



Joliet Alternative Water Source Program

November 19, 2020

City Council Workshop

Welcome



Allison Swisher
City of Joliet




Joe Johnson
Stantec



Theresa O'Grady
Crawford, Murphy
& Tilly

WORKSHOP AGENDA



- 
- **Presentation – Alternative Water Source Program Update & Workshop Goals**
 - Allison Swisher, City of Joliet
 - **Presentation – Lake Michigan Water – Chicago Department of Water Management (CDWM) Alternative**
 - Description of Alternative & Key Terms- Theresa O’Grady, CMT
 - Implementation Considerations & Cost of Water- Joe Johnson, Stantec
 - Alternative Risks & SWOT Analysis - Allison Swisher, City of Joliet
 - **Presentation – Lake Michigan Water – New Indiana Intake Alternative**
 - Description of Alternative & Key Terms- Theresa O’Grady, CMT
 - Implementation Considerations & Cost of Water- Joe Johnson, Stantec
 - Alternative Risks & SWOT Analysis - Allison Swisher, City of Joliet
 - **Next Steps for Alternative Comparison and Alternative Water Source Selection**
 - Allison Swisher, City of Joliet
 - **Public Comments**

WORKSHOP GOALS



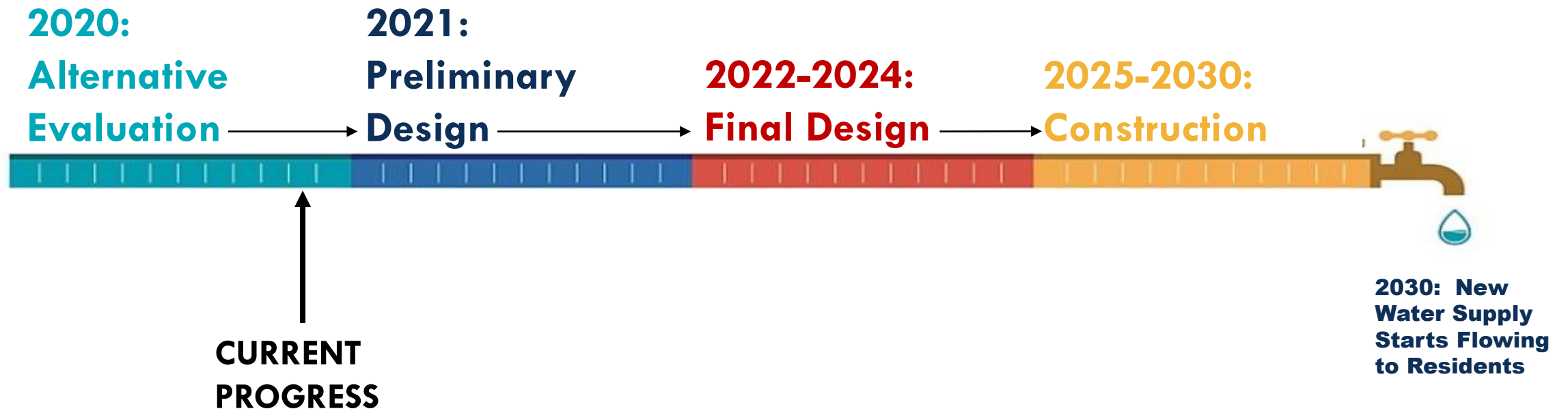
- Update City Council on **progress** and **schedule** for the Alternative Water Source Progress, 2020 Evaluation
- Present the Prospectus (Business Case) for each Alternative:
 - **Lake Michigan Water – Chicago Department of Water Management**
 - **Lake Michigan Water – New Indiana Intake**
- Discuss the Next Steps in the Alternative Water Source Selection



Alternative Water Source Program Update

Allison Swisher, City of Joliet

PROGRAM SCHEDULE



STRATEGIC PLAN



- Strategic Plan prepared by City Staff in **January 2020**
- 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.

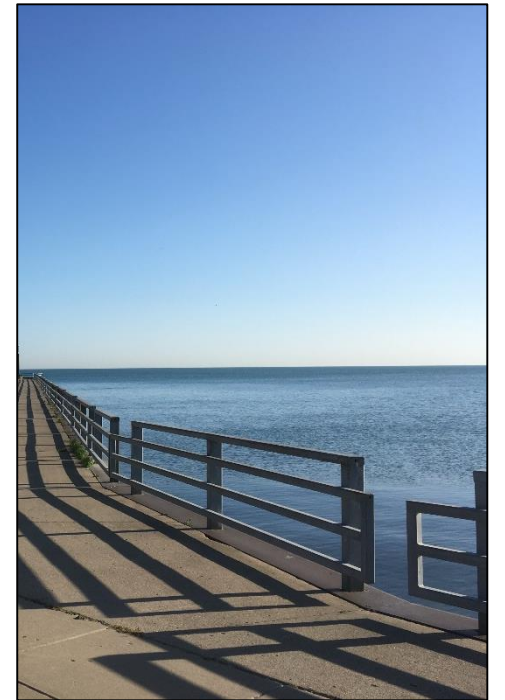
TWO WATER SOURCE ALTERNATIVES



LAKE MICHIGAN
WATER – Chicago
Department of
Water Management
(CDWM)





LAKE MICHIGAN
WATER – New
Indiana Intake




HOW DO WE MAKE A **DECISION**?



-  **Prospectus** is a brief document highlighting the business case for **each water source alternative**

-  **Prospectus** documents have been prepared - one for each of the water source alternatives
 - ✓ *Lake Michigan – Chicago Department of Water Management*
 - ✓ *Lake Michigan – New Indiana Intake*

-  **Prospectus** allows for side-by-side comparison of **each water source alternative**

PROSPECTUS OVERVIEW



Each **Prospectus** includes:

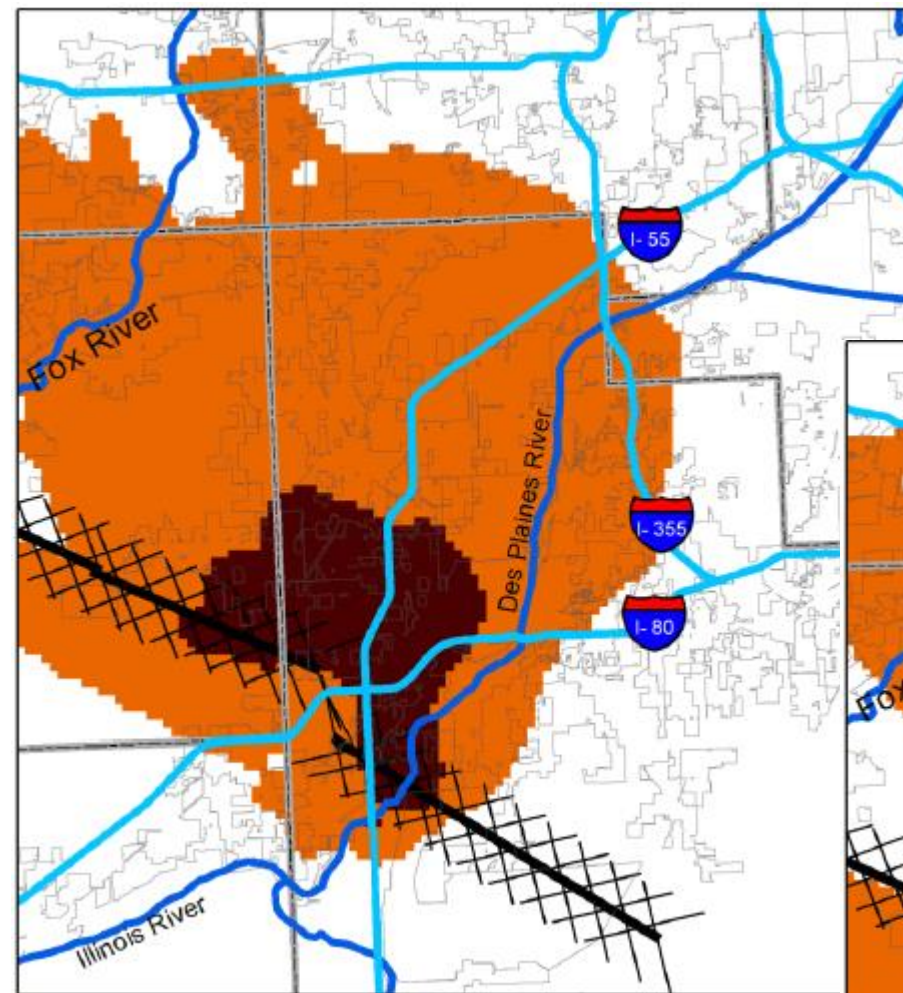
- ✓ *Section 1: Executive Summary*
 - ✓ *Section 2: Problem Statement*
 - ✓ *Section 3: Water Sources Available in Northeastern Illinois*
 - ✓ *Section 4: Previous Studies*
 - ✓ *Section 5: 2020 Evaluation*
 - ✓ *Section 6: Lake Michigan Water - (CDWM or New Indiana Intake) Alternative*
 - ✓ *Section 7: Alternative Risk Analysis*
 - ✓ *Section 8: Alternative SWOT Analysis*
 - ✓ *Section 9: Alternative Summary*
 - ✓ *Section 10: Prospectus Summary – The Business Case*
- ✓ *Unique Sections*
 - ✓ *Common Sections*

PROBLEM STATEMENT

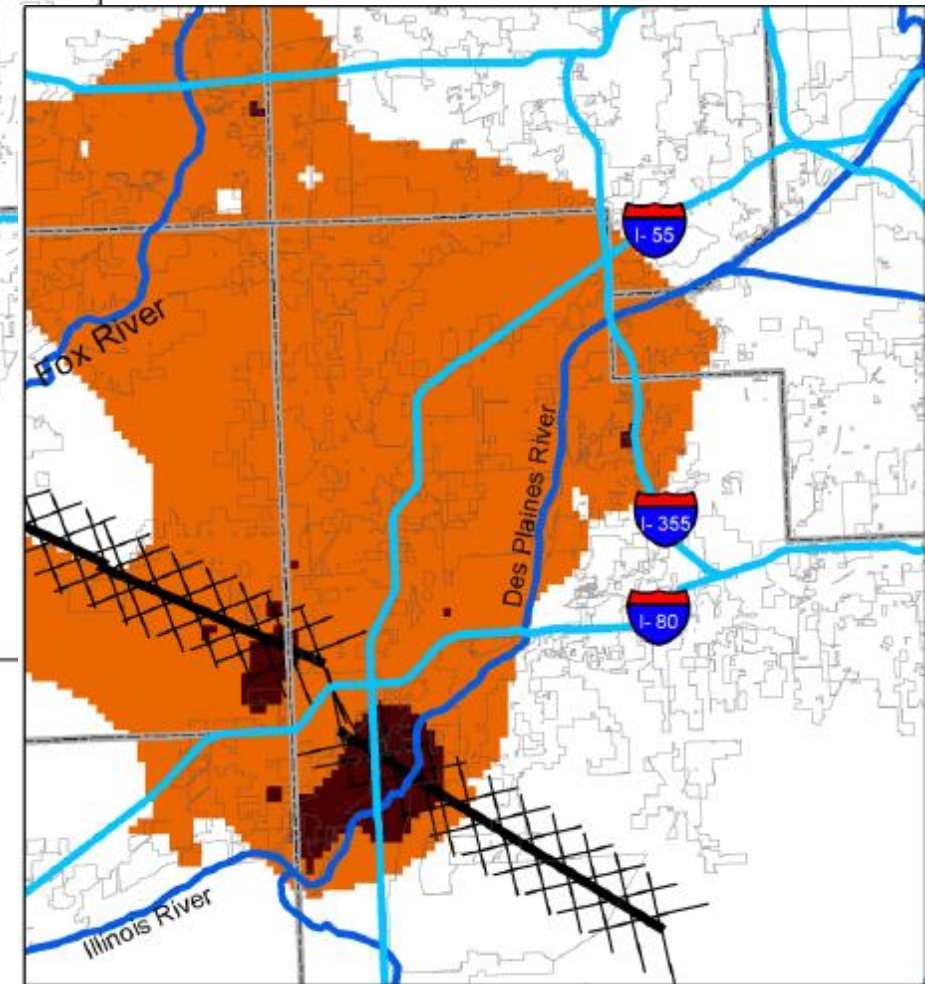
(Section 2)

The existing water source for the City of Joliet **and the region**, the deep sandstone aquifer, is being depleted at the current usage rates and is not sustainable.

The existing water source will no longer be able to meet the City's Maximum Day Demands by 2030.



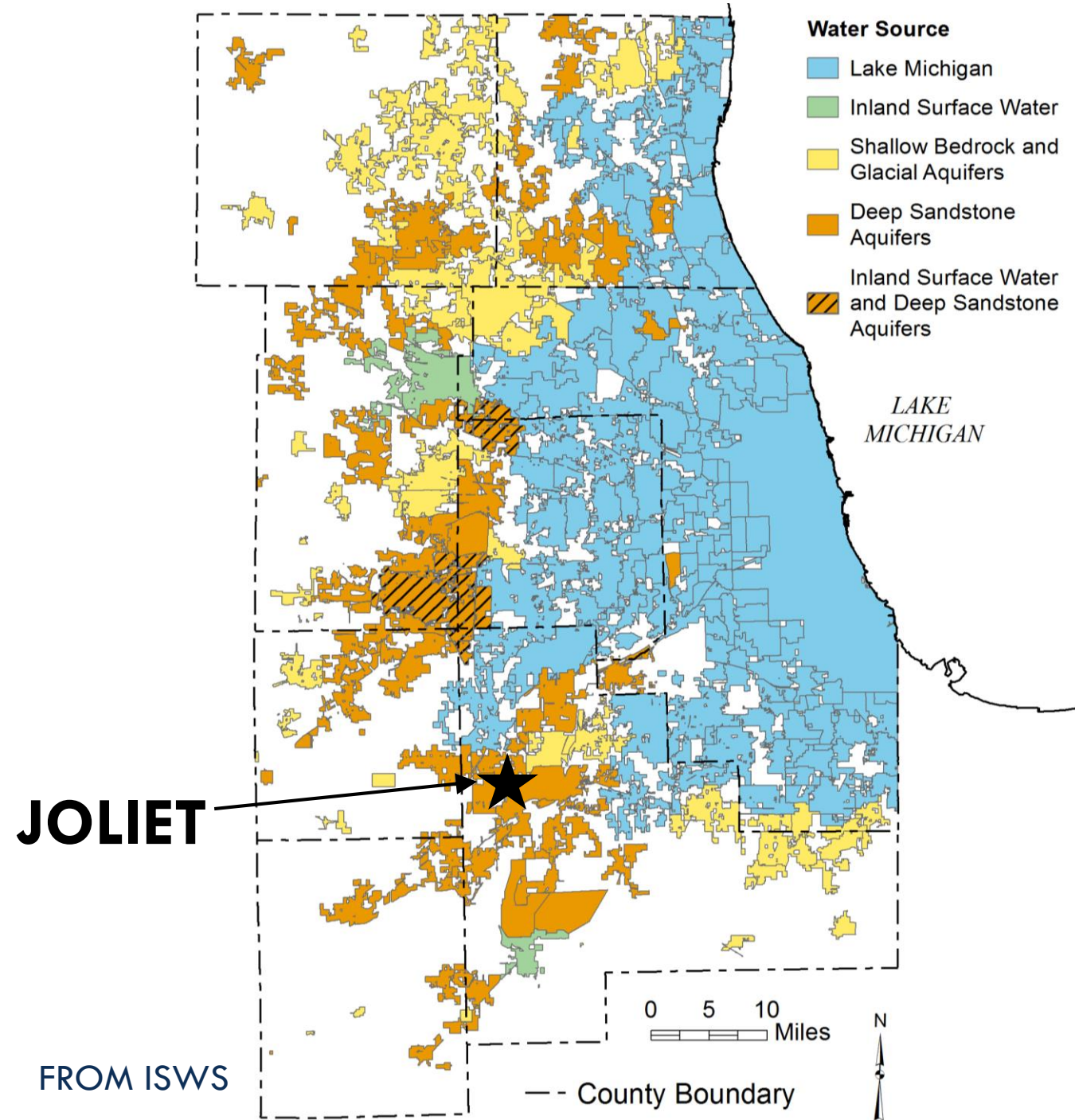
2029 – Before Joliet switches off the aquifer



2050 – Peak Pumping (Joliet off aquifer)

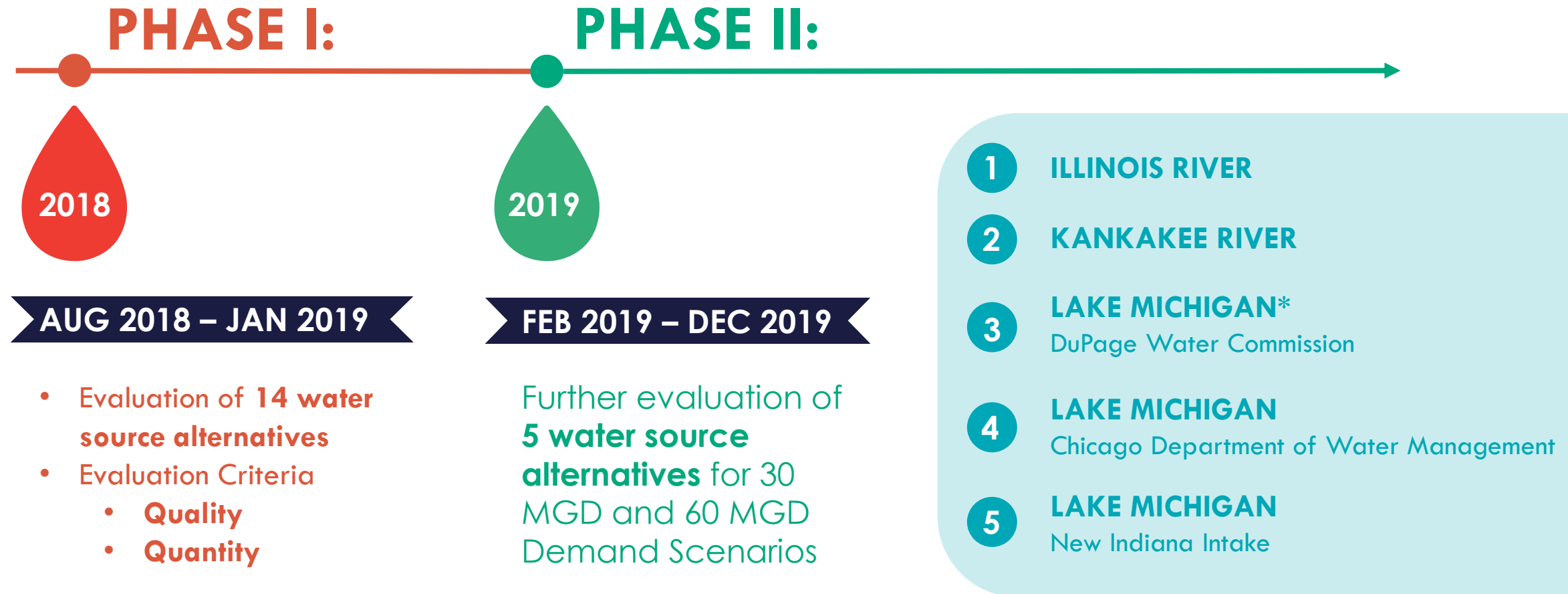
WATER SOURCES AVAILABLE IN NORTHEASTERN ILLINOIS (Section 3)

- Groundwater Wells
- River Water
- Lake Michigan Water



PREVIOUS STUDIES

(Section 4)



*Per a letter dated December 4, 2019 from the DuPage Water Commission, they do not want to be considered as an alternative water source supplier for the City of Joliet.

2020 EVALUATION

(Section 5)



OVERSIGHT

Funding Strategy

Impact on Water Rates & Total
Cost of Water

Risk Analysis

Governmental
Advocacy/Outreach

Public Outreach & Stakeholder
Engagement

EXTERNAL COORDINATION

Water Demand Scenarios

Lake Michigan Allocation

Non-Revenue Water Reduction

Water Purchase/Access
Negotiations

Regional Development

ENGINEERING

Engineering/Siting/Routing Studies

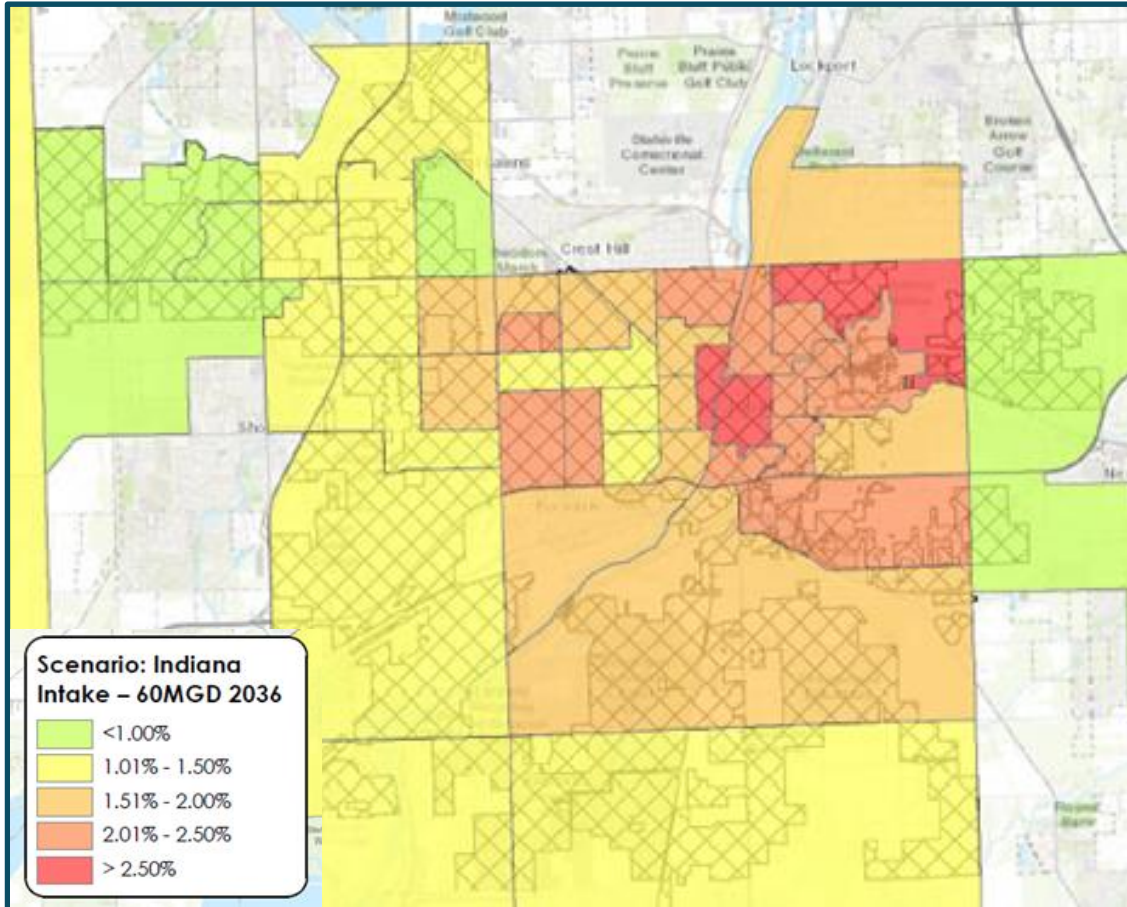
Permitting Plans

Construction
Sequencing/Contracting Plan

Operations & Staffing Evaluation

Class 4 OPCCs

PROGRAM AFFORDABILITY



Water bill as a % of Median Household Income

Challenge

- Significant rate increases will be required regardless of the alternative selected
- Impact of increased rates will vary across City

Possible Responses

- Senior Rate (Existing)
- Conservation education
- Expanded “lifeline” rate tier
- Customer Assistance Programs (CAP)

QUESTIONS?



www.RethinkWaterJoliet.org



Lake Michigan Water – Chicago Department of Water Management (CDWM) Alternative



Lake Michigan Water – CDWM Alternative

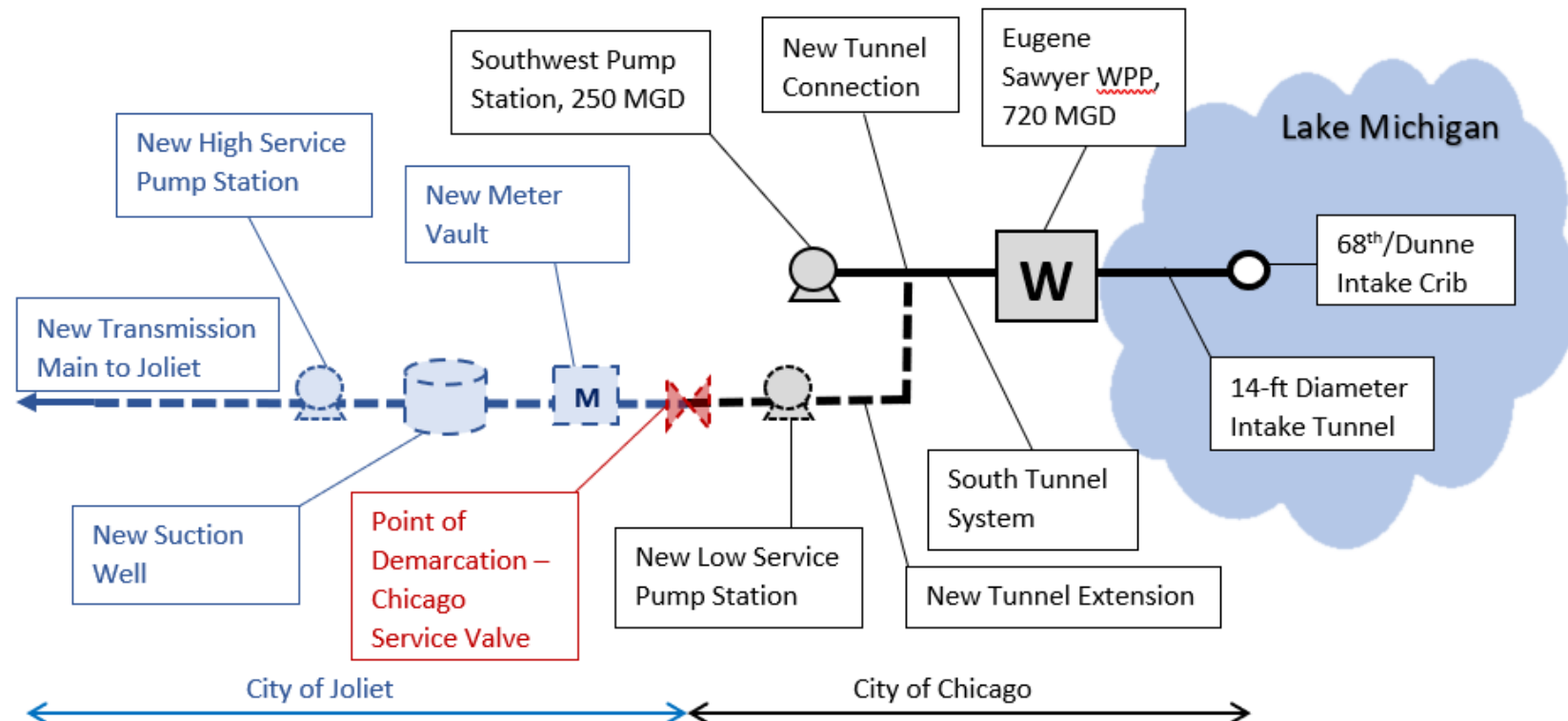
- Description of Alternative
- Key Terms for Water Supply Agreement

Theresa O'Grady,
CMT

DESCRIPTION OF ALTERNATIVE



- Water Source
- Water Treatment and Finished Water
- New Water Supply Infrastructure
 - **Chicago** New Infrastructure
 - **Joliet** New Infrastructure
 - Transmission System/Intermediate Pump Station
 - **Joliet** Water Distribution System Modifications
 - **Back-up** Well Supply

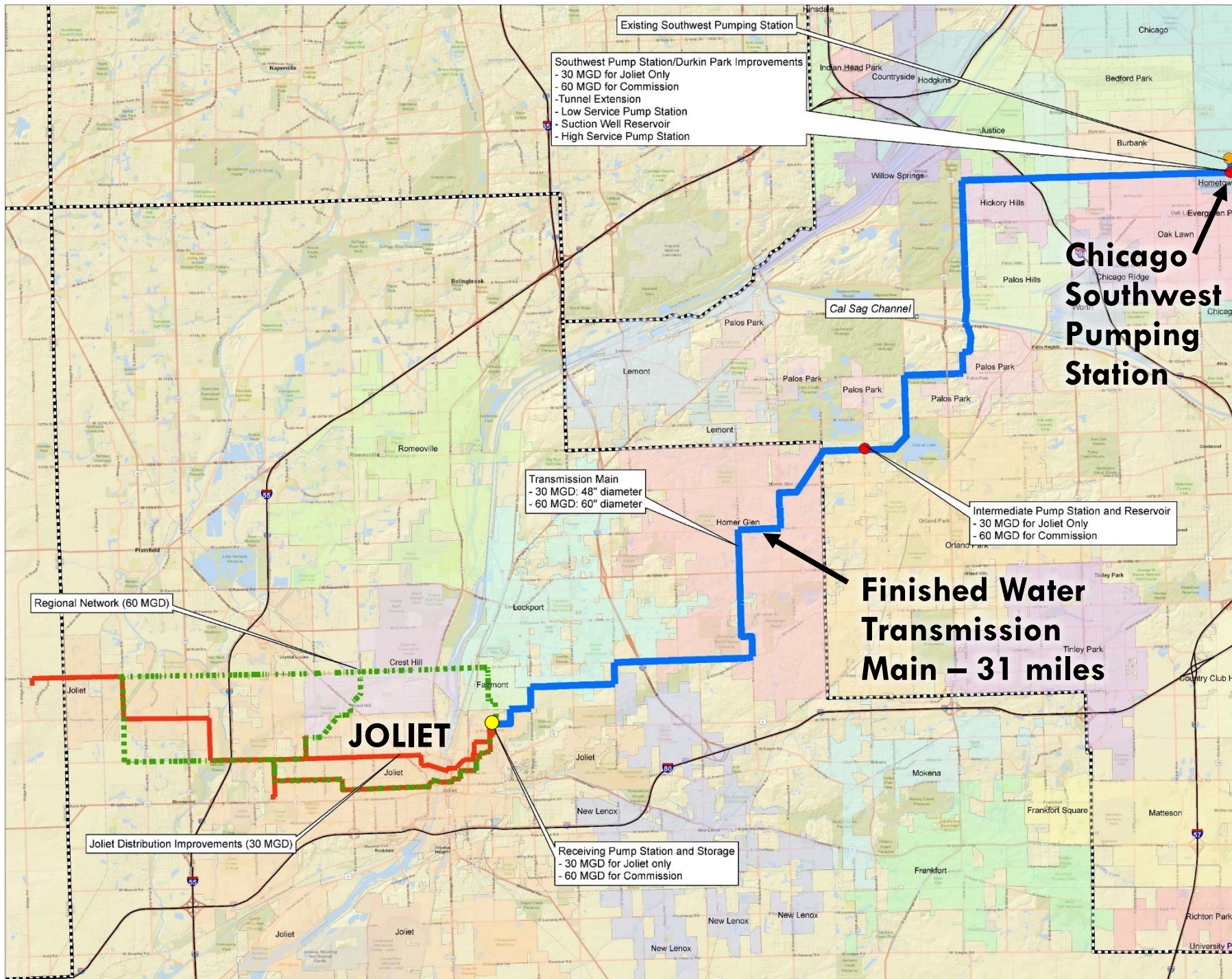


DESCRIPTION OF ALTERNATIVE



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 - **Back-up** Well Supply





CDWM ALTERNATIVE



0 1.25 2.5 5 Miles

(At original document size of 22x34)
1 Inch = 6000 FT

Legend

- Finished Water Transmission Main
- Regional Network
- Water Distribution System Modifications

Facilities

- Existing Fairmount & Garvin Facilities
- Existing Southwest Pumping Station
- Proposed Facility
- County Boundaries



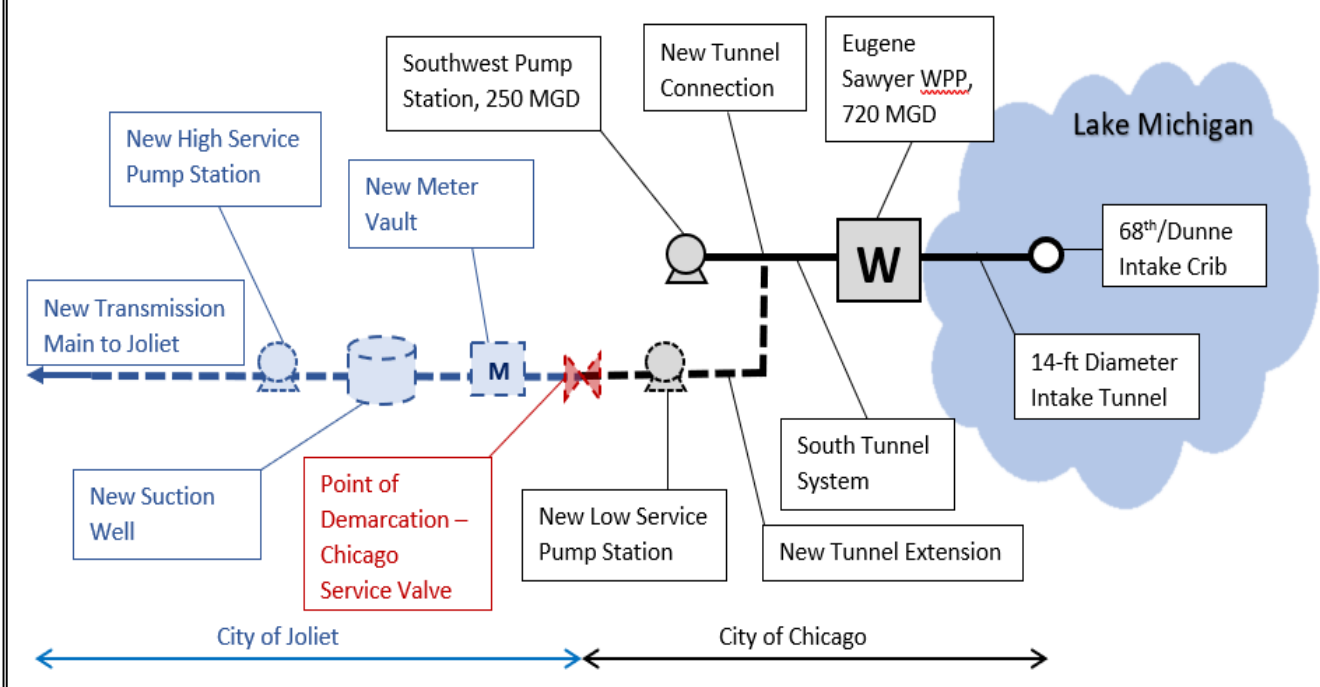
KEY TERMS FOR WATER SUPPLY AGREEMENT

- Agreement **Structure & Term**
- **Rights & Responsibilities** of the Parties*
- **Real Estate** Matters
- Basis for **Costs** and Fees*
- Provision for **Assignment/Transfer**
- Commitment to **Transparency** and Collaboration*



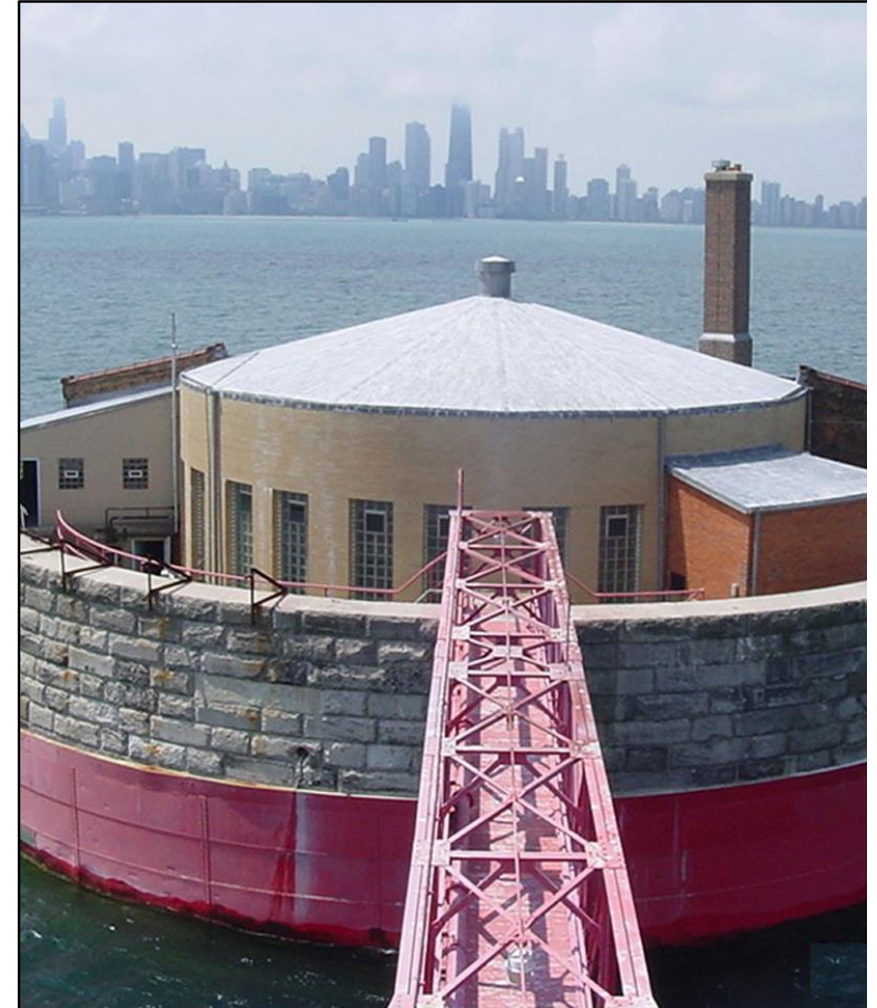
RIGHTS & RESPONSIBILITIES OF THE PARTIES

- Water Quality and Quantity
- **Chicago** New Water Supply Infrastructure
 - Owned & operated by Chicago
 - Chicago designs/constructs Tunnel Connection
 - Chicago finances but Joliet designs/constructs Tunnel Extension, Low Service Pump Station, Chicago Service Valve
- **Joliet** New Water Infrastructure
 - Meter Vault, Suction Well, High Service Pump Station, Transmission Main
 - Designed, constructed, owned & operated by Joliet
- Water **Storage** Requirements



BASIS FOR COST & FEES

- Uniform Water Rate
- **Credit** equal to difference between the previous year's Uniform Water Rate and cost of service to Joliet
- **Cost of Service** – Joliet only pays for facilities attributable to water service to Joliet
- Results in **Wholesale Rate** to Joliet



COMMITMENT TO TRANSPARENCY AND COLLABORATION



- **Chicago's** commitment memorialized in preliminary Agreement
- Formation of an **Advisory Council** composed of representatives from Chicago, Joliet and other wholesale purchasers
- **Goals:**
 - Obtain meaningful **input and feedback** from members regarding operations and capital investments of the Chicago water system
 - Establish standing mechanisms for **regular/enhanced communication**
 - Provide process for members to **make recommendations** for Chicago's consideration for **reliable and cost-effective** delivery of water





Lake Michigan Water – CDWM Alternative

- Implementation Considerations and Schedule
- Cost of Water

Joe Johnson, Stantec

IMPLEMENTATION CONSIDERATIONS

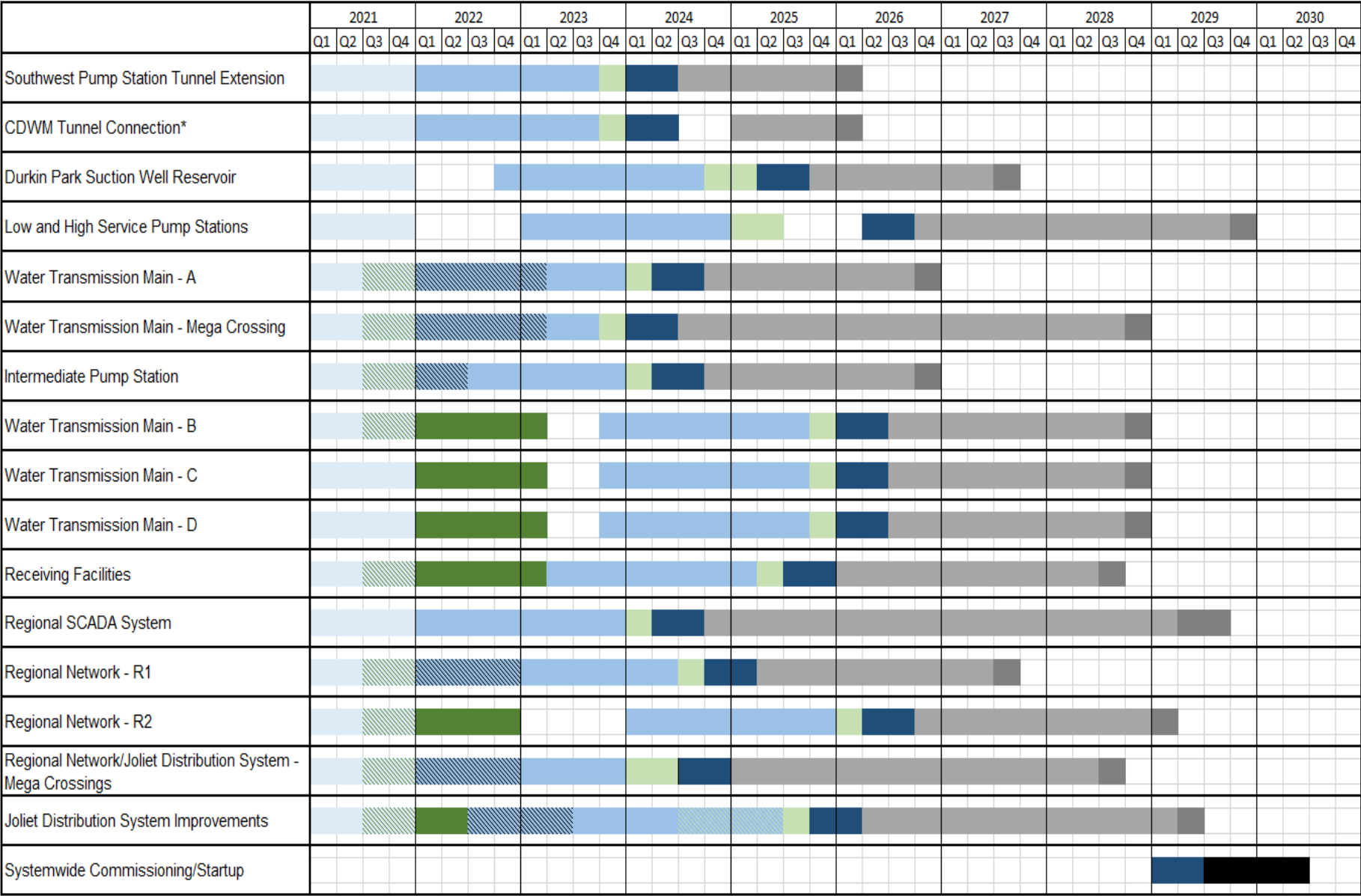


- **Land Acquisition**
- **Permitting Plans**
 - Overall Permitting
 - Site Specific Permitting
 - Route Specific Permitting
- **Implementation Plan**
 - Design & Construction
 - Start-up, Commissioning, Monitoring
 - Water Source Transfer Plan
- **Operations & Staffing**

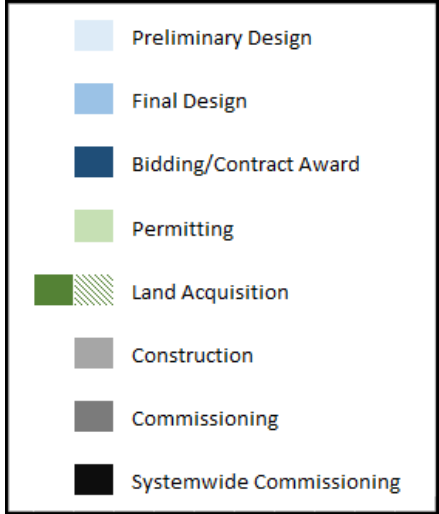


CONCEPTUAL IMPLEMENTATION SCHEDULE

LAKE MICHIGAN WATER – CDWM REGIONAL 60 MGD ALTERNATIVE



Legend



*Construction Completed by CDWM

COST OF WATER

(CDWM ALTERNATIVE)



- Water Purchase Costs
- Capital Costs
- Operation, Maintenance & Replacement (OM&R) Costs
- Funding Strategy
- Impact on Monthly Water Rates
- 50-year Total Cost of Water

WATER PURCHASE COSTS



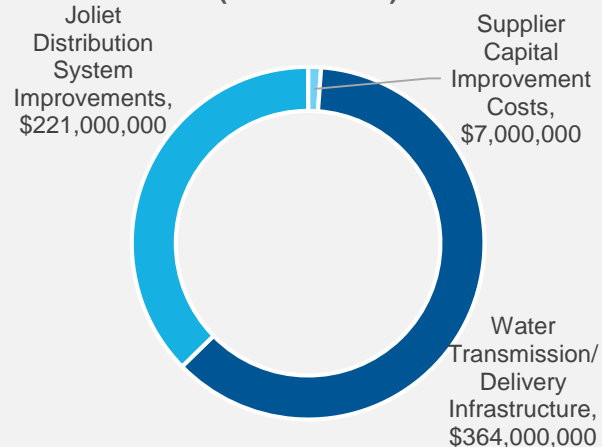
- **Previous** framework – Uniform Water Rate
- **New** framework – Wholesale Rate based on Cost of Service
- Joliet only pays for **costs attributable to service** to Joliet
- Joliet's Cost of Service (30 MGD) includes:
 - Cost for **existing facilities** (Crib, Intake, Eugene Sawyer WPP, South Tunnel) - \$2.27/1,000 gallons
 - Cost for **new facilities** (Tunnel Connection/Extension, Low Service Pump Station) - \$0.94/1,000 gallons

	2018 \$/1,000 gallons
Uniform Water Rate	\$3.95
Joliet Cost of Service (estimated)	\$3.21

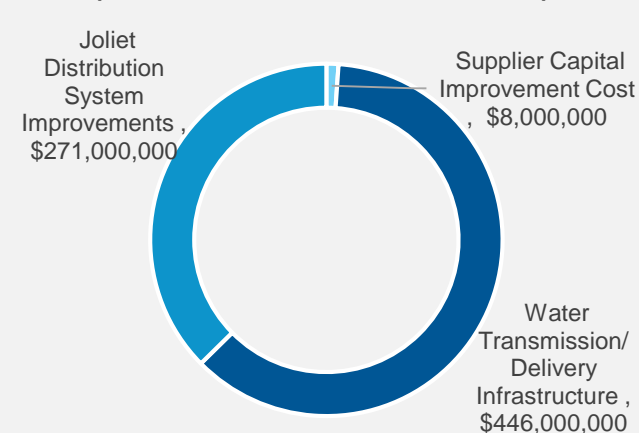
CAPITAL COSTS

- Supplier Capital Improvements
- Water Transmission/Delivery System Costs
- Joliet Distribution System Improvements
- Regional Water Commission Network Improvements (for Regional Option only)

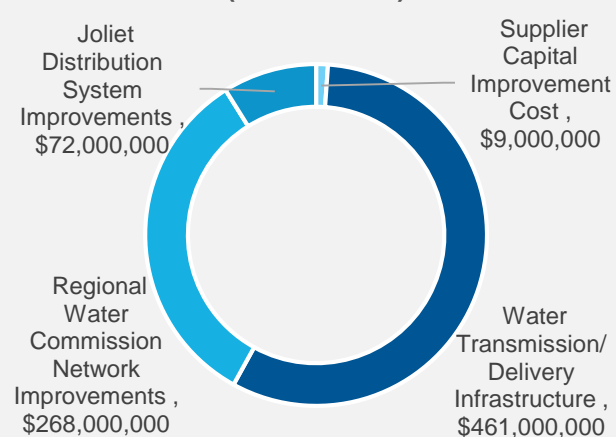
Capital Costs: CDWM 30 MGD
\$592 million
(2020 dollars)



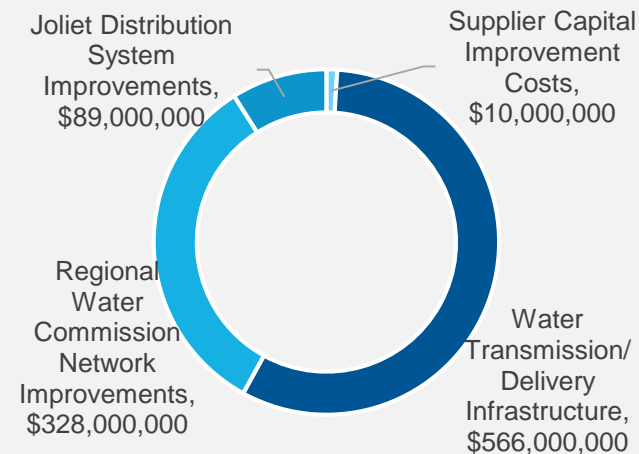
Capital Costs: CDWM 30 MGD
\$725 million
(escalated to time of construction)



Capital Costs: CDWM 60 MGD
\$810 million
(2020 dollars)



Capital Costs - CDWM 60 MGD
\$993 million
(escalated to time of construction)



OPERATION, MAINTENANCE & REPLACEMENT (OM&R) COSTS



- Net annual increase in Operation, Maintenance & Replacement Costs (2030 dollars):

	CDWM 30 MGD	CDWM 60 MGD	CDWM 60 MGD (Joliet share)
Annual OM&R Costs for New Infrastructure	\$4,700,000	\$6,900,000	\$4,300,000
Annual Credit for Reduced Well Use	(\$4,000,000)		(\$4,000,000)
Net Increase in Annual OM&R	\$700,000		\$300,000

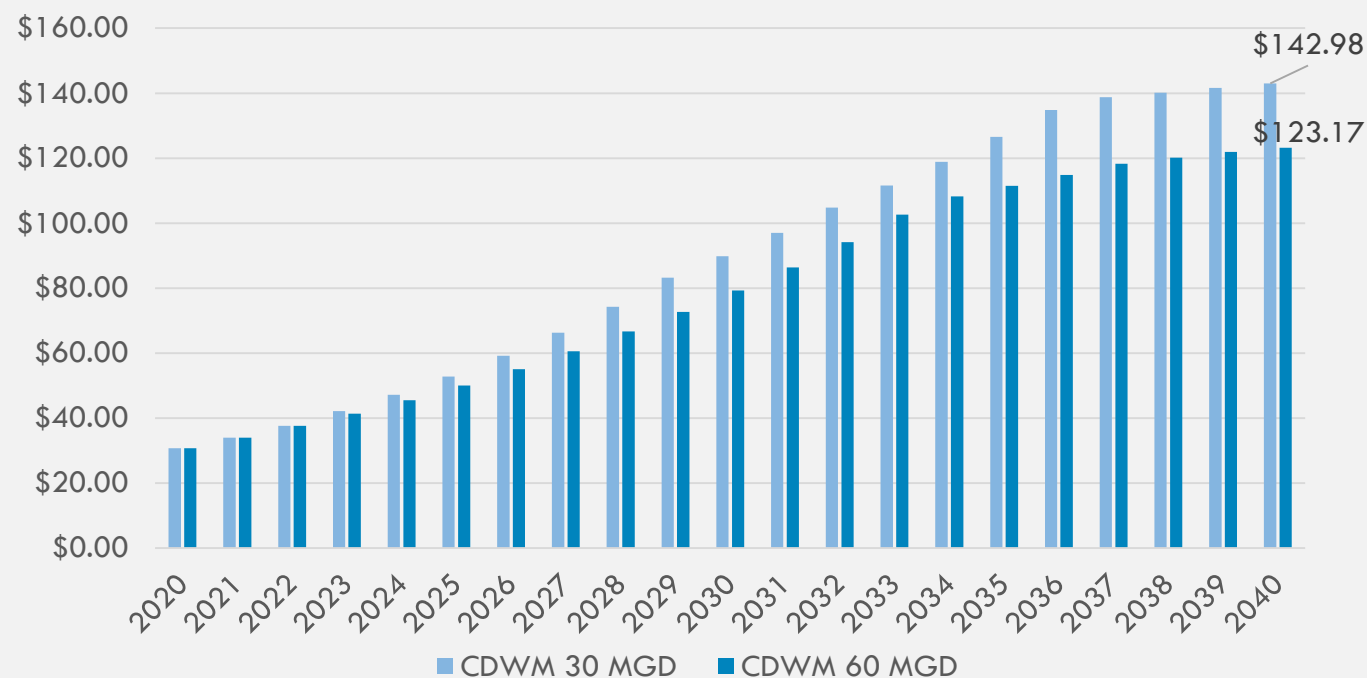
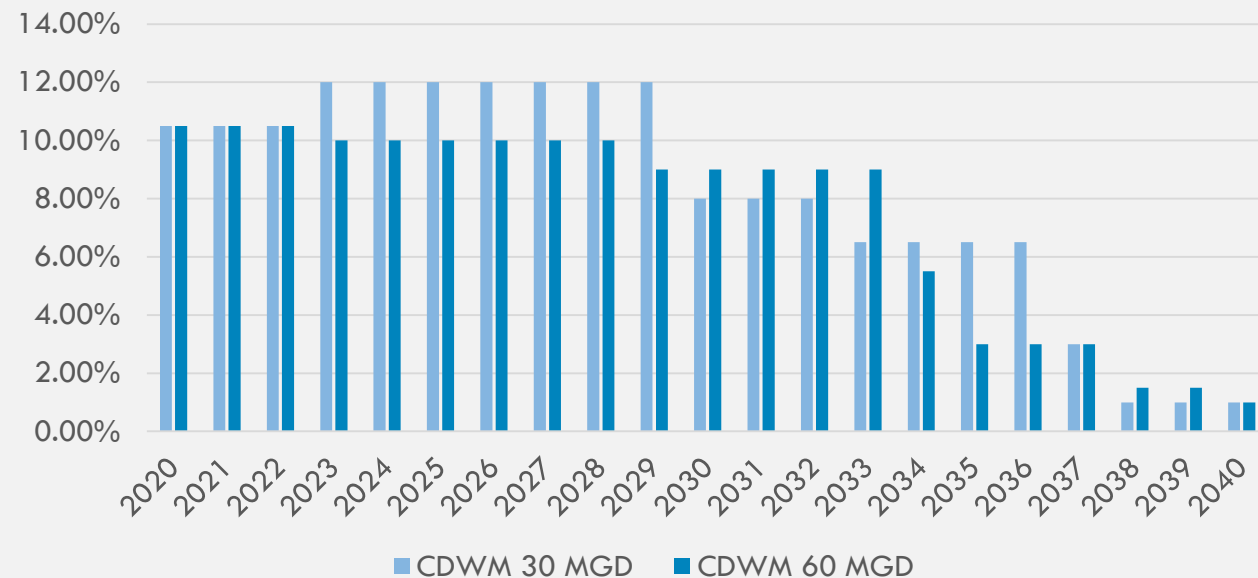
FUNDING STRATEGY



Funding Source	Interest Rate	Maturity	Financing 30 MGD	Financing 60 MGD
WIFIA	2.0% - 3.0%	35 years after substantial completion	\$355,000,000	\$487,000,000
IEPA SRF	1.5% - 2.5%	20 years	\$250,000,000	\$250,000,000
Revenue Bonds	3.0% - 4.0%	30 years	\$120,000,000	\$256,000,000
TOTAL (escalated to time of construction)			\$725,000,000	\$993,000,000

IMPACT ON MONTHLY WATER RATES

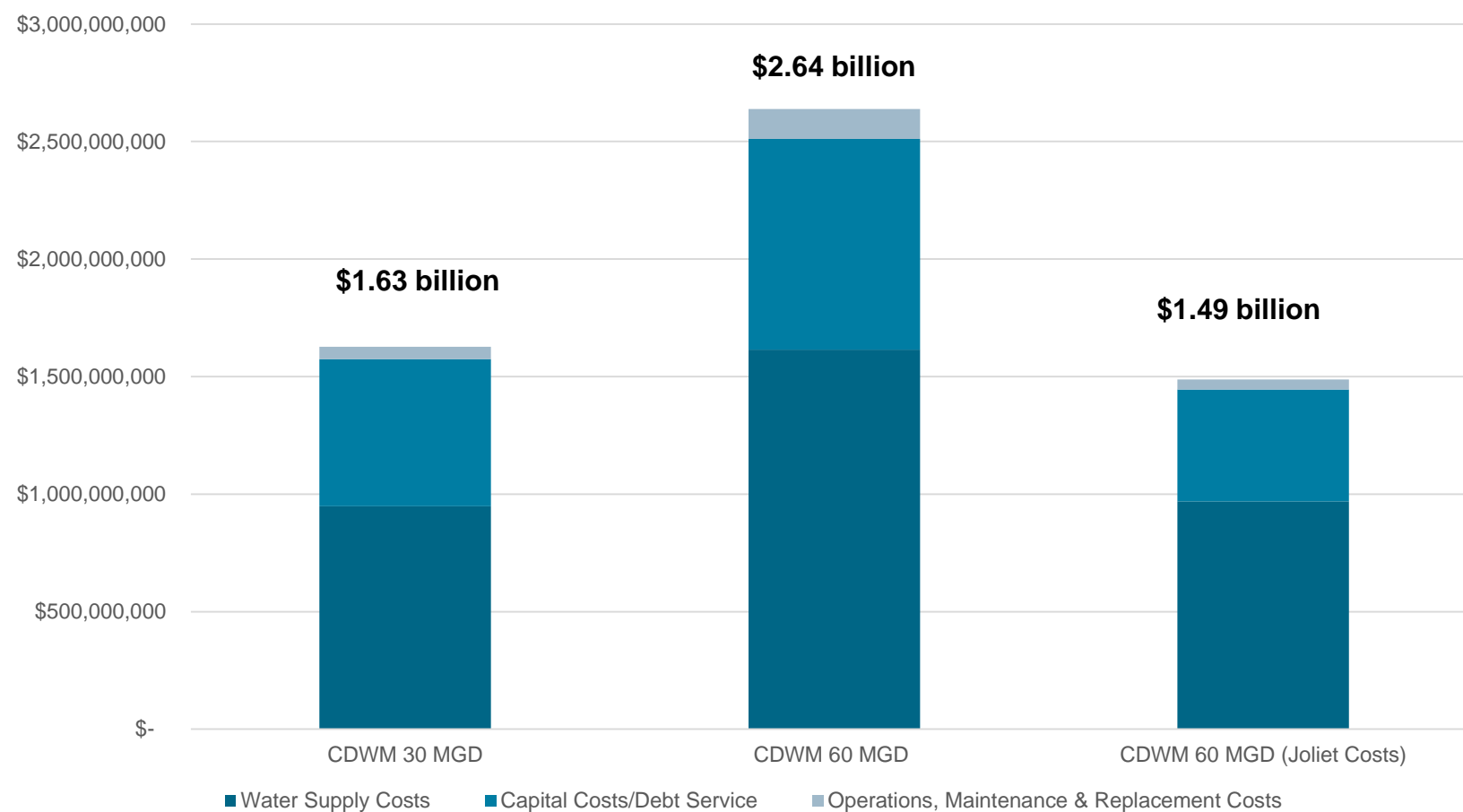
- Increases take into account alternative water source improvements and general water system improvements (including NRW Reduction)
- Rate increases for the 30 MGD scenario:
 - 10.5% annually for 2020 to 2022
 - 12% annually for 2023 to 2029
 - 8% annually for 2030 to 2032
 - 6.5% annually for 2033 to 2036
 - 3% for 2037
 - 1% annually for 2038 to 2040
- For 30 MGD Scenario, monthly water bill:
 - 2030 - \$89.83/month
 - 2040 - \$142.98/month
 - based on water usage of 700 cubic feet
 - does not include sewer or trash



50-YEAR TOTAL COST OF WATER



- Water Supply Costs
- Capital Costs/Debt Service
- OM&R Costs

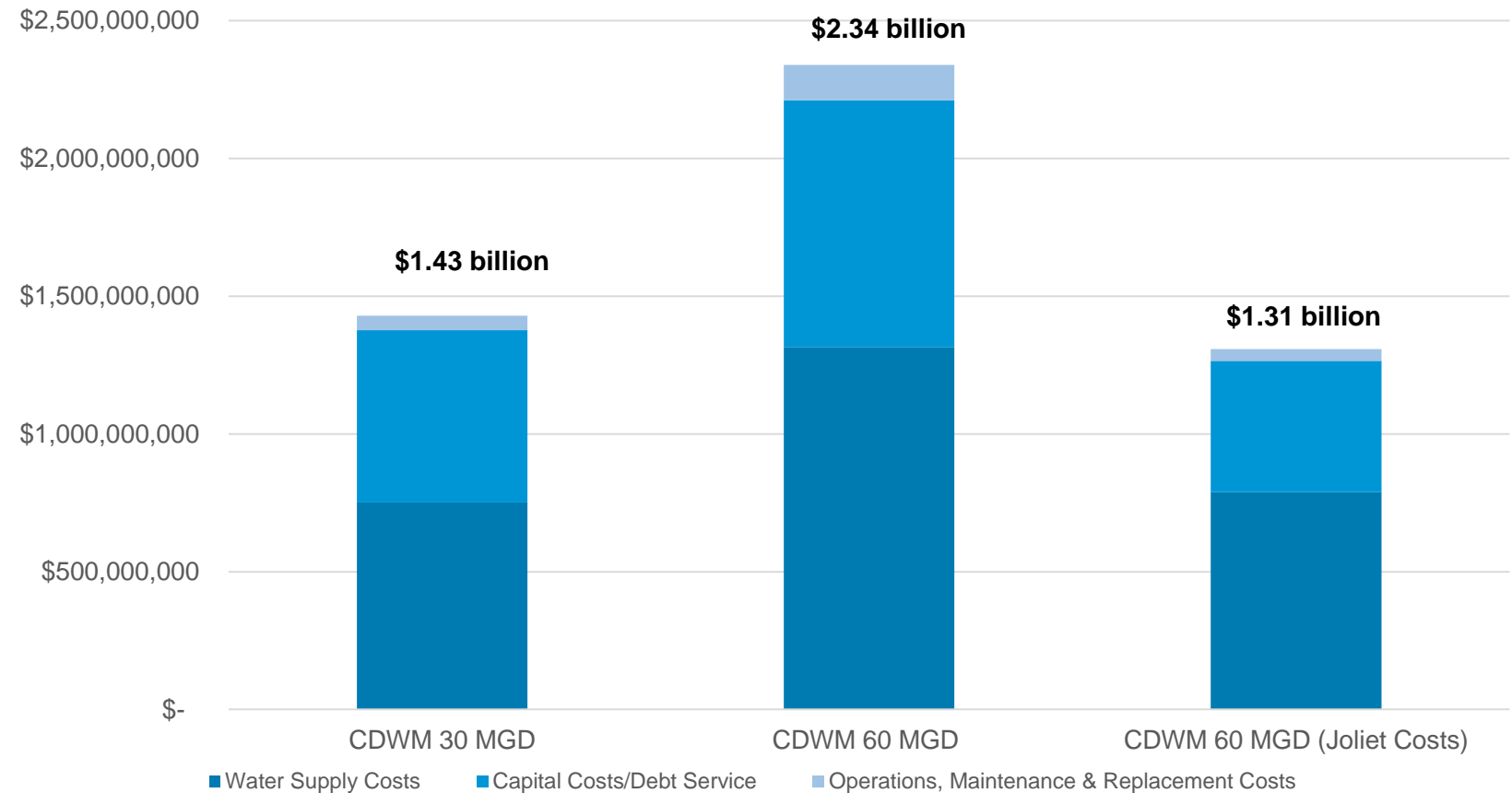


Based on annual purchased water rate escalation of 2%

50-YEAR TOTAL COST OF WATER



- Water Supply Costs
- Capital Costs/Debt Service
- OM&R Costs



Based on annual purchased water rate escalation of 1.3% for 30 MGD and 1.39% for 60 MGD (as suggested by Chicago)



Lake Michigan Water – CDWM Alternative

- Alternative Risks and SWOT Analysis

Allison Swisher, City of Joliet

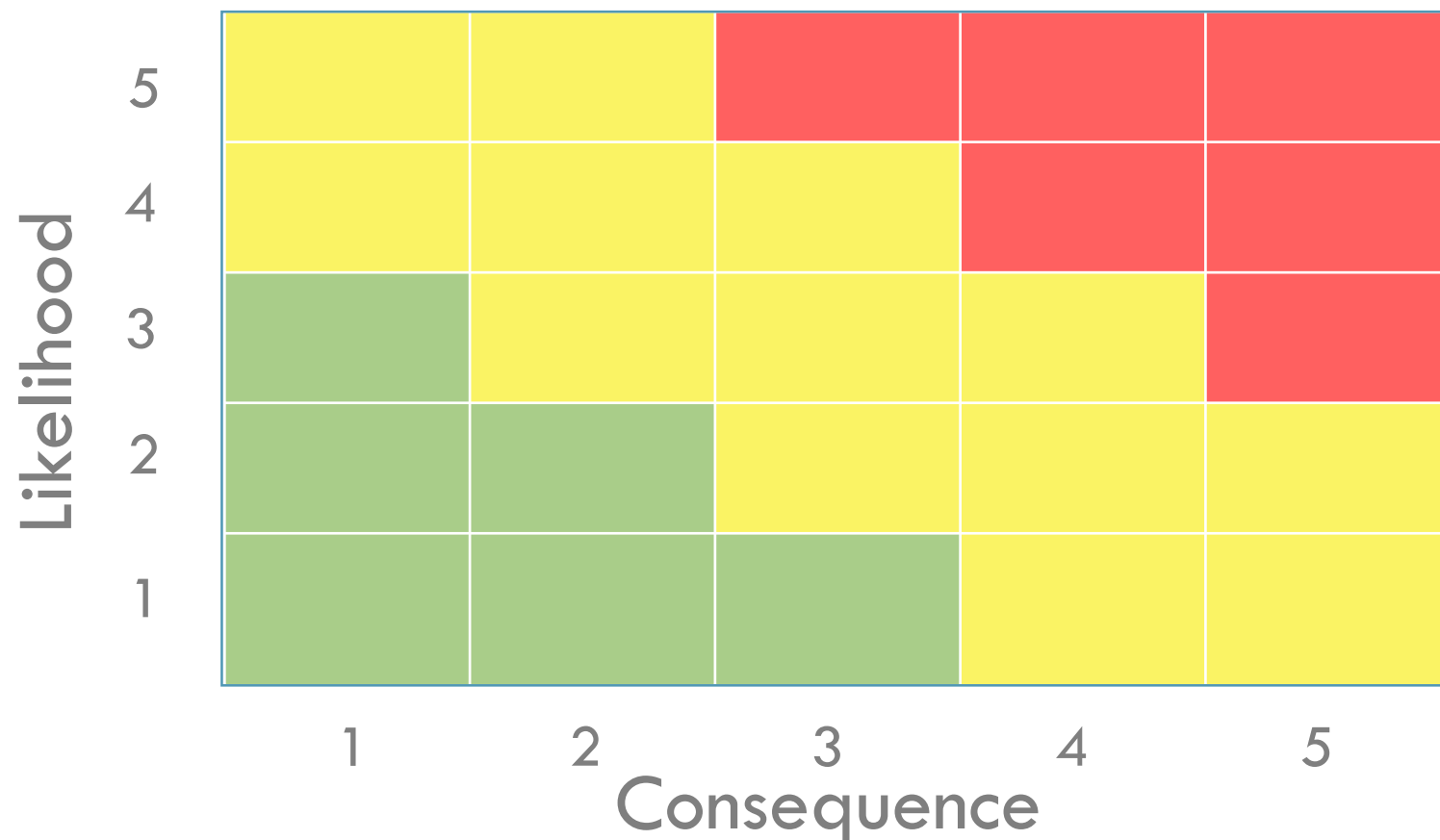
UNCERTAINTY AND RISK



Risk = Uncertainty
that matters

Risk is a function of:

- Likelihood
- Consequence (Impact)



ALTERNATIVE RISK ANALYSIS

(Section 7)



Risks were identified and steps were taken to mitigate risks

Agreement Terms & Conditions

Sale of Water
System

Change of
Administration

Payment for items
not related to Joliet

Control

Operations

Water Quality

Water Rates

Aged Infrastructure

70+ years old

Does not treat for
emerging
contaminants

Land Acquisition

Rights-of-way,
easements

Facility sites

CDWM ALTERNATIVE

SWOT ANALYSIS (Section 8)

Strengths

- ♦ **Chicago is an established water supplier with high quality source**
- ♦ No responsibility for surface water treatment facilities
- ♦ All construction activity is within Illinois
- ♦ Improvements can be completed in time to allow for new water source to be online by 2030
- ♦ Cost of service based on wholesale water rate
- ♦ Chicago's proposed Advisory Council offers Joliet the opportunity to provide meaningful input
- ♦ Agreement transferrable to Regional Water Commission

Weaknesses

- ♦ **No control over water production and thus purchased water costs**
- ♦ Chicago's existing aged infrastructure
- ♦ Reduced flexibility for future expansion and operational opportunities
- ♦ Complex construction at a constrained site

Opportunities

- ♦ **Regionalization and use of existing infrastructure for economies of scale**
- ♦ Collaboration with City of Chicago (and its existing wholesale customers)

Threats

- ♦ **Factors beyond Joliet's control (replacement of aging infrastructure, need for advanced treatment and departure of existing wholesale customers)**
- ♦ Future changes to corrosion control and/or the water treatment process
- ♦ Challenges with connection to Chicago's tunnel
- ♦ Land acquisition outside Joliet limits
- ♦ Higher interest rates than those assumed for program funding
- ♦ Increased monthly water bills result in customer non-payment

THE BUSINESS CASE

(Section 10)



- Long-term wholesale customer of City of Chicago at **wholesale rate** based on cost of service
- Reduce the **effort, time, cost, and risks** associated with development and operation of a new lake intake and surface water treatment plant
- Give up **control** over water production/treatment and future water rates
- Chicago infrastructure is **aged** and does not treat for emerging contaminants
- Leverage the knowledge and **water supply expertise** as well as the existing capacity of the City of Chicago system for providing treated Lake Michigan water

QUESTIONS?	Parameter	Lake Michigan Water – CDWM Alternative
	Improvements Required	Tunnel Extension, Low Service Pump Station, Chicago Service Valve, Meter Vault, Suction Well, High Service Pump Station, 31 miles of Transmission Main including intermediate Pump Station and Reservoir, Joliet Distribution System Modifications including additional Storage & Pump Stations
	Capital Costs (2020 dollars)	\$592 million for 30 MGD system, \$810 million for 60 MGD system
	Type of Agreement	Water Purchase for treated Lake Michigan water
	Length of Agreement	50 years plus additional 10 year automatic renewals with 5-year advance notice of intent not to renew, also allows reopeners for discussion of issues on both sides
	Compensation	Volumetric based on the water purchased, Annual cost of \$31 million for 30 MGD system, \$50.5 million for 60 MGD system (based on 2032 demand and 2032 rates)
	Basis for payment	Uniform Water Rate plus credit/debit for difference between Uniform Water Rate and Wholesale Rate (as determined by annual cost of service)
	Operation, Maintenance & Replacement (2020 dollars)	Net increase of \$700,000 annually for 30 MGD, \$2.9 million annually for 60 MGD
	50-year Total Cost of Water	\$1.63 billion for 30 MGD, \$2.64 billion for 60 MGD based on 2% rate escalation and \$1.43 billion for 30 MGD, \$2.34 billion for 60 MGD based on 1.3% and 1.39% rate escalation, respectively
	Rate Increases	For 30 MGD system: 10.5% per year from 2020 to 2022, 12% per year from 2023 to 2029, 8% per year from 2030 to 2032, 6.5% per year from 2033 to 2036, 3% for 2037 and 1% per year for 2038 to 2040
	Estimated Monthly Water Bill	For 30 MGD system: 2030 - \$89.83/month, 2040 - \$142.98/month based on estimated average monthly water usage of 700 cubic feet
	Control	No Control over water treatment and rate setting for purchased water rates – only participation on Chicago’s new Advisory Council
	Operational Requirements	Joliet responsible for water pumping, transmission and distribution. Staffing to remain unchanged from current levels.



Lake Michigan Water – New Indiana Intake Alternative



Lake Michigan Water – New Indiana Intake Alternative

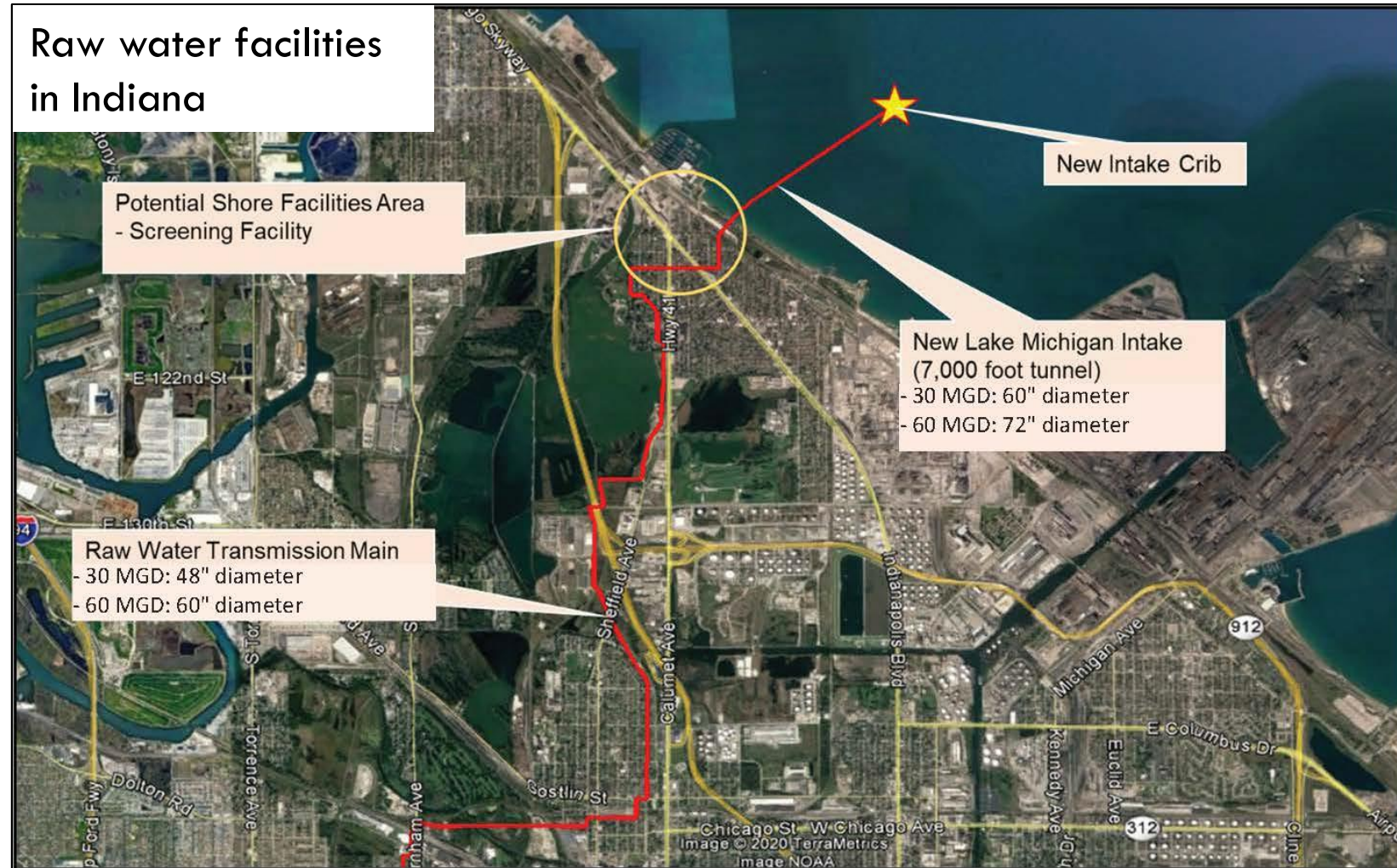
- Description of Alternative
- Key Terms for Access Agreement

Theresa O'Grady,
CMT

DESCRIPTION OF ALTERNATIVE



- Water Source and Raw Water Quality
- Intake Pipe
- Shore Facilities
- Raw Water Transmission System/Intermediate Pump Station
- Water Treatment Plant and Finished Water Quality
- Joliet Water Distribution System Modifications
- Back-up Well Supply



KEY TERMS FOR ACCESS AGREEMENT

- Agreement **Structure & Term**
- **Rights & Responsibilities** of the Parties
- **Real Estate** Matters
- Basis for **Costs** and Fees*
- Provisions for **Assignment/Transfer**
- **Limitation** on Supply of Water to South Cook Communities



BASIS FOR COST & FEES



- 3 Types of Payments
 - One-time payments
 - Initial Payments – upon execution of preliminary and final agreements, upon approval of bidding documents
 - Enhanced right-of-way (ROW) payments
 - Reimbursement payments
 - Costs incurred providing assistance to Joliet during design & construction
 - Annual payments
 - Property taxes (or PILOT)
 - Access Fee (ROW/easements)
 - Volumetric Charge for water pumped from Lake Michigan





Lake Michigan Water – New Indiana Intake Alternative

- Implementation Considerations and Schedule
- Cost of Water

Joe Johnson, Stantec

IMPLEMENTATION CONSIDERATIONS

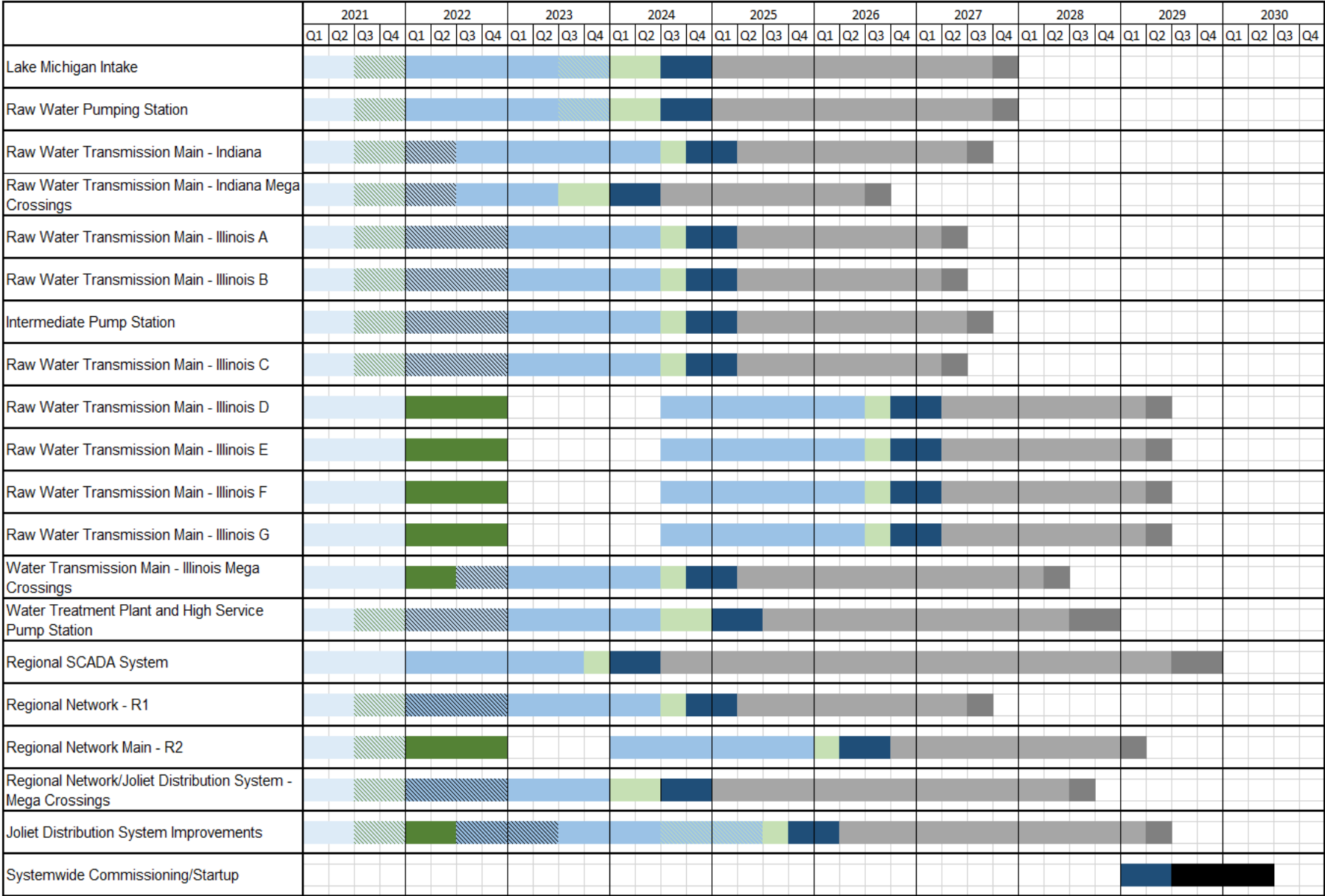


- **Land Acquisition**
- **Permitting Plans**
 - Overall Permitting
 - Site Specific Permitting
 - Route Specific Permitting
- **Implementation Plan**
 - Design & Construction
 - Start-up, Commissioning, Monitoring
 - Water Source Transfer Plan
- **Operations & Staffing**



CONCEPTUAL IMPLEMENTATION SCHEDULE

LAKE MICHIGAN WATER - INDIANA INTAKE REGIONAL 60 MGD ALTERNATIVE



Legend

Preliminary Design

Final Design

Bidding/Contract Award

Permitting

Land Acquisition

Construction

Commissioning

Systemwide Commissioning



COST OF WATER

(NEW INDIANA INTAKE
ALTERNATIVE)



- Access Costs
- Capital Costs
- Operation, Maintenance & Replacement (OM&R) Costs
- Funding Strategy
- Impact on Monthly Water Rates
- 50-year Total Cost of Water

ACCESS COSTS

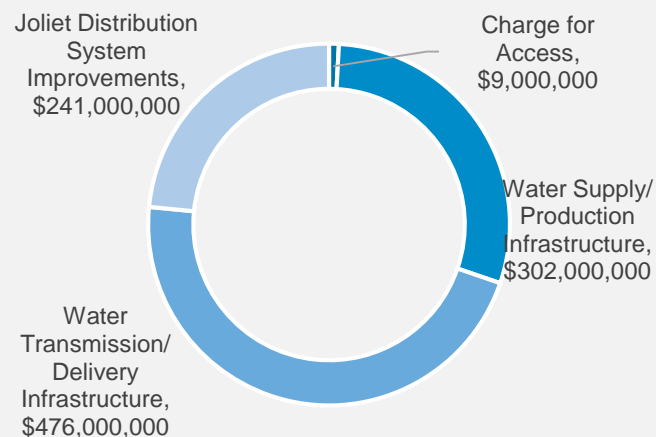


Type	Description	Amount
One-time Payments	Initial Payments (upon execution of preliminary and final agreements, upon approval of bidding documents)	One - \$250,000 payment One - \$750,000 payment One - \$1,000,000 payment
	Enhanced Right-of-way Payments	Three - \$2,000,000 payments
Reimbursement Payments	Costs incurred by Hammond providing assistance to Joliet during design & construction	
Annual Payments	Property Taxes (or PILOT)	Est. \$26,000 initially; \$310,500 after improvements complete
	Access Fee (ROW/easements)	\$110,000 (escalated annually by CPI not to exceed 2%)
	Volumetric Charge for water pumped from Lake Michigan	\$5,000/MGD based on water pumped annually (escalated annually by CPI not to exceed 2%)

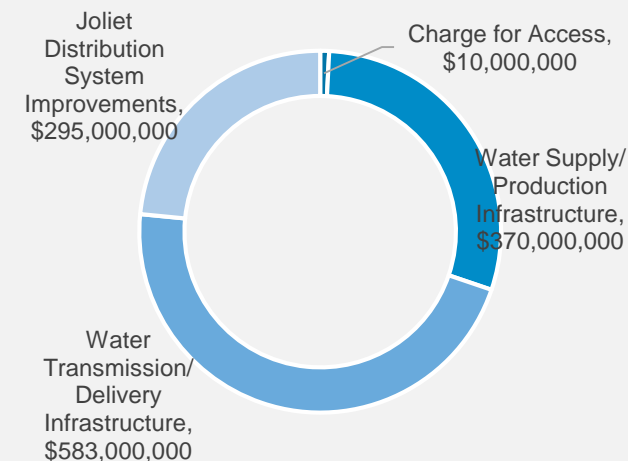
CAPITAL COSTS

- Charges for Access to ROW & Easements
- Water Transmission/Delivery Infrastructure
- Joliet Distribution System Improvements
- Regional Water Commission Network Improvements (for Regional Option only)

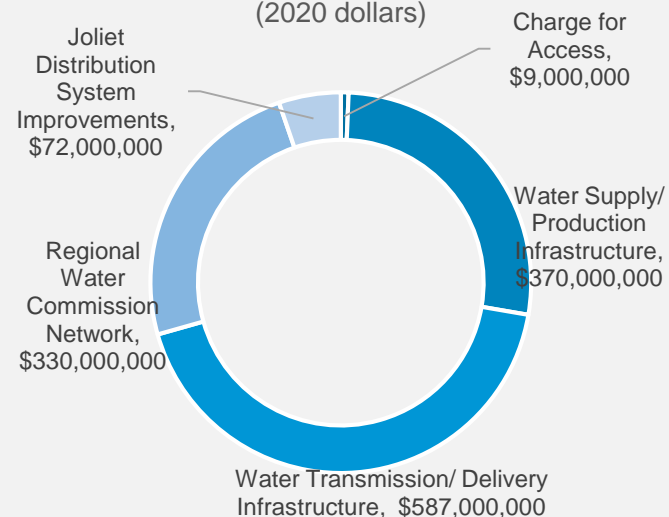
Capital Costs: New Indiana Intake
30 MGD
\$1.028 billion
(2020 dollars)



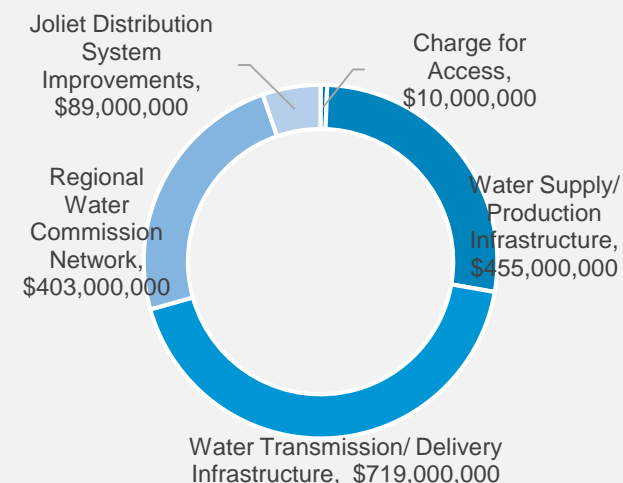
Capital Costs: New Indiana Intake
30 MGD
\$1.258 billion
(escalated to time of construction)



Capital Costs: New Indiana Intake
60 MGD
\$1.368 billion
(2020 dollars)



Capital Costs: New Indiana Intake
60 MGD
\$1.676 billion
(escalated to time of construction)



OPERATION, MAINTENANCE & REPLACEMENT (OM&R) COSTS



- Net annual increase in Operation, Maintenance & Replacement Costs (2030 dollars):

	Indiana Intake 30 MGD	Indiana Intake 60 MGD	Indiana Intake 60 MGD (Joliet share)
Annual OM&R Costs for New Infrastructure	\$14,300,000	\$18,200,000	\$11,100,000
Annual Credit for Reduced Well Use	(\$4,000,000)		(\$4,000,000)
Net Increase in Annual OM&R	\$10,300,000		\$7,100,000

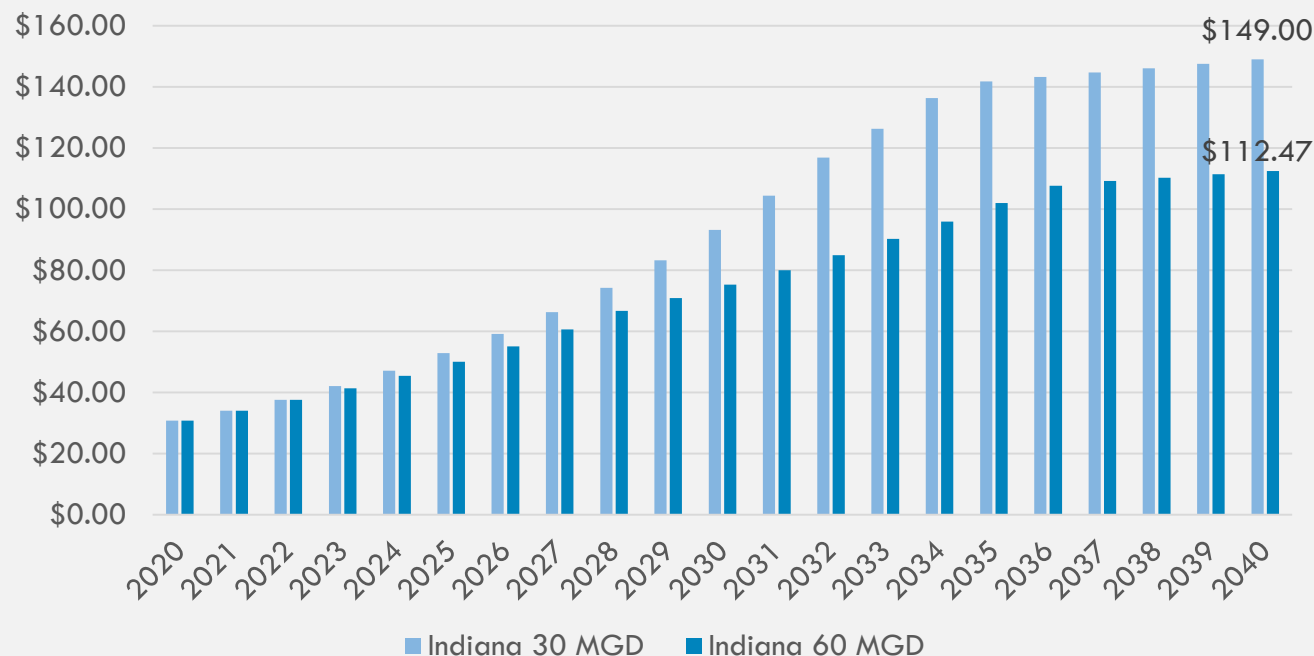
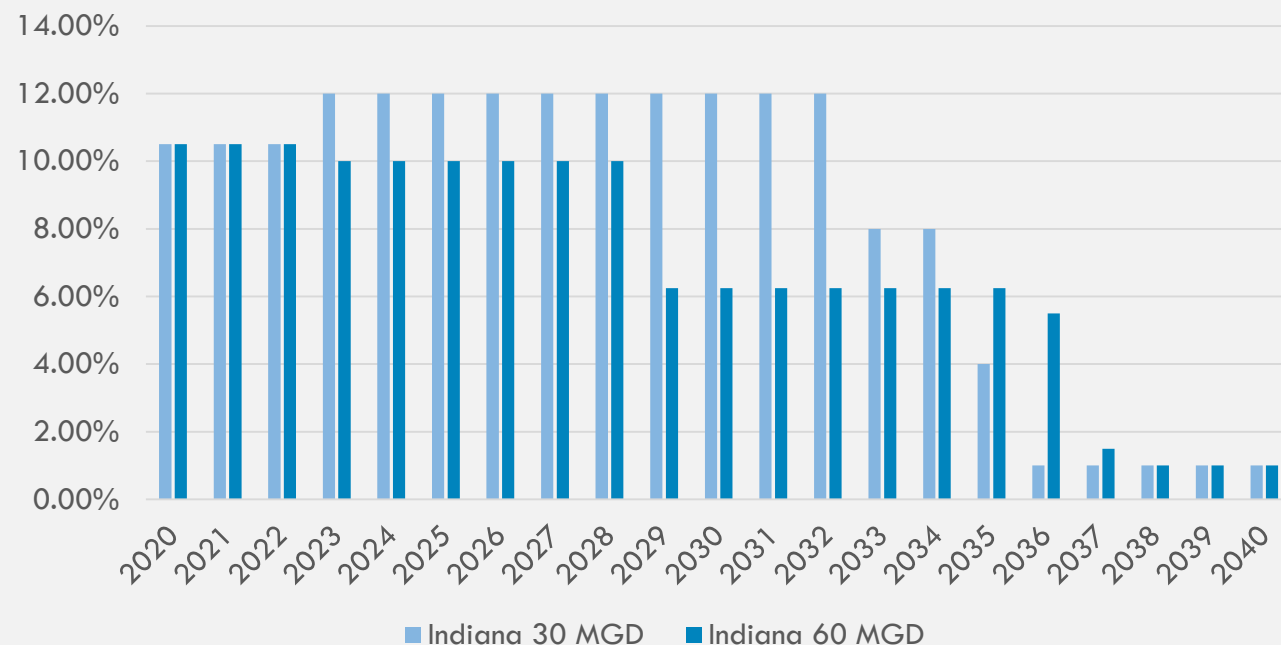
FUNDING STRATEGY



Funding Source	Interest Rate	Maturity	Financing 30 MGD	Financing 60 MGD
WIFIA	2.0% - 3.0%	35 years after substantial completion	\$616,000,000	\$821,000,000
IEPA SRF	1.5% - 2.5%	20 years	\$250,000,000	\$250,000,000
Revenue Bonds	3.0% - 4.0%	30 years	\$391,000,000	\$604,000,000
TOTAL (escalated to time of construction)			\$1,257,000,000	\$1,675,000,000

IMPACT ON MONTHLY WATER RATES

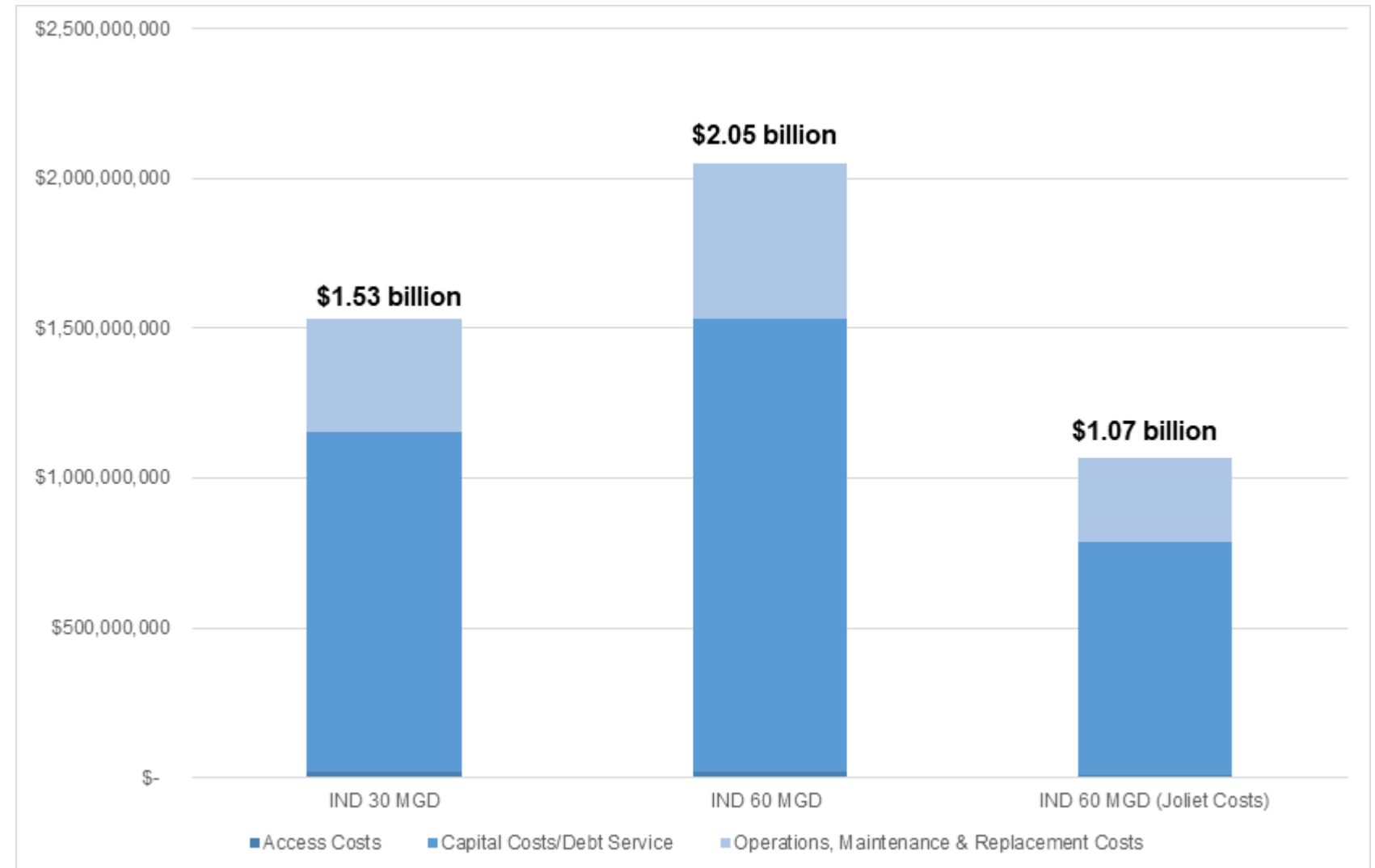
- Increases take into account alternative water source improvements and general water system improvements (including NRW Reduction)
- Rate increases for the 30 MGD scenario:
 - 10.5% annually for 2020 to 2022
 - 12% annually for 2023 to 2032
 - 8% annually for 2033 to 2034
 - 4% for 2035
 - 1% annually for 2036 to 2040
- For 30 MGD Scenario, monthly water bill:
 - 2030 - \$93.15/month
 - 2040 - \$149.00/month
 - based water usage of 700 cubic feet
 - does not include sewer or trash



50-YEAR TOTAL COST OF WATER



- Access Costs
- Capital Costs/Debt Service
- OM&R Costs





Lake Michigan Water – New Indiana Intake Alternative

- Alternative Risks and SWOT Analysis

Allison Swisher, City of Joliet

ALTERNATIVE RISK ANALYSIS

(Section 7)



Risks were identified and steps were taken to mitigate risks

Crossing State Lines

Disputing Allocations

Permitting

Legislation

Magnitude of Improvements

Costs

Construction Sequencing

Complexity

Debt Burden

Operations

Responsibility/Liability

Source Water
Monitoring (Raw Water
Quality)

Staffing

Land Acquisition

Rights-of-way,
easements

Facility sites

NEW INDIANA INTAKE ALTERNATIVE

SWOT ANALYSIS (Section 8)

Strengths

- ♦ **Complete control over improvements, schedule, water treatment, operation of system and water rates**
- ♦ Economical to pump and treat own water source
- ♦ Brand new infrastructure
- ♦ Improvements can be completed by 2030
- ♦ 99 year access agreement with Hammond
- ♦ Design water treatment plant to provide desired finished water quality
- ♦ Agreement transferrable to Regional Water Commission

Weaknesses

- ♦ **Implementation of the alternative is complex - extent of infrastructure and magnitude of construction**
- ♦ Future operational requirements and liability
- ♦ Permitting for Lake Michigan Intake and Water Treatment Plant
- ♦ Intake location on south end of Lake Michigan is vulnerable to industrial spills

Opportunities

- ♦ **Long term partnership with Hammond, Indiana on source water monitoring**
- ♦ Protection from known emerging contaminants

Threats

- ♦ **Potential challenges to interstate use of water**
- ♦ Acquiring land for shore facilities
- ♦ Land acquisition outside Joliet limits
- ♦ Higher interest rates than those assumed for program funding
- ♦ Increased monthly water bills result in customer non-payment
- ♦ Significant debt burden

THE BUSINESS CASE

(Section 10)



- **Bold** plan
- **Responsibility and liability** for infrastructure designed, built, financed, owned, and operated by the City of Joliet
- **Long-term** relationship with City of Hammond for access
- **Advanced** water treatment process
- Brand **new** infrastructure
- Magnitude of improvement results in significant capital expenditure and debt burden and **complex** construction sequencing and added regulatory and administrative complexities bringing water across state lines
- Total **control** over program implementation, operations and future rate setting

QUESTIONS?	Parameter	Lake Michigan Water – New Indiana Intake
	Improvements Required	Lake Michigan Crib, 7,000’ Intake Tunnel, Pump Station, 48 miles of Transmission Main including intermediate Pump Station and Reservoir, Water Treatment Plant, Joliet Distribution System Modifications including additional Storage & Pump Stations
	Capital Costs (2020 dollars)	\$1.03 billion for 30 MGD system, \$1.37 billion for 60 MGD system
	Type of Agreement	Access Agreement for use of easements on Hammond property and right-of-way for transmission main as well as coordination for land acquisition for shore facilities
	Length of Agreement	99 years plus two 25 year renewals possible (with reopeners)
	Compensation	One-time payments (totaling \$9.9 million), annual fixed fee payment for right-of-way use (\$110,000), and annual volumetric payment based on water pumped (\$5,000/MGD). Annual payments inflate by CPI, not to exceed 2%
	Basis for payment	Annual charge for real estate and right-of-way access as well as annual volumetric charge for Lake Michigan Water pumpage
	Operation, Maintenance & Replacement (2020 dollars)	Net increase of \$10.3 million annually for 30 MGD system, \$14.2 million annually for 60 MGD system
	50-year Total Cost of Water	\$1.53 billion for 30 MGD, \$2.05 billion for 60 MGD
	Rate Increases	For 30 MGD system: 10.5% per year from 2020 to 2022, 12% per year from 2023 to 2032, 8% per year from 2033 to 2034, 4% in 2035 and 1% per year from 2036 to 2040
	Estimated Monthly Water Bill	For 30 MGD system: 2030 - \$93.15/month, 2040 - \$149/month based on estimated average monthly water usage of 700 cubic feet
	Control	Full Control over design, construction and operation of entire Lake Michigan Water system and setting of water rates
	Operational Requirements	Joliet responsible for all aspects of water source, supply and treatment. Fourteen additional staff members recommended



Next Steps for Alternative Comparison and Alternative Water Source Selection

Allison Swisher, City of Joliet

SELECTION ROADMAP



Public Forum

- Online: Nov. 30th to Dec. 14th
- Virtual: Dec. 2nd & Dec. 3rd
- www.RethinkWaterJoliet.org



Supplemental Information – Alternative Comparison



City Council Workshop

- Dec. 17th from 5:30-7:30 pm
- Presentation of Alternative Comparison
- Chicago and Hammond Representatives in attendance



Selection of Water Source

- January 2021

PROGRAM SCHEDULE



JOLIET ALTERNATIVE WATER SOURCE PROGRAM

ONLINE VIRTUAL
EVENT!

LEARN MORE at
RethinkWaterJoliet.org

VIEW & COMMENT ANYTIME BETWEEN **NOV 30TH – DEC 14TH**

LIVE VIRTUAL
MEETINGS!

DEC 2ND | 1:00-2:30 PM

or

DEC 3RD | 6:30-8:00 PM

To register, visit
RETHINKWATERJOLIET.ORG

View a **presentation** & participate
in a **live Q&A session!**

*Identical materials will be presented
at both meetings.*

QUESTIONS?	Parameter	Lake Michigan Water – CDWM Alternative	Lake Michigan Water – New Indiana Intake
	Improvements Required	Tunnel Extension, Low Service Pump Station, Chicago Service Valve, Meter Vault, Suction Well, High Service Pump Station, 31 miles of Transmission Main including intermediate Pump Station and Reservoir, Joliet Distribution System Modifications including additional Storage & Pump Stations	Lake Michigan Crib, 7,000’ Intake Tunnel, Pump Station, 48 miles of Transmission Main including intermediate Pump Station and Reservoir, Water Treatment Plant, Joliet Distribution System Modifications including additional Storage & Pump Stations
	Capital Costs (2020 dollars)	\$592 million for 30 MGD system, \$810 million for 60 MGD system	\$1.03 billion for 30 MGD system, \$1.37 billion for 60 MGD system
	Type of Agreement	Water Purchase for treated Lake Michigan water	Access Agreement for use of easements on Hammond property and right-of-way for transmission main as well as coordination for land acquisition for shore facilities
	Length of Agreement	50 years plus additional 10 year automatic renewals with 5-year advance notice of intent not to renew, also allows reopeners for discussion of issues on both sides	99 years plus two 25 year renewals possible (with reopeners)
	Compensation	Volumetric based on the water purchased, Annual cost of \$31 million for 30 MGD system, \$50.5 million for 60 MGD system (based on 2032 demand and 2032 rates)	One-time payments (totaling \$9.9 million), annual fixed fee payment for right-of-way use (\$110,000), and annual volumetric payment based on water pumped (\$5,000/MGD). Annual payments inflate by CPI, not to exceed 2%
	Basis for payment	Uniform Water Rate plus credit/debit for difference between Uniform Water Rate and Wholesale Rate (as determined by annual cost of service)	Annual charge for real estate and right-of-way access as well as annual volumetric charge for Lake Michigan Water pumpage
	Operation, Maintenance & Replacement (2020 dollars)	Net increase of \$700,000 annually for 30 MGD, \$2.9 million annually for 60 MGD	Net increase of \$10.3 million annually for 30 MGD system, \$14.2 million annually for 60 MGD system
	50-year Total Cost of Water	\$1.63 billion for 30 MGD, \$2.64 billion for 60 MGD based on 2% rate escalation and \$1.43 billion for 30 MGD, \$2.34 billion for 60 MGD based on 1.3% and 1.39% rate escalation, respectively	\$1.53 billion for 30 MGD, \$2.05 billion for 60 MGD
	Rate Increases	For 30 MGD system: 10.5% per year from 2020 to 2022, 12% per year from 2023 to 2029, 8% per year from 2030 to 2032, 6.5% per year from 2033 to 2036, 3% for 2037 and 1% per year for 2038 to 2040	For 30 MGD system: 10.5% per year from 2020 to 2022, 12% per year from 2023 to 2032, 8% per year from 2033 to 2034, 4% in 2035 and 1% per year from 2036 to 2040
	Estimated Monthly Water Bill	For 30 MGD system: 2030 - \$89.83/month, 2040 - \$142.98/month based on estimated average monthly water usage of 700 cubic feet	For 30 MGD system: 2030 - \$93.15/month, 2040 - \$149/month based on estimated average monthly water usage of 700 cubic feet
	Control	No Control over water treatment and rate setting for purchased water rates – only participation on Chicago’s new Advisory Council	Full Control over design, construction and operation of entire Lake Michigan Water system and setting of water rates
	Operational Requirements	Joliet responsible for water pumping, transmission and distribution. Staffing to remain unchanged from current levels	Joliet responsible for all aspects of water source, supply and treatment. Fourteen additional staff members recommended