

Alternative Water Source Program Joliet City Council Workshop

January 13, 2022

WORKSHOP AGENDA



- Alternative Water Source Program (AWSP) Overview and Status Update
 - Allison Swisher, City of Joliet
- Update on Water Commission Formation Efforts
 - Allison Swisher, City of Joliet
- Update on Funding and Financial Strategy
 - Joe Johnson, Stantec
- 2021 Preliminary Engineering and Program Milestones
 - Theresa O'Grady, CMT
- Look Ahead 2022 and Beyond
 - Allison Swisher, City of Joliet

WORKSHOP GOALS



- Increase awareness of **Program activities** and **progress**
- Present Water Commission Formation plan and required Council action
- Seek input on future Joliet water capacity needs
- Discuss anticipated Program funding strategy
- Highlight accomplishments from 2021 Program activities
- Define anticipated **2022** Program activities and goals



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PROGRAM OVERVIEW AND STATUS UPDATE

CURRENT **PROBLEM**

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



Western Joliet Wells (Wells 15, 17 & 28)

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 aguifer (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.



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

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



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

Channahon

• Crest Hill

- Lemont
- Minooka
- Romeoville
- Shorewood

Bottom Line: This

is a regional problem – with the potential for a regional solution.

STUDY HISTORY





JOLIET CITY COUNCIL **DECISION**



SELECTION OF NEW WATER SOURCE ALTERNATIVE

 Purchasing treated water from the City of Chicago and pumping ~35 miles to the City of Joliet for distribution





- CIP#1 Chicago
 Connection Facilities
- CIP#2 Finished Water Transmission Main
- CIP#3 Intermediate
 Pump Station/Storage
- CIP#4 Standpipe/ Auxiliary Pump Station
- CIP#5 Systemwide
 SCADA/Communication
- CIP#6 Regional Transmission Main Network
- CIP #7 Cal-Sag Crossing

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.

ALTERNATIVE WATER SOURCE PROGRAM SCHEDULE





LAKE MICHIGAN ALLOCATION STATUS



Draft Allocation Application Submittal Sept 21, 2020





Allocation Permit Approval Sept 1, 2021

CHICAGO COORDINATION STATUS

- Preliminary Agreement executed between Joliet & Chicago in January 2021 (beginning of last year)
- Performed Comprehensive Audit of Chicago's 2018 & 2019 Cost of Service Studies in 2021
 - Reduced water rate by \$0.50 to \$0.60 per 1,000 gallons (2019 COS) depending on final regional demand scenario
 - Discussion on final cost of service methodology continues
- Initiation of Advisory Council
 - Kick-off meeting with Chicago's 4 largest wholesale customers held in December 2021
- Negotiations continue on the development of the Final Water Supply Agreement
 - Anticipate completion and approval of Final Water Supply Agreement in 2nd Quarter of 2022



QUESTIONS?



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WATER COMMISSION FORMATION EFFORTS

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

CREATING WATER COMMISION IS MOST COST-EFFECTIVE APPROACH



• Encourages participation from the most communities

 More participation, more economical, resulting in lowest cost for all



REGIONAL COORDINATION UPDATE

- Focused in 2021 on Formation of Water Commission
- Technical Advisory Group
 - 2 meetings each month (coordination and workshop meetings)
- Mayors and Managers Group
 - Monthly meetings



REGIONAL COORDINATION UPDATE

- 7 Communities (Joliet, Lemont, Romeoville, Crest Hill, Shorewood, Minooka & Channahon) continuing discussions
- 4 Communities have decided not to join (Oswego, Montgomery, Yorkville & Homer Glen)



WATER COMMISSION LEGISLATION





We especially thank our principal bill splators. State Rep. and Majority Caucus Whip Larry Walsh, Jr. State Senator John Connor

We also the Kon and Assistant What is the second as principal cote Rep. and Assistant What is seader Natalie A. Manley, State S hater Meg Loughree Copper and Seate Rep. Dagmara "Dee" Avelar.

Among others, supporters of this legislation included: Will County Executive Jennifer Bertino-Tarrant, Will County Governmental League, Metro West Council of Government, Illinois Municipal League, Will and Grundy County Building Trades, Chicago and Cook County Building Trades, AFL-CIO and City of Chicago. Y-111 N-0 P-1 NV-6 2:32 SENATE BILLS RDG 3 PG 2 SB 280 WALSH-WHEELER-MANLEY EVANS-AVELAR TIF-CITY OF OTTAWA

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WATER COMMISSION STRUCTURE





Water Commission will be governed by a Board of Commissioners. Each Member will appoint an elected official as its representative.

ACTIONS REQUIRED TO JOIN WATER COMMISSION (Feb 1st)



PRELIMINARY AGREEMENT	 Basis for negotiation of final IGA by April 30, 2023 Requires demonstration of financial capability 				
KEY PRINCIPLES	 Governance, Financial, Operations Terms Program Schedule, Development, Management Terms 				
DECLARATION OF MAXIMUM DAY DEMAND	 Design Capacity: 2050 Maximum Day Demand Design Consideration: Estimated Buildout Maximum Day Demand 				
BASIS OF DESIGN	 Infrastructure System Configuration and Design Parameters Establishes Baseline Capital Costs 				
APPOINTMENTS	 Mayors' and Managers' Advisory Working Group (Mayor/Corporate Authorities, Municipal Manager/Administrator/ Municipal Management Staff) Technical Advisory Working Group 				

PRELIMINARY AGREEMENT



Agreement Overview:

- Preliminary Agreement establishes key terms for Water Commission to be formed with IGA in 2023 (after members obtain their Lake Michigan Allocation Permit)
- Between Joliet and communities who approve it by February 28, 2022 (7 communities listed)
- Preliminary Agreement in place until IGA approved in 2023
- Limited termination rights noted in the Preliminary Agreement
- Full document posted on the website at <u>www.RethinkWaterJoliet.org</u>

PRELIMINARY AGREEMENT (Cont'd)



Agreement Objectives:

- Project is completed on time (2030)
- Cost controls are established
- Participation by as many communities as possible in order to reduce costs
- Current and future costs are distributed fairly
- Future capacity needs are protected
- Agreed upon key principles (KP) cannot be changed without unanimous approval



- Defines the basis for the IGA which will create the Water Commission in 2023
- Establishes **deadline for delivery of water** by 2030 (unless a different date is unanimously approved by all Parties)
- Establishes **key terms agreed on by the Parties** related to: Governance; Financing; Program/Project Schedule, Development and Management; and Operations
- Defines Joliet's role as **Program Manager** for the duration of Program Implementation (design through start-up/commissioning)

PRELIMINARY DECLARATION OF MAXIMUM DAY DEMAND



- Need to make preliminary declaration of 2050 Maximum Day Demand and Estimated Buildout Maximum Day Demand
 - Final declaration of 2050 MDD in IGA (2023) must be within 10% of preliminary declaration
- Pay capital contribution based on capacity declared (\$/MGD)
- Initial System Capacity based on Total of all Members' 2050 Maximum Day Demand (no excess capacity)
- Allows for Joliet's future growth (2050 and Buildout)

PRELIMINARY DECLARATION OF MAXIMUM DAY DEMAND



2050 Maximum Day Demand

- CMAP Population Projection of 202,559
- Southeast growth area
- Reduction in non-revenue water and some conservation

Buildout Maximum Day Demand

- Population equivalent over 400,000
- 100-year projection (2121)
- Growth consistent with current development mix

→ Declare 32 MGD

→ Declare 65 MGD

BASIS OF DESIGN

- Presents a current description of the configuration, features, and key design criteria of the proposed system
- Establishes **minimum design criteria** for water commission infrastructure
- **Baseline** for design and associated infrastructure **costs**
- Changes to basis of design that are not required and that would increase program costs or lengthen program schedule require unanimous approval of all members





Exhibit C to Preliminary Agreement Basis of Design

Regional Water Commission January 7, 2022 FOR MUNICIPAL APPROVAL

Stantec

APPOINTMENTS



- To Mayors' & Managers' Advisory Working Group:
 - Mayor/Corporate Authorities:
 - Primary:
 - Alternate:
 - Municipal Manager/Administrator/ Municipal Management Staff:
 - Primary:
 - Alternate:
- To Technical Advisory Working Group:
 - Primary:
 - Alternate:
- Working Groups end when IGA approved & Commission formed in 2023
 - Board of Commissioners: Commissioner & Alternate (Mayor/Corporate Authorities)
 - Technical Advisory Committee: Member & Alternate (Municipal Employee)

DISCUSSION



- Questions on Preliminary Agreement, Key Principles, Basis of Design
- Preliminary Declaration of Maximum Day Demand
 - 2050
 - Estimated Buildout
- Advisory Working Group Appointments
 - Mayors' and Managers' Advisory Working Group

(Mayor/Corporate Authorities, Municipal Manager/Administrator/ Municipal Management Staff)

• Technical Advisory Working Group



FUNDING AND FINANCIAL STRATEGY

WATER COMMISSION INFRASTRUCTURE





REGIONAL COMMISSION IMPLEMENTATION COSTS



Program Management, Design and Construction Engineering for Regional System

Joliet, as Program Manager for Water Commission, will hold, manage, and finance program management and engineering contract.

Commission will reimburse Joliet for other members' share of costs.

Land Acquisition, Permitting for Regional System

Joliet, as Program Manager for Water Commission, will finance costs associated with land acquisition and permitting.

Commission will reimburse Joliet for other members' share of costs.

Construction of Regional Infrastructure

Commission will hold construction contracts, finance construction costs and own, operate/ maintain regional infrastructure.

Members will pay Capital and Debt Service Costs based on proportion of Total 2050 Declared Maximum Day Demand. Design and Construction of Individual Commission Member System Improvements

Individual Commission Members will own, operate/maintain, and be responsible for design, construction, and financing of costs for all improvements required within their water systems.

JOLIET COSTS AS WATER COMMISSION MEMBER



Cost Category	Basis for Cost	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water Supply	Volumetric based on actual water usage (\$ per 1,000 gallons) subject to minimum take									
Capital Costs/ Debt Service	Based on Member's 2050 Declared Maximum Day Demand (\$ per MGD)									
Maintenance & Replacement/	O&M: Volumetric based on actual water usage (\$ per 1,000 gallons)									
	R: Based on Member's 2050 Declared Maximum Day Demand (\$ per MGD)									
Commission Administration	Annual costs split equally between all members									
FUNDING TOOLS





WIFIA – Low interest, flexible draw down, flexible repayment



SRF LOAN – Very low interest, familiar process, good target for stimulus funding



REVENUE BONDS – Shorter issuance process, structuring options, currently lower rates

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

Identified strategy for funding Program while managing required water rate increases.

FUNDING STRATEGY





FUNDING STRATEGY





Debt service plan is sculpted to defer repayment of WIFIA Principal until 2050. Near-term impact on water rate increases is managed.

FUNDING STRATEGY - ACTIONS

rethink Water Together

- Use available CASH and SHORT-TERM BORROWING to defer need for incurring large scale debt
- Lock-in available **WIFIA** funding and flexible repayment options for ongoing costs to be incurred by Joliet
 - Water Main Replacement Program
 - Program Management, Design and Construction Engineering
- Identify individual projects for SRF LOAN funding on an annual basis
- Use **REVENUE BONDS** as needed to compliment other options and maintain desired cash reserve
- Aggressively seek out and pursue **EXTERNAL FUNDING OPPORTUNITIES**

2022 FUNDING MILESTONES



• \$59M Bond Anticipation Note (Q1 2022)

Short-term borrowing to fund:

- 2022 Alternative Water Source Program design, land acquisition, program management (\$23M)
- 2022 Water Main Replacement Program (\$36M)

• Close of first WIFIA Loan for \$308M (Q1 2022)

Long-term, flexible credit agreement to fund up to 49% of:

- Alternative Water Source Program design, land acquisition, program management
- Water Main Replacement Program (through 2030)
- Federal Community Project Funding (expected)

FINANCIAL STRATEGY - RATES



- Joliet must develop water rates to support its share of Program costs
- Rate development process will look at options for meeting financial needs while considering affordability
- Construction cost estimates are being updated as part of Preliminary Design and will be included in the rate analysis



JOLIET WATER RATES AS OF NOVEMBER 1, 2021



Household using 50 gallons per day for 1 month

Joliet Resident Joliet Non-Resident Water Volume Charge First 2 HCF Over 2 HCF First 2 HCF Over 2 HCF (\$/HCF) (\$/HCF) (\$/HCF) (\$/HCF) Customer Class Code Commercial С \$2.00 \$6.04 \$2.92 \$6.97 Industrial \$2.00 \$6.04 \$2.92 \$6.97 I Governmental G \$2.00 \$6.04 \$2.92 \$6.97 \$1.81 Residential Owner RO \$5.43 \$2.92 \$6.97 Residential Senior RS \$1.25 \$3.72 \$2.92 \$6.97 \$2.00 \$6.04 Residential Tenant \$2.92 \$6.97 RT Multi Family Owner MO \$2.00 \$6.04 \$2.92 \$6.97 Multi Family Senior \$1.45 \$4.38 \$2.92 \$6.97 MS Multi Family Tenant MT \$2.00 \$6.04 \$2.92 \$6.97 Water Daily Charge per Month per Month All classes, excluding seniors \$6.83 \$6.83 All Senior Classes (RS, MS) \$6.12 \$6.12

JOLIET WATER BILLINGS: 2020







2022 WATER RATE **ANALYSIS**





AFFORDABILITY STRATEGIES



Promote Conservation

- Direct reduction in cost to customer Water and Sewer
- Systemwide reduction in purchased water and energy, chemical costs

Manage Program Costs

- Control Capital and O&M Costs
- Obtain external funding support for program (grants, low interest loans)

Leverage External Sources of Assistance

- Low Income Household Water Assistance Program (LIHWAP)
- Others?

Evaluate Water Rate Structure

• Options for tiered rates and classification rates



QUESTIONS?



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2021 PRELIMINARY **ENGINEERING** AND PROGRAM **MILESTONES**

ALTERNATIVE WATER SOURCE PROGRAM TEAM

Program Mgmt/Engineering

- Stantec Consulting Services, Inc.
 - Crawford, Murphy & Tilly, Inc.
 - Engineering Enterprises, Inc.
 - Strand Associates, Inc.
 - V3 Companies, Ltd.
 - Cornwell Engineering Group, Inc.
 - Images, Inc. (Public Outreach)

Legal/Advocacy/Financial Services

- Donahue & Rose (Legal Counsel)
- Barnes & Thornburg (Advocacy)
- Burns & McDonnell (Rate Consultant)
- Speer Financial (Financial Consultant)
- Katten, Muchin Rosenman, LLP (Bond Counsel)
- JP Morgan (Lead Underwriter)





OVERALL ACCOMPLISHMENTS



Executed Preliminary Agreement with City of Chicago

Updated Strategic Plan Collaboratively led Water Commission Formation with potential regional partners

Obtained approval of Water Commission Legislation

Obtained Lake Michigan Allocation Permit (Joliet) Advanced Preliminary Engineering for CIPs Submitted complete application for first WIFIA Loan

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ACCOMPLISHMENTS: PRELIMINARY ENGINEERING





Sustainability Strategy

Chicago Connection Facilities Design

ACCOMPLISHMENTS:



Reviewed/analyzed alternative water commission governance models Prepared Water Commission Legislation approved during veto session Developed Preliminary Agreement and Key Principles for Water Commission Formation

Supported Lake Michigan Allocation Permit process (Joliet) Led ongoing negotiations with Chicago for Final Water Supply Agreement



ACCOMPLISHMENTS: GOVERNMENT ADVOCACY





Educated local, state, and federal officials on the region's water challenges and need for action



Obtained Congressional support for Joliet water programs through Community Project Funding initiative



Govenor Pritzker Signs Senate Bill 280, Bill to Enable Water Commission The City of Joliet applauds the signing of Senate Bill 280, which enables the creation of a southwest suburban regional water commission. Illinois Governor JB Pritzker announced the bill's signing in a press release <u>https://www.illinois.gov/news/pressrelease.24281.html</u> yesterday.

President Biden signs \$1 trillion bipartisan infrastructure bill into law Advocacy Team incorporated language into Federal infrastructure legislation to allow the program to fund "the formation of regional water partnerships to collaboratively address documented water shortages"

\$ ACCOMPLISHMENTS: FINANCIAL



Submitted application for first WIFIA Loan Developed financial framework for Water Commission

Completed audit of Chicago's cost of service water rate Updated funding strategies to optimize Program costs and enhance affordability



QUESTIONS?



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LOOK AHEAD - 2022 AND BEYOND

PROGRAM GOALS FOR 2022



Regional Coordination	Engineering	Funding/Financial	Legal	Governmental Advocacy
Approval of Preliminary Agreement with Regional Communities	Complete Preliminary Design of CIPs	BAN and WIFIA Loan Closing (1 st Quarter)	Approval of Chicago Water Supply Agreement (2 nd Quarter)	Promote Expanded Access to SRF Funds
Coordinate with Advisory Working Groups on Commission Design	Proceed into Final Design for CIPs	Commission WIFIA Letter of Interest	Development of Commission Documents (IGA, Water Supply Agreement)	Develop opportunities for external funding

PROGRAM SCHEDULE – BEYOND 2022 OVERVIEW



2023

- Commission Formation
- Initial SRF Loan Application
- Preliminary and Final Design
- Land/Easement Acquisition

2024

- Commission WIFIA Loan
 Closing
- Land/Easement Acquisition
- Final Design and Bidding
- Construction Begins at Chicago Connection

2025-2030

- Final Design and Bidding
- Construction
- Commissioning/Startup
- Water Source Transfer
- Chicago Cost of Service Analysis (2029)

Ongoing Public Education and Outreach



2030

Delivering Lake Michigan Water to a Growing Region





FOR MORE INFORMATION:

 Sign up for the mailing list
 Visit the website at <u>www.RethinkWaterJoliet.org</u>

- Learn more Eblasts, social media posts
- Help spread the word



QUESTIONS?



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