

**MINUTES OF A COMMITTEE OF THE WHOLE MEETING  
OSWEGO VILLAGE PRESIDENT AND BOARD OF TRUSTEES  
OSWEGO VILLAGE HALL  
100 PARKERS MILL, OSWEGO, ILLINOIS  
June 8, 2021**

**CALL TO ORDER**

President Troy Parlier called the meeting to order at 6:04 p.m.

**ROLL CALL**

Board Members Physically Present: President Troy Parlier; Trustees Tom Guist, Kit Kuhrt, James Marter II, Terry Olson, Jennifer Jones Sinnott and Brian Thomas.

Staff Physically Present: Dan Di Santo, Village Administrator; Christina Burns, Asst. Village Administrator; Tina Touchette, Village Clerk; Jeff Burgner, Police Chief; Jennifer Hughes, Public Works Director; Rod Zenner, Community Development Director; Mark Horton, Finance Director; Scott McMaster, ED Director; Joe Renzetti, IT/GIS Director; Jenette Sturges, Community Engagement Coordinator, Marketing; Susan Quasney, Project Engineer; Tim Zasada, Asst. Public Works Director Utilities; Jay Hoover, Building Services Manager; Alex Ponx, Public Works Intern; and Karl Ottosen, Village Attorney.

**PUBLIC FORUM**

Public Forum was opened at 6:04 p.m. There was no one who requested to speak. The public forum was closed at 6:04 p.m.

**OLD BUSINESS**

There was no old business.

**NEW BUSINESS**

**G.1 Update on the Alternative Water Source Evaluation – Part 1: Purpose, Need and Options**

Director Hughes addressed the Board regarding alternative water source purpose, need and options. The first water service in Oswego dates back to 1895. Water ran out by 1921 and they had to go deeper into the aquifer. The system is aging, and Kendall County and Oswego are growing rapidly. There are currently eleven wells serving Oswego. Tonight's meeting and several upcoming meetings, staff and representatives will present why Oswego needs a new water service, options, details and conservation measures will be presented in future meetings. A decision on a new water source will need to be made later this year.

Baxter & Woodman representatives, Carolyn Grieves and Lauren Schuld attended in person and presented their evaluation. Illinois State Water Survey (ISWS) representatives, Cecilia Cullen and Daniel Abrams attended via phone and presented the results of the survey. ISWS projects that Montgomery, Oswego and Yorkville will be at severe risk of being able to meet demands and becoming inoperable by 2050.

**Project Overview**

- Part 1- purpose and need with identification of options
  - Study background and purpose
    - ✓ Update and align Village's previously conducted water supply studies with two new water supply options.
    - ✓ Oswego is teaming with Montgomery and Yorkville to evaluate regional solutions.
    - ✓ Several studies were completed from 2014 through 2018.
  - Regional water source background
    - ✓ Ironton-Galesville Aquifer
      - Naturally occurring radium 226 and radium 228
      - Pumped beyond its sustainable yield and water levels are dropping
      - City of Joliet has decided to abandon the use of the Ironton-Galesville Aquifer for Lake Michigan water

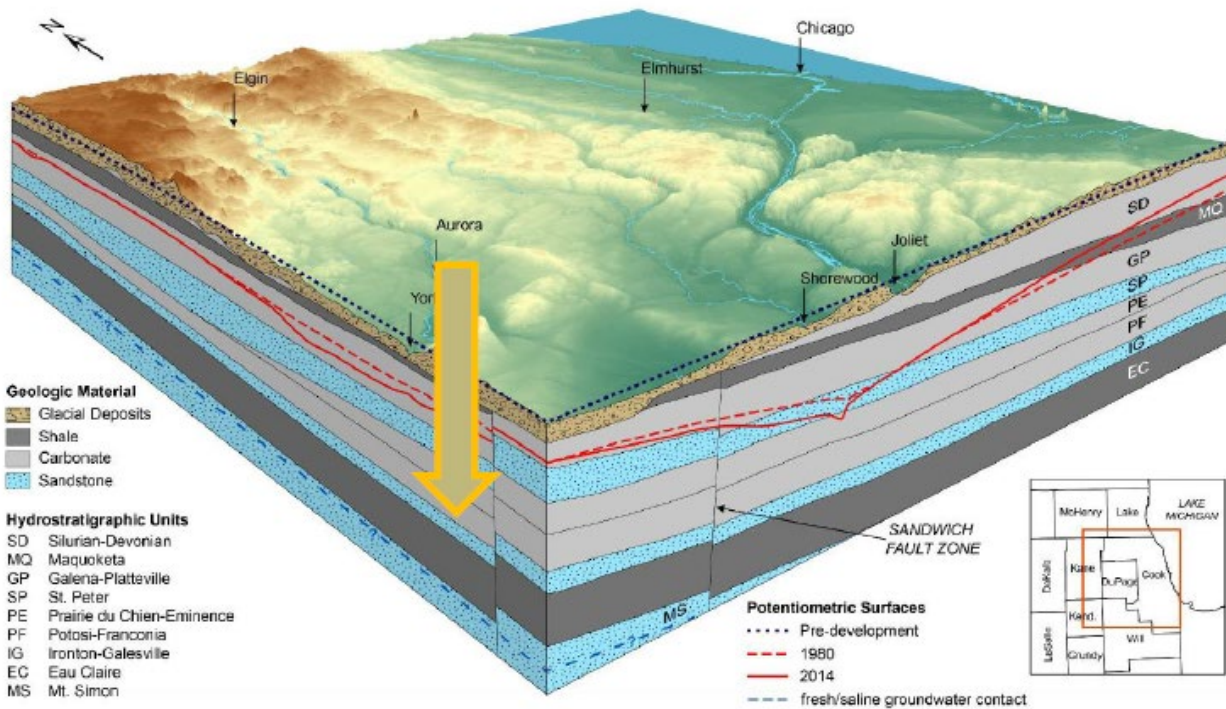
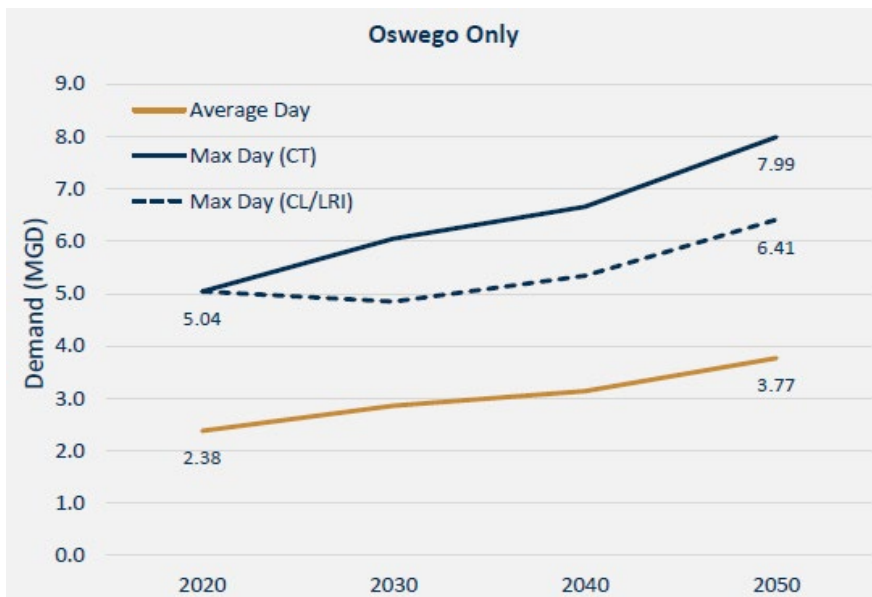
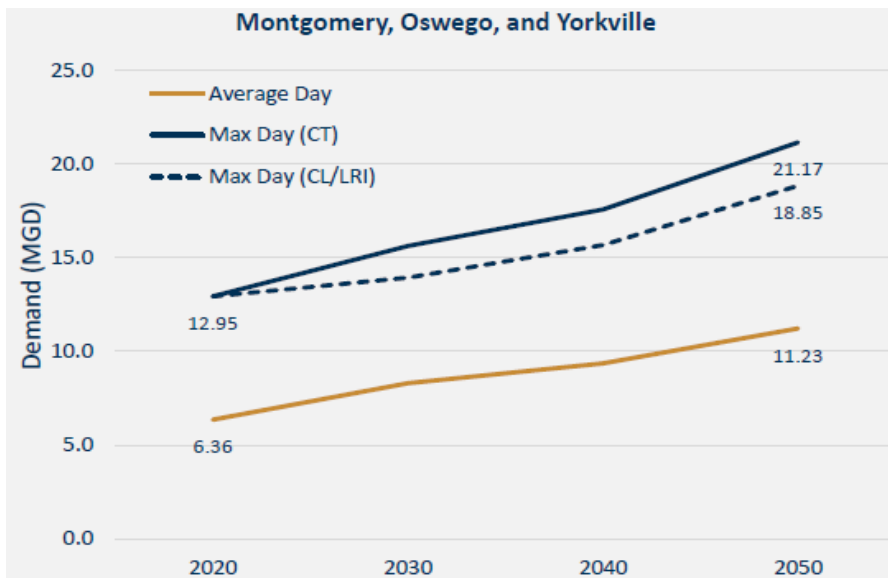


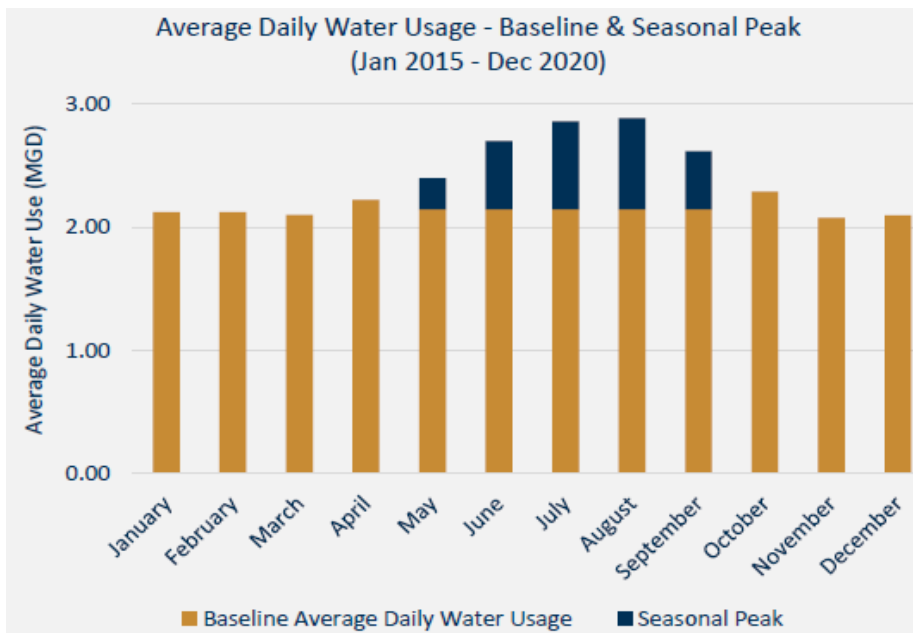
Figure 23: Potentiometric surface of the Cambrian-Ordovician sandstone aquifers for predevelopment, 1980, and 2014 in northeastern Illinois. The left cutaway runs through southern McHenry, Kane, and Kendall Counties. The right cutaway runs through Kendall, Will, and southern Cook Counties

- Population and water demand
  - ✓ Water demand projections
    - Montgomery population projections based on full buildout before 2050
    - Oswego and Yorkville population projections based on CMAP ON TO 2050
    - Analyzed historical water data going back to 2015
    - Dash line indicates a conservative trend

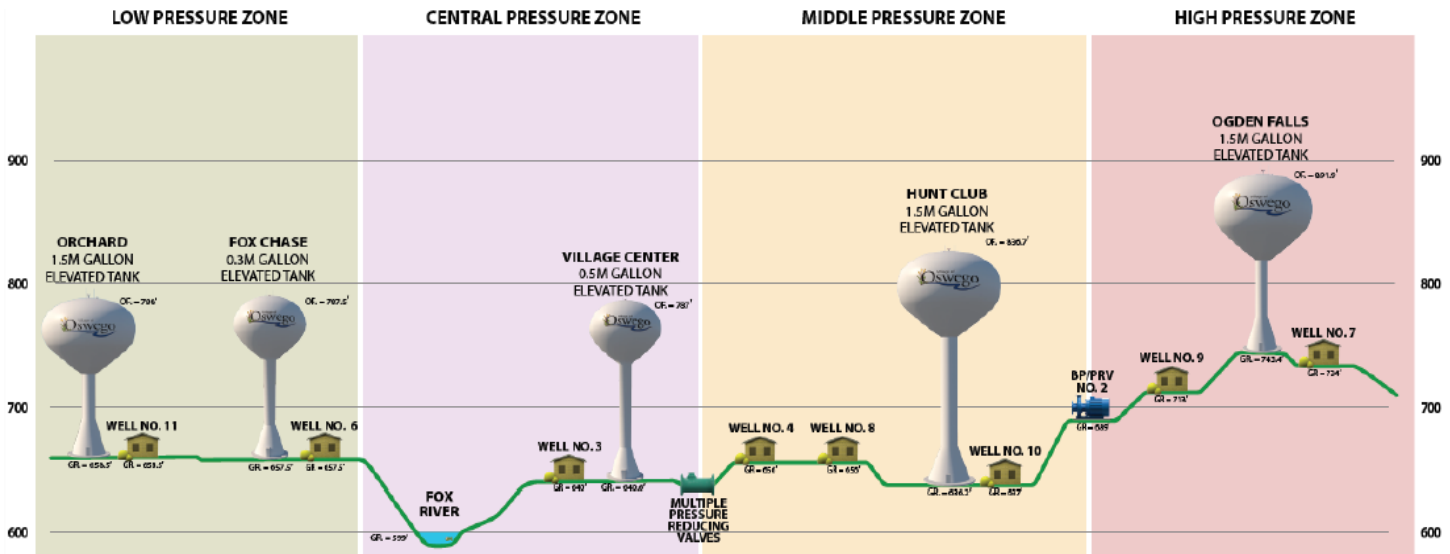
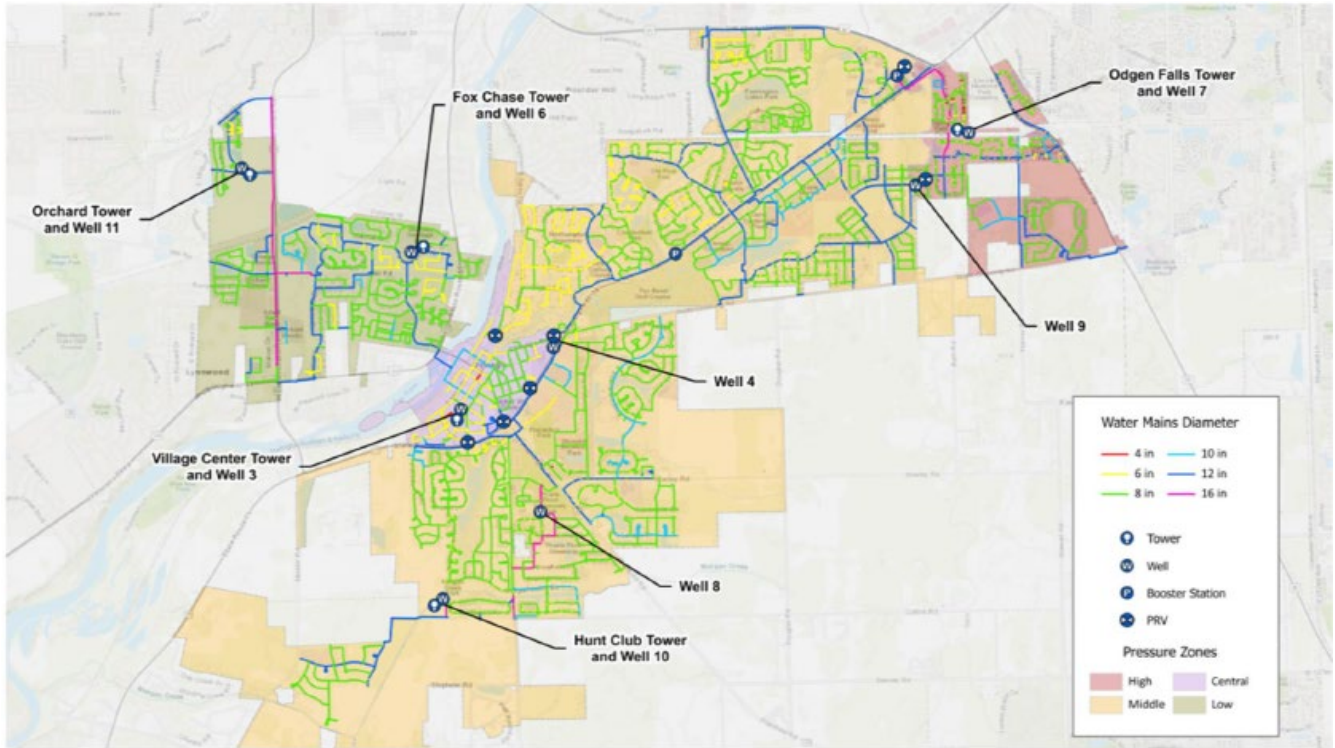




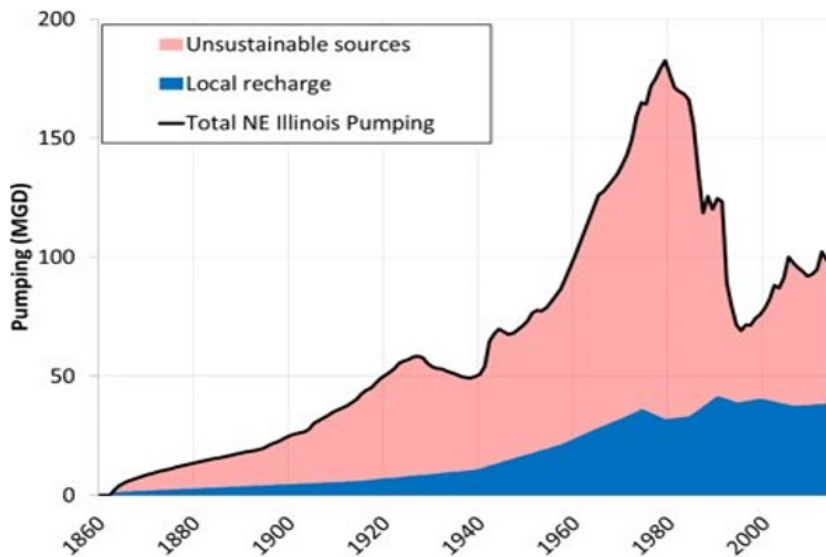
- ✓ Water conservation
  - Baseline demand
  - Seasonal peak demand
  - Defer short-term capital improvements needed to meet increasing water demands.
  - Conservation methods could be implemented to get the number down but will not be the only thing needed.
  - Still need a water source; planning for enough



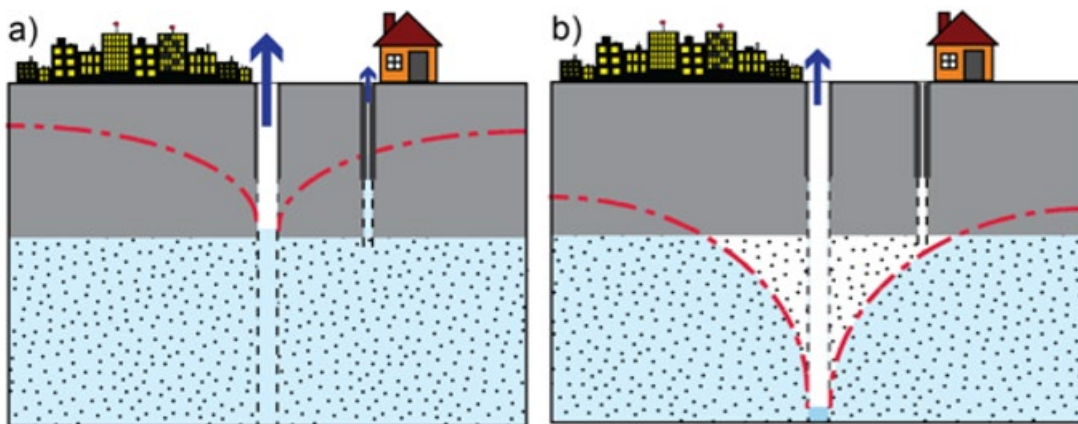
- Oswego existing system
  - ✓ 8 deep wells
  - ✓ 8 radium removal water plants
  - ✓ 5 elevated storage tanks
  - ✓ 170 miles of water main
    - 4"-16" in diameter



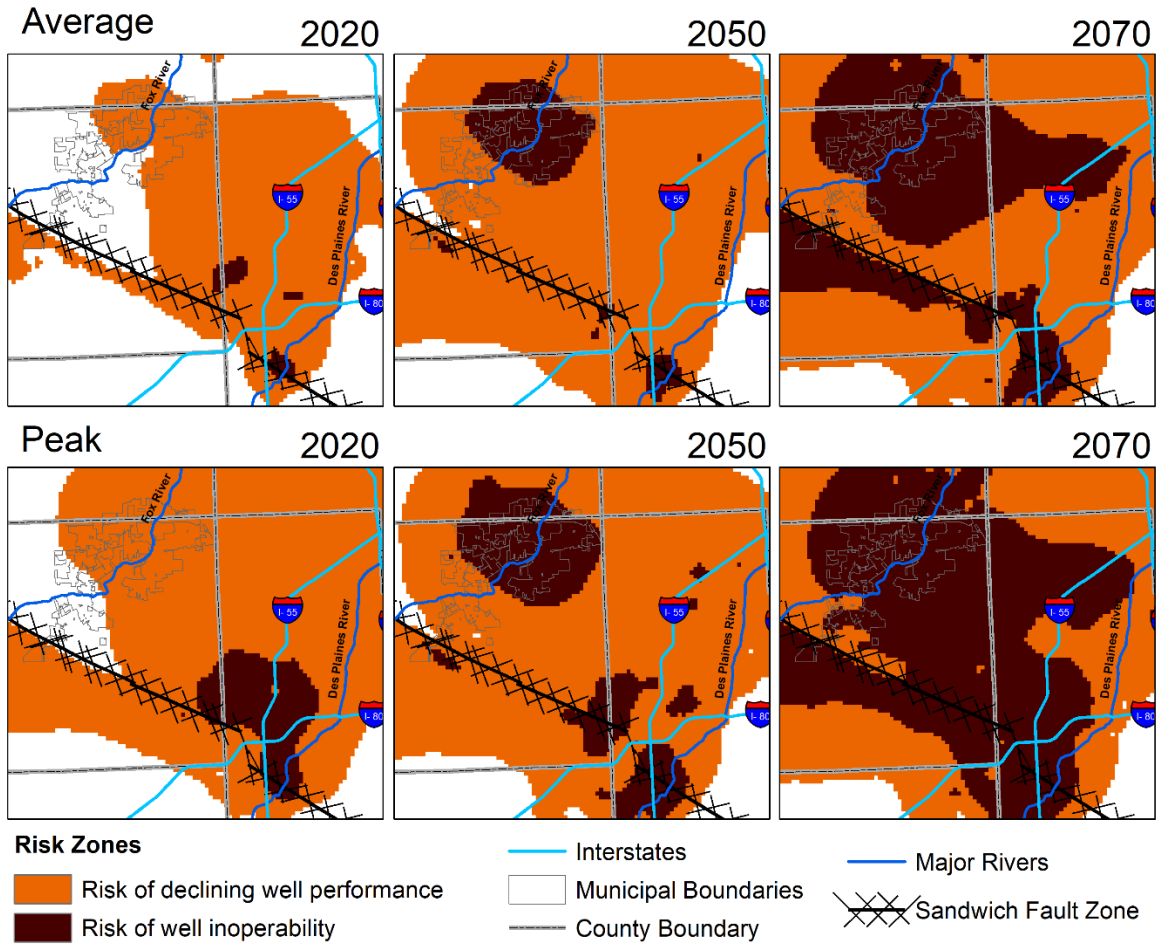
- Illinois State Water Survey- Risk to Sandstone Supply in Oswego
  - ✓ Many communities in NE Illinois are evaluating whether the sandstone can meet future demands
  - ✓ Risk of drawdown is severe; demand has exceeded recharge for over 100 years



- ✓ Regional impact of withdrawals from the Cambrian-Ordovician sandstones; a simulated video was shown to reflect the drawdown from 1863-2060 in the Ironton-Galesville sandstone.
  - Video assumes that Joliet is not off the aquifer, but the date will show Joliet off the aquifer.
- ✓ Desaturation of the sandstone
  - Unsustainable withdrawals result in water levels eventually falling into the aquifer.
  - The sandstone starts to cave in; pumps cannot operate in these conditions.
  - Not concerned about aquifers going dry as much as with keeping water levels above the tops of the deep formations.



- Impacts of pumping in the region
  - ✓ Real concern that the well will not be able to meet demand
  - ✓ Model scenarios show drawdown is severe throughout the Oswego area
  - ✓ Risk of declining well production
    - Decreasing ability to reliably pump water
    - 7 of 8 Oswego wells are currently in this range
  - ✓ Risk of well inoperability
    - Insufficient well capacity to meet water demand
    - 7 of 8 Oswego wells reach this level by 2050 under average conditions and current trends



- Takeaway 1: sandstone aquifer is not a viable long-term water supply source for Oswego.
- ✓ In all scenarios, all Oswego wells are at severe risk:

a)	LRI		CT		CT + 1.5 MGD <sup>a</sup>		CT + 3 MGD <sup>a</sup>	
	<i>Risk of declining production</i>	<i>Risk of inoperability</i>	<i>Risk of declining production</i>	<i>Risk of inoperability</i>	<i>Risk of declining production</i>	<i>Risk of inoperability</i>	<i>Risk of declining production</i>	<i>Risk of inoperability</i>
<b>3</b>	2026	2043	2026	2039	2026	2039	2026	2039
<b>4</b>	2007	2045	2007	2041	2007	2039	2007	2039
<b>6</b>	2008	2044	2008	2040	2008	2039	2008	2039
<b>7</b>	2002	2058	2002	2051	2002	2045	2002	2039
<b>8</b>	2008	2049	2008	2045	2008	2039	2008	2039
<b>9</b>	2005	2052	2005	2047	2005	2039	2005	2039
<b>10</b>	2008	2052	2008	2047	2008	2040	2008	2039
<b>11</b>	2010	2045	2010	2042	2010	2039	2010	2039

- Takeaway 2: conservation extends the life of the aquifer by a few years but will not fix the groundwater shortage problem.

Some Conservation                      Current Trend

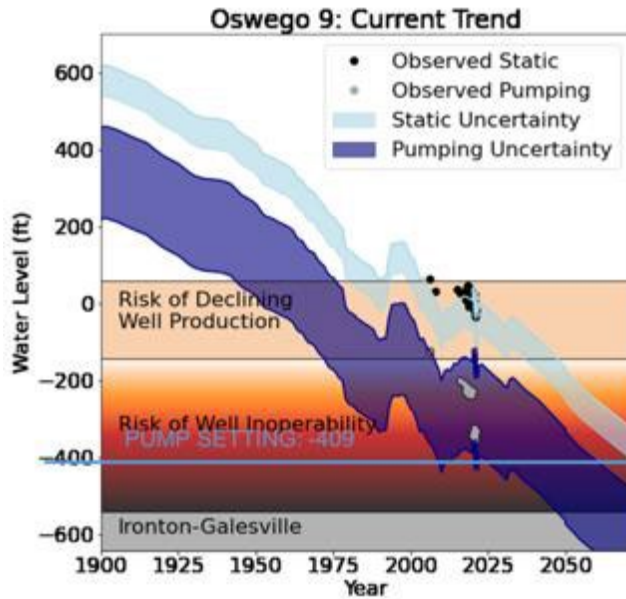
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- Takeaway 3: Oswego’s water supply is vulnerable to new demands in the area, such as an industry or computation center.
  - ✓ Water user going on the aquifer in 2039:

a)	LRI		CT		CT + 1.5 MGD <sup>a</sup>		CT + 3 MGD <sup>a</sup>	
	<i>Risk of declining production</i>	<i>Risk of inoperability</i>	<i>Risk of declining production</i>	<i>Risk of inoperability</i>	<i>Risk of declining production</i>	<i>Risk of inoperability</i>	<i>Risk of declining production</i>	<i>Risk of inoperability</i>
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### Impact on Oswego’s Water Supply

- Possible impacts of declining water levels
  - Limits on pump settings (specifically whether a pump can even be lowered into the Ironton-Galesville aquifer)
  - Costs associated with lifting water over a greater distance
  - The need to rehabilitate wells more frequently and aggressively
  - Increase risk of pumping sand
  - Potential for caving the deeper sandstone formation
  - Reduced production capacity of the well
  - Pumps set at 409 feet in Oswego



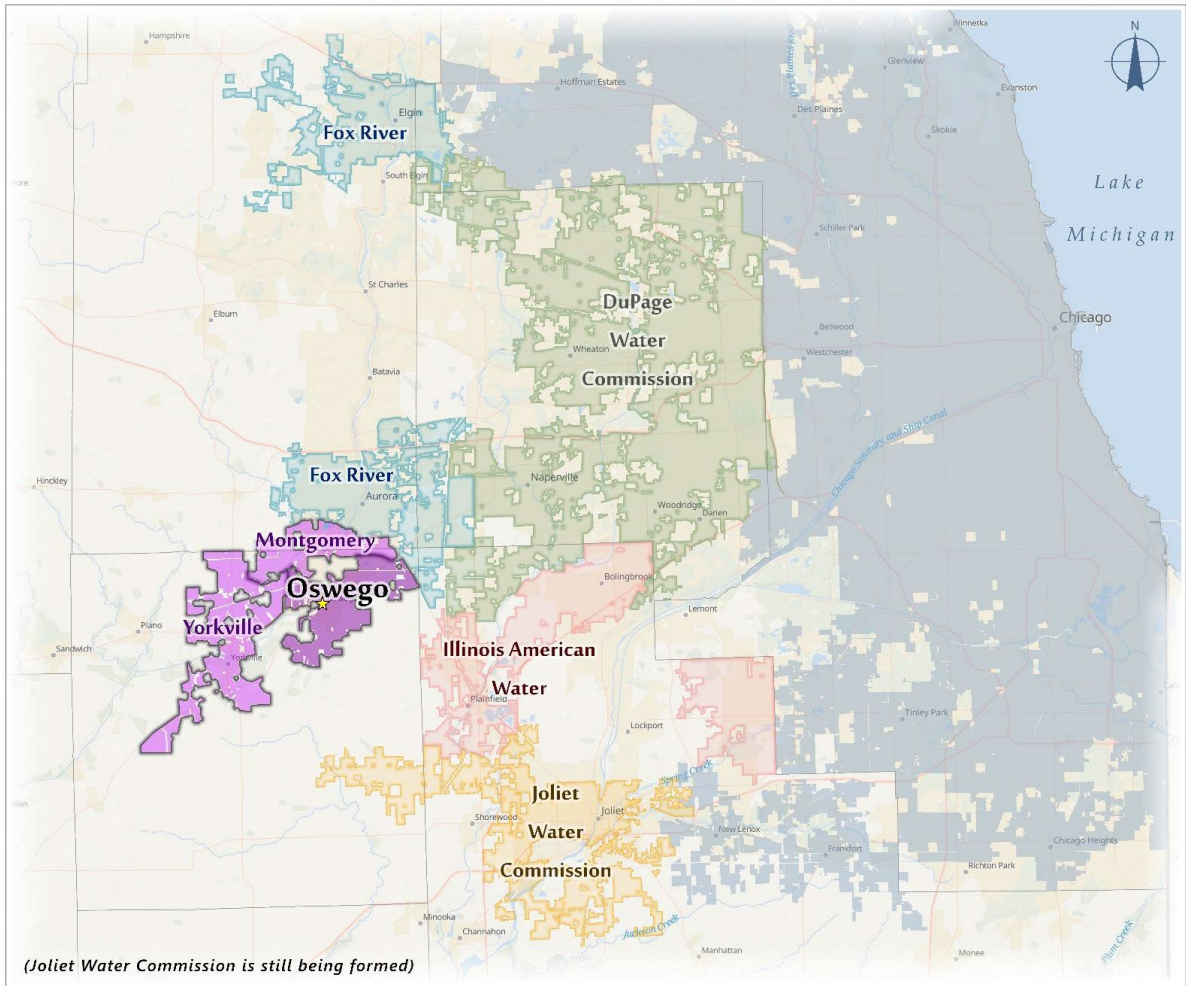
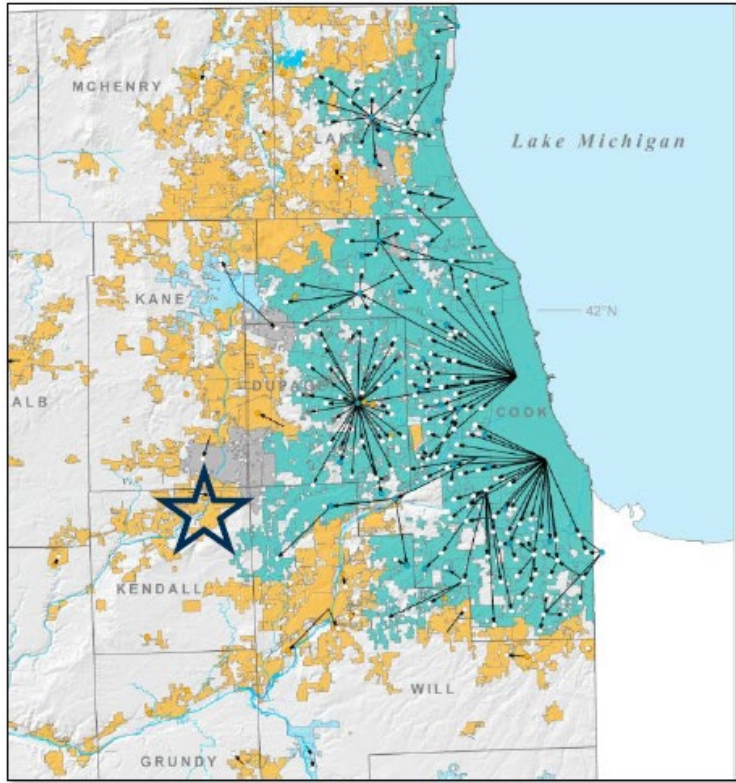
- Will Oswego’s withdrawals ever be sustainable?
  - ✓ No. Withdrawals from the sandstone aquifer in Oswego, Montgomery and Yorkville have been unsustainable for over a century. Over the decades, the aquifer has slowly depleted and now many supply wells are threatened. If withdrawals continue to exceed sustainable, irreparable declines in water levels will occur, impacting the already limited timeline of availability for this water source.
- How long can Oswego meet needed supply form the sandstone?
  - ✓ Planning based on a time-horizon of available water from an aquifer is challenging due to how water levels are sensitive to minor changes in uncertain future demands.
  - ✓ Risk increases as demands increase. All Oswego wells have water levels dropping into the zone of severe risk for well operability. Best case scenario, Oswego’s first well enters this risk zone in 2043 for average pumping conditions and 2034 for peak pumping conditions. The results indicate Oswego will eventually need an alternative primary supply of water.
- Alternative water sources
  - ✓ Fox River
    - Viable water source
    - Will be required to keep wells

Drains 938 square miles in Wisconsin and 1,720 square miles in Illinois	New regional surface water plant required
Carries stormwater and wastewater treatment plant effluents	IDNR governs flow withdrawal from the Fox River
Water withdrawal may be restricted due to low flows	Hardness water
Water source for Cities of Elgin and Aurora	Communities required to keep some wells



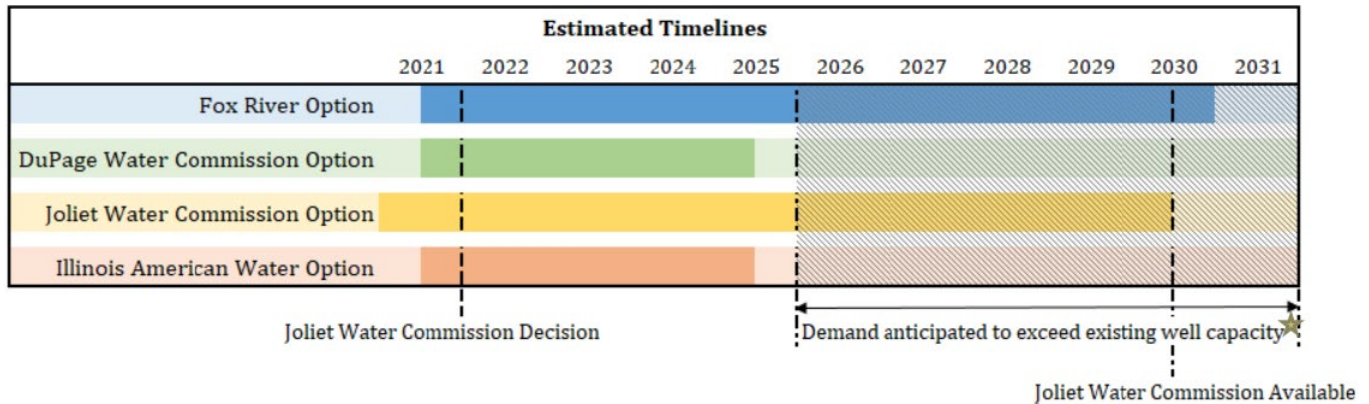
- ✓ Lake Michigan
  - Not required to keep backup wells; but may choose to do so
  - Via DuPage Water Commission
  - Via new Joliet Water Commission
  - Via Illinois American Water

Watershed covers 45,600 square miles in WI, MI and IL	6.6 million Illinois residents receive Lake Michigan water
Source of drinking water for Chicago area since mid-1800s	IDNR governs water allocation from Lake Michigan
Chicago River reversal helped carry sewage away from Chicago's water supply	High quality source water hardness 140 – 150 mg/l
1967 Supreme Court decree limits amount of water to 2,068 MGD	Not required to keep backup wells



➤ Key considerations

- ✓ Sustainability of water source
- ✓ Water quality
- ✓ Governance and operational responsibility
- ✓ Timeline
- ✓ Internal system improvements
- ✓ Cost
- Water supply alternatives estimated timelines
  - ✓ By 2025-2026, will need a new well



★ *Estimated well capacity timeline for Oswego only. Montgomery and Yorkville well capacity timelines are under review at this time.*

- Next steps/Future meetings
  - ✓ Part 2- Water source options details; 6/22/21 Committee of the Whole meeting
  - ✓ Part 2- Key considerations; 6/22/21 Committee of the Whole meeting
  - ✓ Part 3- conservation measures; 7/13/21 Committee of the Whole meeting
  - ✓ Internal system improvements
  - ✓ Part 5- Cost estimates
  - ✓ Funding alternatives
  - ✓ Part 4- Public information meeting for Oswego, Montgomery, and Yorkville
  - ✓ Part 6- Source selection later this year; gather feedback

Board, staff, Baxter & Woodman and Illinois State Water Survey representatives' discussion focused on model scenarios; at risk because of big users of water; why eastern Kane County is not seeing a problem; their wells are older and drilled into the aquifer; St. Peter wells blocks off from others; they bought themselves more time, but still turning orange; St. Charles bedrock valley is helping; MQ prevents rainwater from being used for the entire northeast Illinois; whether there are natural things to counteract; artificial injection of wells is tricky in trying to get around the shale; may have been possible 100 years ago; combating the region; expensive proposition locally; not a rapid turnaround and still not sure it would work; conservation with low flow plumbing/energy star fixtures; minimizes the flow coming out, even in old houses; seasonal peak demand is where we can conserve; twelve communities are talking to Joliet right now; very popular topic to talk about now; Kane County has a bit more time; assumes Joliet will be off the aquifer by 2030; Plainfield already off the aquifer; population demand; Oswego's population around 54,000 by year 2050; total approximate population of Oswego, Yorkville and Montgomery will be 143,700; implementing when to be off the aquifer; hitch on graph (page 11 on the presentation) shows community going to Lake Michigan; received more data than other years; 2008 drought; estimates will include all options; DuPage off the aquifer by 2025; Lockport and Lemont both talking about moving off the aquifer; a new well will be needed by year 2025; Joliet needs decision by the end of the year if choosing to connect with Joliet by year 2023; Fox River is an option, but will still need new wells; new wells will cost \$7-10 million each with an install time of three years; can sustain with wells down; if there is a drought, will need to take conservation measures; whether there is a risk of running dry; worried about slurping and pulling other material up and damaging wells; not having to put in new wells; pumping deeper; Well 9 is at 1,150 feet; need all new equipment if drilling some of the wells deeper; cost of

new equipment estimated at \$500,000; four wells can be lowered 100-200 feet using existing equipment; will cost \$120,000 each. Any additional questions, please contact Director Hughes. There was no further discussion.

**CLOSED SESSION**

There was no closed session.

**ADJOURNMENT**

The meeting adjourned at 7:07 p.m.

Tina Touchette  
Village Clerk