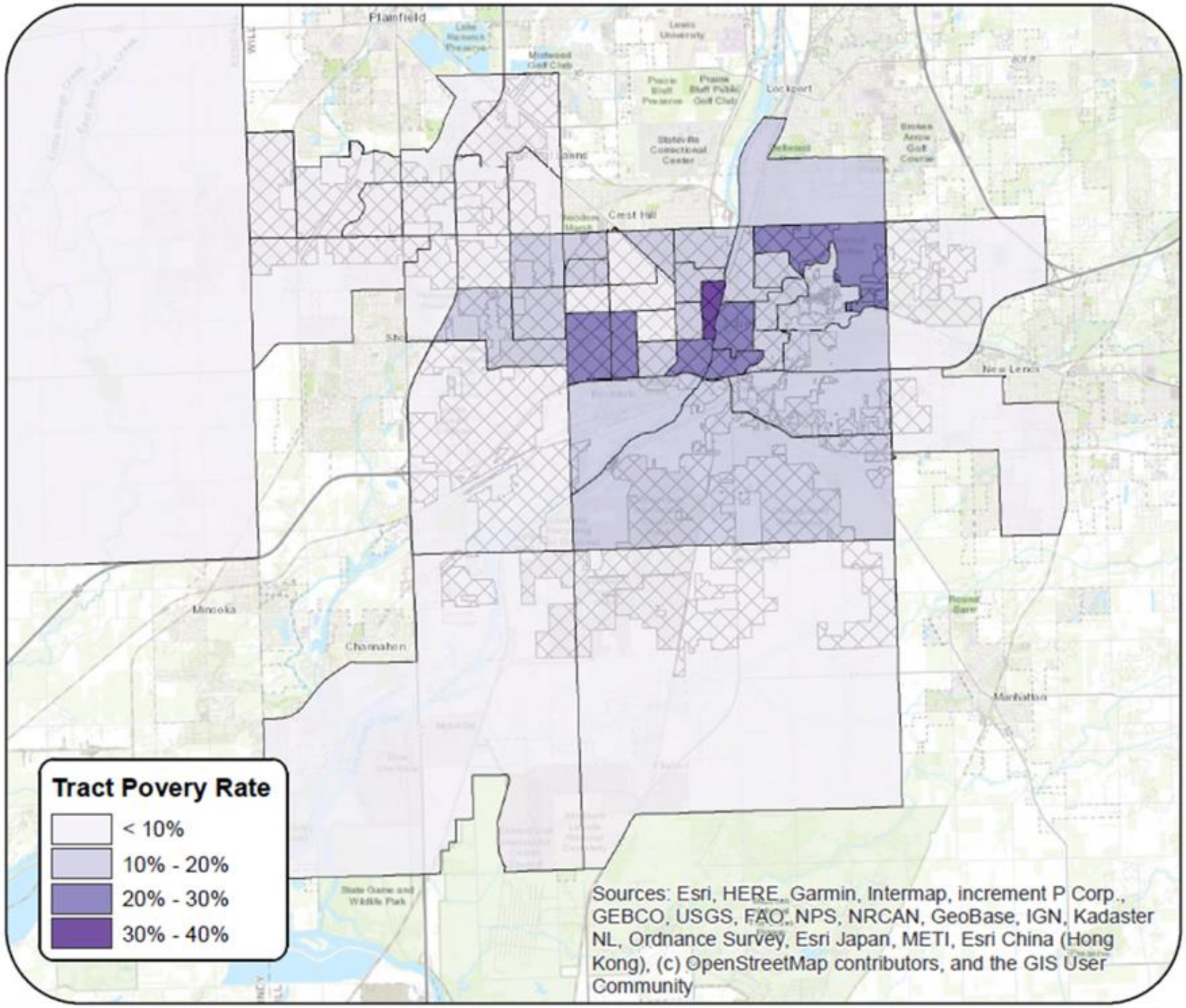
Median Household **Income**



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Family Poverty Rate

Strategies to Mitigate Customer Impacts

Project Focus

- Highest Value – Lowest Cost Alternative
- Financing Strategies
  - Favorable terms
  - Flexible terms
  - Partner contributors
- Operating and Maintenance efficiencies

Strategies to Mitigate Customer Impacts

Customer Focus

- Water Efficiency Support
- Temporary Assistance – tied directly to bill
- Credits/Discounts – monthly bill adjustments
- Flexible Terms - Payment plans
- Lifeline Rate - Low rate for fixed volume
- Crisis Funding - One-time or short-term relief

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AWSP Public Outreach Strategy

Allison Swisher, City of Joliet

2021 PUBLIC OUTREACH STRATEGY

INCREASE **AWARENESS**

- Structured communication to reach all parts of the Joliet community

MAINTAIN **TRANSPARENCY**

- Continued advertisement of meetings and public posting of program materials

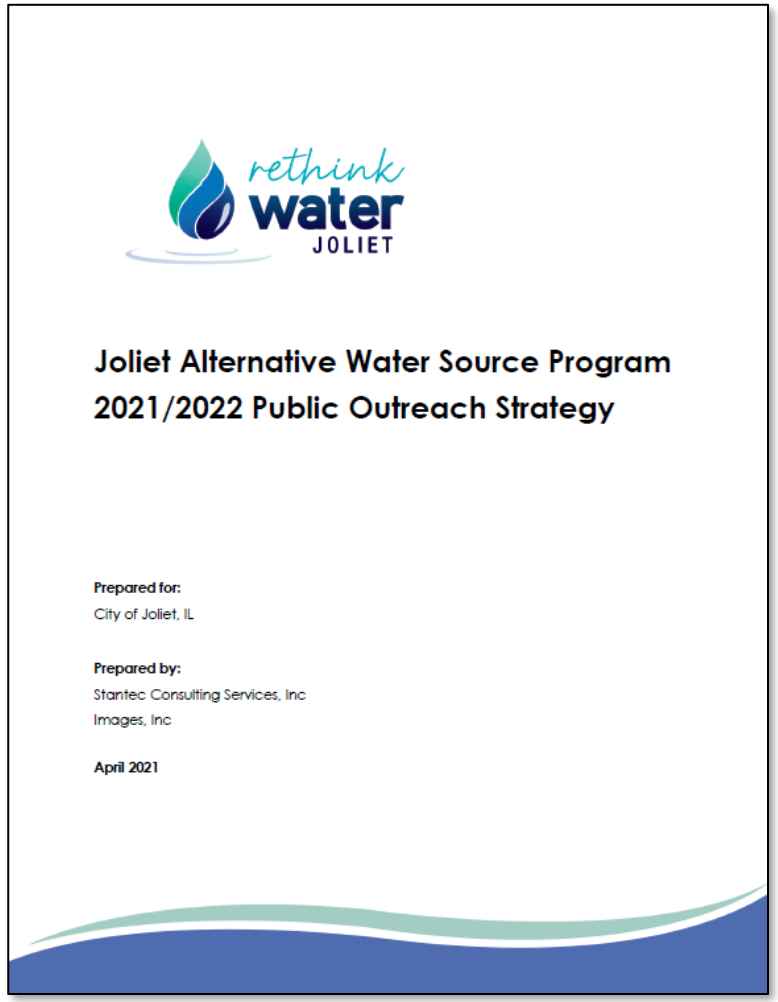
ENHANCE **CUSTOMER UNDERSTANDING**

- Regular distribution of information related to customer benefits, estimated costs, and affordability efforts

PROMOTE **CONFIDENCE**

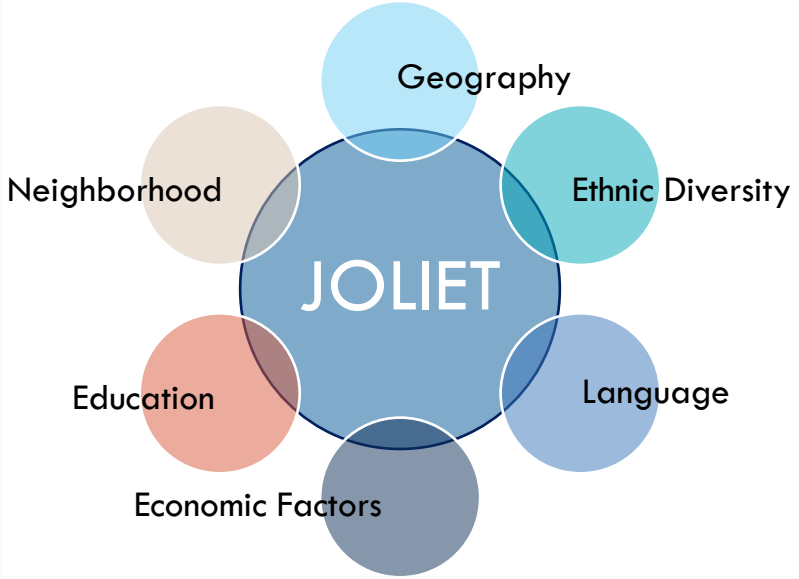
- Highlighting Joliet's infrastructure management, cost control, water efficiency, and water conservation efforts

2021 PUBLIC OUTREACH STRATEGY



CONTINUED CONSISTENT COMMUNICATION

- Social Media Posts
- E-blasts
- Community Billboards
- Bus and Community Posters
- Quarterly Newsletters
- Stakeholder Meetings
- Informational Video



TARGETED COMMUNITY OUTREACH

- Community Summits
- Community Events
- Targeted Meetings

2021 UPDATE EVENTS

- Newsletter – May, August, November 2021
- Stakeholder Meeting – June, October 2021
- Public Service Committee Updates – 3rd Monday of each month
- Finance Committee Update – April, September, December 2021
- City Council Update – May, August, November* 2021

*Workshop

Encourage Public to Get Involved

- Sign up for the mailing list
- Visit the website at www.RethinkWaterJoliet.org
- Learn more – Eblasts, social media posts
- Help spread the word

ADDITIONAL RESOURCES

www.RethinkWaterJoliet.org

Information available on the project website includes documents supporting the years of evaluation that led to the City's decision to proceed with development of a Lake Michigan water source:

- *Environmental Commission Meeting Presentations (2018 & 2019)*
- *2018 Phase I Study Report*
- *Joint City Council & Environmental Commission Workshop Presentations (2019)*
- *2019 Phase II Study Report*
- *Public Forum Presentations (2019 & 2020)*
- *City Council Workshop Presentations (2020 & 2021)*
- *Stakeholder Meeting Presentations (2020)*
- *2020 Prospectus Documents*
- *2020 Basis of Design Report*
- *2020 Comparison Document*
- *Newsletter & Educational Topics*

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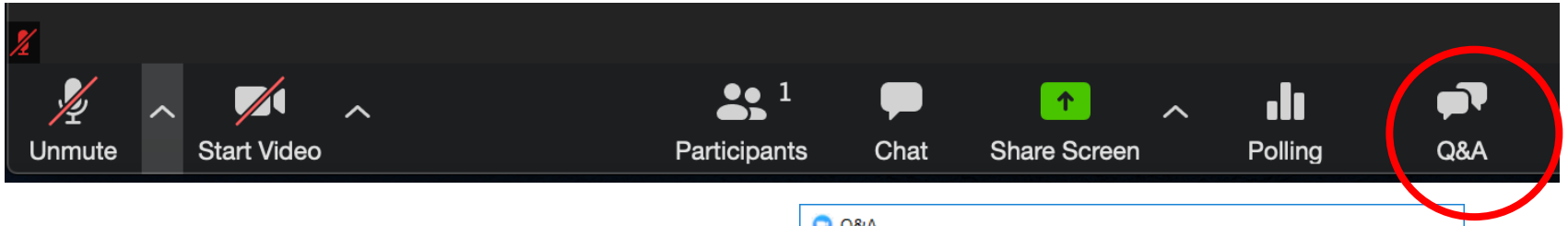
Questions & Answers Panel

Moderator – Brian Kazyak
Panelists - Allison Swisher, Joe Johnson, Theresa O'Grady

QUESTION & ANSWER SESSION

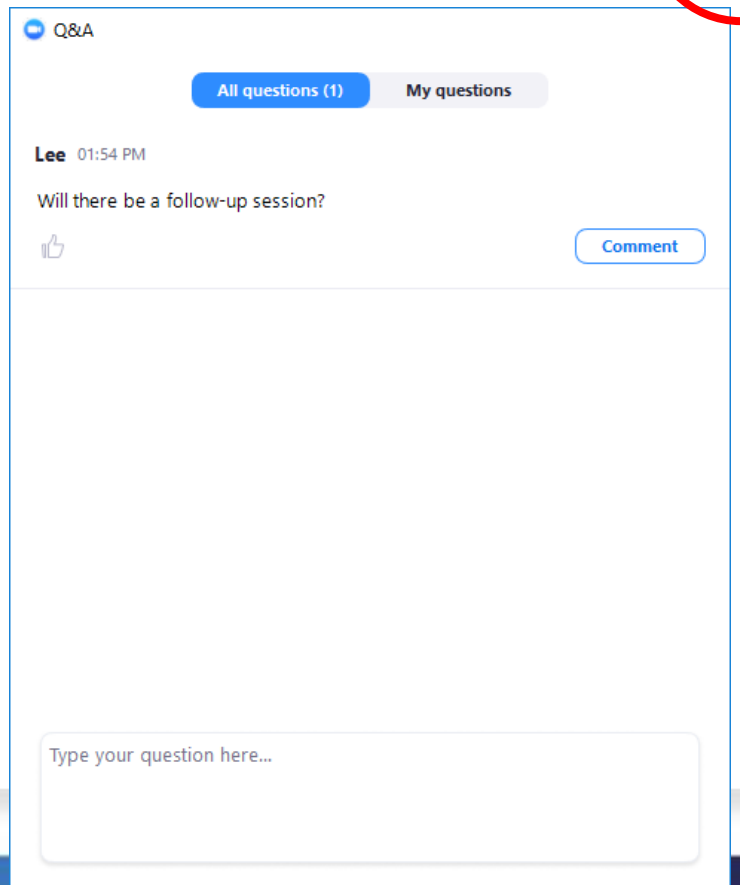
How to Ask a Question



Please use the Q&A functionality in Zoom instead of chat.

The Q&A window can be used to ask questions of the panelist(s). The questions will be reviewed by a moderator.

Your questions may then be answered live, in discussion or via the Q&A window.



Panelists

Moderator
Brian Kazyak
Stantec

Allison Swisher
City of Joliet

Joe Johnson
Stantec

Theresa O'Grady
Crawford, Murphy & Tilly

Thank you.

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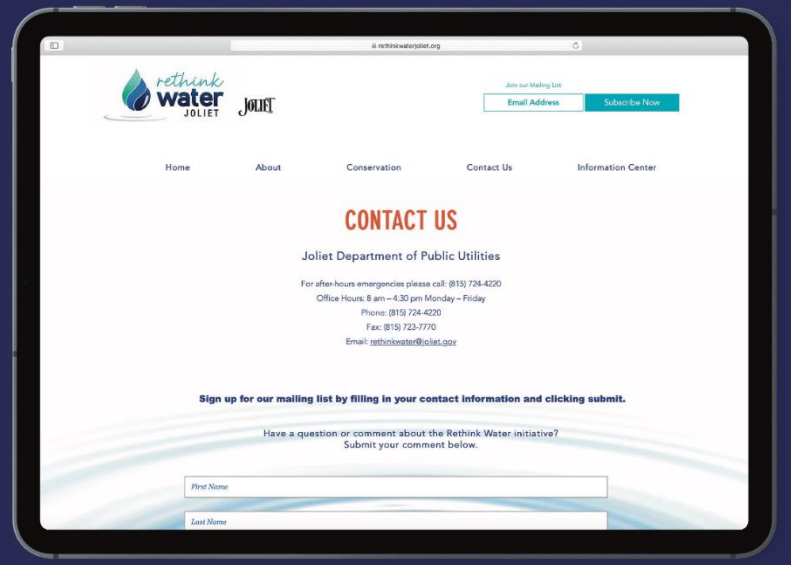
VISIT US ONLINE & SUBMIT YOUR COMMENTS!

RETHINKWATERJOLIET.ORG