
Village of Romeoville

Alternative Water Supply Study



PRESENTATION OVERVIEW – November 17, 2021 Update

- 1 Review of Previous Presentation
- 2 Conceptual Comparison of Alternatives – Phase 1 Analysis Conclusions
- 3 Recommended Alternatives for Phase 2 Study
- 4 Next Steps

Village of Romeoville

Alternative Water
Supply Study



PRESENTATION OVERVIEW – NOVEMBER 17, 2021 UPDATE



Review of Previous
Presentation

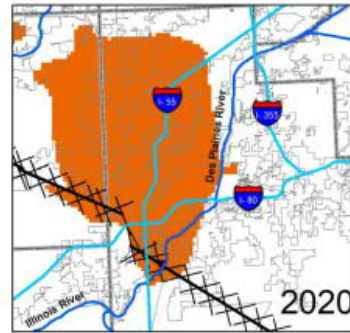
Illinois State Water Survey

Commissioned to Study Deep Sandstone Aquifer

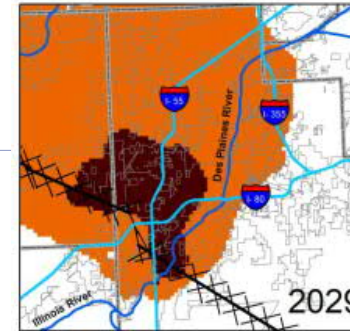
Many communities in this region currently rely on deep groundwater aquifers as their primary water source.

ISWS has been investigating northeastern Illinois' groundwater supply for over 150 years. The ISWS study, released in September of 2020, confirms that the deep groundwater supply is low. Our region is depleting our primary water source faster than it's able to replenish itself. Without a new water source, our water demands will exceed our water supply.

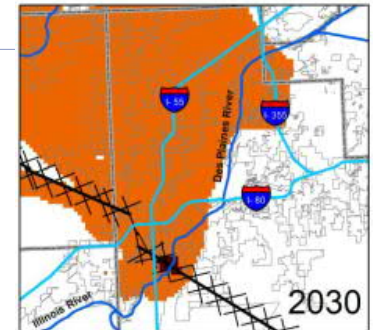
Some communities are in need as soon as 2030 where Romeoville has additional time.



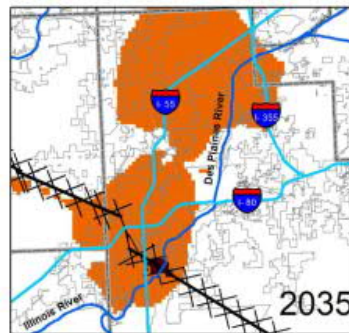
2020 (current conditions)



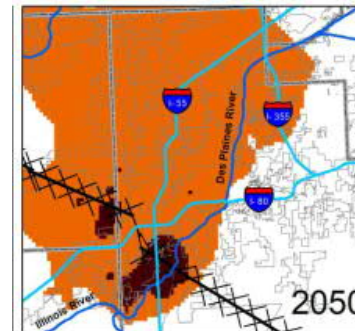
2029 (before Joliet switched off the sandstone aquifer to Lake Michigan)



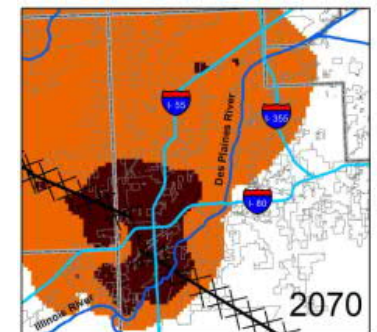
2030 (after Joliet switches)



2035 (after Oswego, Yorkville and Montgomery are assumed to switch)



2050 and 2070 (future peak demand conditions)



Risk Zones

- Risk of declining well performance
- Risk of well inoperability

— Interstates

— County Boundary

Municipal Boundaries

— Major Rivers

X X X Sandwich Fault Zone

UNDERSTANDING POTENTIAL FUTURE GROWTH DETERMINES WATER DEMAND AND POPULATION EQUIVALENT (PE) PROJECTIONS

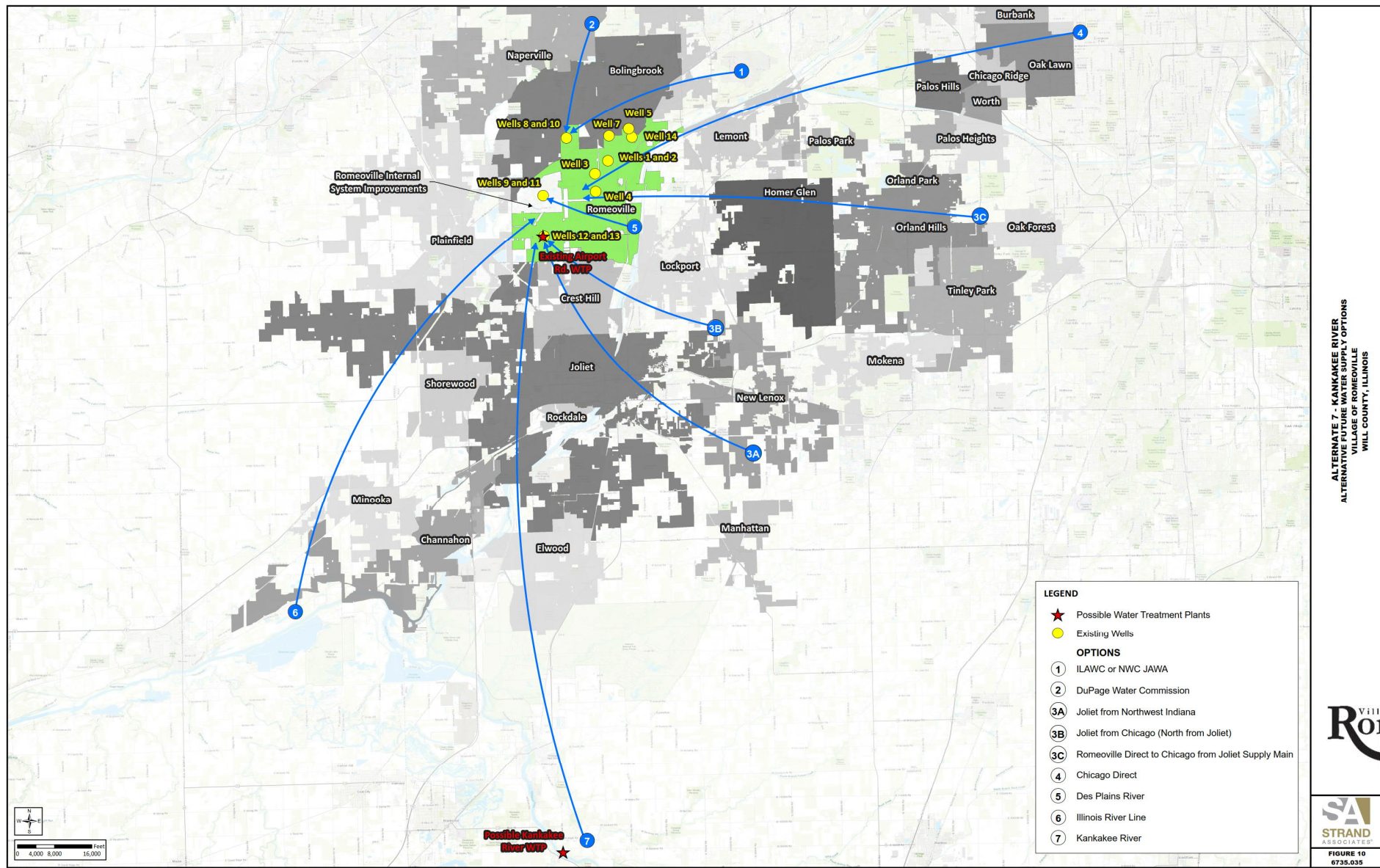
Projected PE & Water Use Data					
Year	Projected PE	Projected Average Day Demand (MGD)	Projected Maximum Day Demand (MGD)	Projected Max:Avg Ratio	Projected Average GPCD
2020	52,000	4.38	6.57	1.50	84.2
2025	54,334	4.57	6.85	1.50	84.0
2030	56,667	4.75	7.13	1.50	83.9
2035	59,001	4.94	7.41	1.50	83.7
2040	61,334	5.13	7.69	1.50	83.6
2045	63,668	5.31	7.97	1.50	83.5
2050	66,001	5.50	8.25	1.50	83.3



Village of Romeoville

ALTERNATIVE WATER SUPPLY STUDY PHASE 1 SUMMARY

- Lake Michigan Water - DuPage Water Commission
- Lake Michigan Water – Regional Water Commission (Joliet) – From Chicago
- Lake Michigan Water - Regional Water Commission (Joliet)– From Indiana (eliminated)
- Lake Michigan Water- Chicago Direct
- Lake Michigan - Northern Will County Water Agency or Illinois American Water Company
- Des Plaines River
- Illinois River – Marseilles Pool
- Kankakee River



Village of Romeoville

Alternative Water Supply Study



PRESENTATION OVERVIEW – NOVEMBER 17, 2021 UPDATE



Conceptual Comparison of Phase 1 Alternatives

CONSIDERATIONS FOR ALTERNATIVE EVALUATION

Alternative water sources have been evaluated for their ability to provide sufficient water quantity and water quality to serve the Village of Romeoville for many years to come.

Staff has been identifying viable options for a long-term water supply solution for the Village and will make a recommendation in November on optimal options to pursue further. The following was considered when researching alternate solutions.

- Cost
- Raw water quality
- Sustainability/water quantity
- Implementation risk
- Operation & maintenance
- Control (governance)

COMPARISON OF PHASE 1 ALTERNATIVES

	ALTERNATIVE	CONCEPTUAL COST	RAW WATER QUALITY	SUSTAINABILITY	IMPLEMENTATION RISK	OPERATION AND MAINTENANCE	CONTROL (GOVERNANCE)
LAKE MICHIGAN	DUPAGE WATER COMMISSION	+	+	+	+	+	○
	REGIONAL WATER COMMISSION	+	+	+	+	+	○
	ILAWC / NWCWA	+	+	+	○	+	○
	CITY OF CHICAGO	-	+	+	○	+	○
RIVER	DES PLAINES RIVER	○	-	○	-	-	+
	ILLINOIS RIVER - MARSEILLES POOL	-	○	○	-	-	+
	KANKAKEE RIVER	-	○	-	○	-	+

COMPARISON OF PHASE 1 ALTERNATIVES

	ALTERNATIVE	CONCEPTUAL COST	RAW WATER QUALITY	SUSTAINABILITY	IMPLEMENTATION RISK	OPERATION AND MAINTENANCE	CONTROL (GOVERNANCE)
LAKE MICHIGAN	DUPAGE WATER COMMISSION	+	<u>All River Options Were Eliminated:</u> <ul style="list-style-type: none"> Cost were very unfavorable in comparison Raw Water Quality was very poor and variable Less sustainable than Lake Michigan Environmental factors, water quality, and feasibility added high levels of risk. Water Treatment added significant Operation and Maintenance effort and costs. 				
	REGIONAL WATER COMMISSION	+					
	ILAWC / NWCWA	+					
	CITY OF CHICAGO	-	+	+	○	+	○
RIVER	DES PLAINES RIVER	○	-	○	-	-	+
	ILLINOIS RIVER - MARSEILLES POOL	-	○	○	-	-	+
	KANKAKEE RIVER	-	○	-	○	-	+

COMPARISON OF PHASE 1 ALTERNATIVES

	ALTERNATIVE	CONCEPTUAL COST	RAW WATER QUALITY	SUSTAINABILITY	IMPLEMENTATION RISK	OPERATION AND MAINTENANCE	CONTROL (GOVERNANCE)
LAKE MICHIGAN	DUPAGE WATER COMMISSION	+	+	+	+	+	○
	REGIONAL WATER COMMISSION	+	+	+	+	+	○
	ILAWC / NWCWA	+	+	+	○	+	○
	CITY OF CHICAGO	-	+	+	○	+	○
RIVER	DES PLAINES RIVER	○					+
	ILLINOIS RIVER - MARSEILLES POOL	-					+
	KANKAKEE RIVER	-					+

Direct Connection to City of Chicago Eliminated:

- Cost were very unfavorable in comparison
- Lengthy water transmission main and high number of other municipalities impacted added moderate levels of risk.
- Lengthy water transmission main outside of Village limits added some, minor additional operation and maintenance concerns.

COMPARISON OF PHASE 1 ALTERNATIVES

	ALTERNATIVE	CONCEPTUAL COST	RAW WATER QUALITY	SUSTAINABILITY	IMPLEMENTATION RISK	OPERATION AND MAINTENANCE	CONTROL (GOVERNANCE)
LAKE MICHIGAN	DUPAGE WATER COMMISSION	+	+	+	+	+	○
	REGIONAL WATER COMMISSION	+	+	+	+	+	○
	ILAWC / NWCWA	+	+	+	○	+	○
	CITY OF CHICAGO	-	+	+	○	+	○
RIVER	DES PLAINES RIVER	○	-	○	-	-	+
	ILLINOIS RIVER - MARSEILLES POOL	-	○	○	-	-	+
	KANKAKEE RIVER	-	○	-	○	-	+

Village of Romeoville

Alternative Water Supply Study



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Recommended Alternatives for Phase 2 Study

- Lake Michigan Water - DuPage Water Commission
- Lake Michigan Water - Regional Water Commission
- Lake Michigan Water - Northern Will County Water Agency or Illinois American Water Company

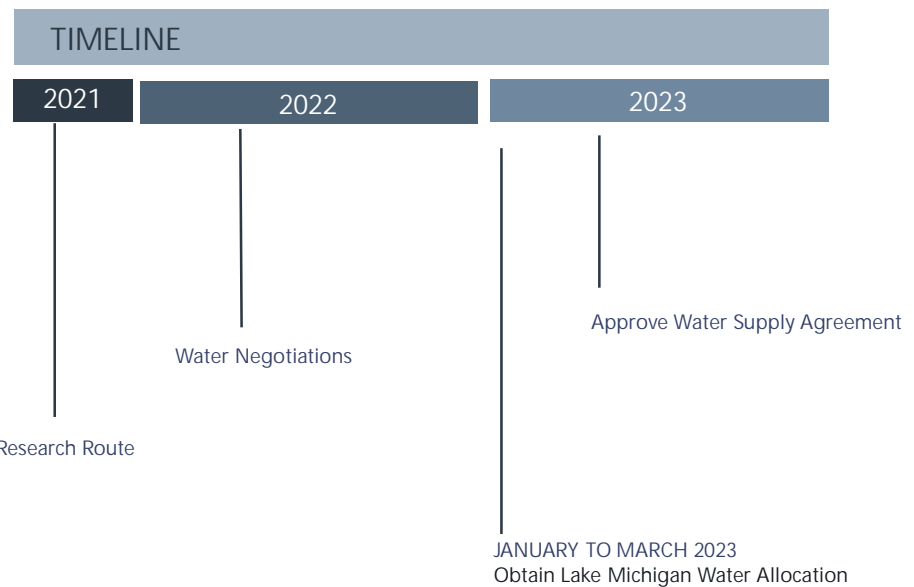
ALTERNATE WATER SUPPLY STUDY

Lake Michigan Water DuPage Water Commission

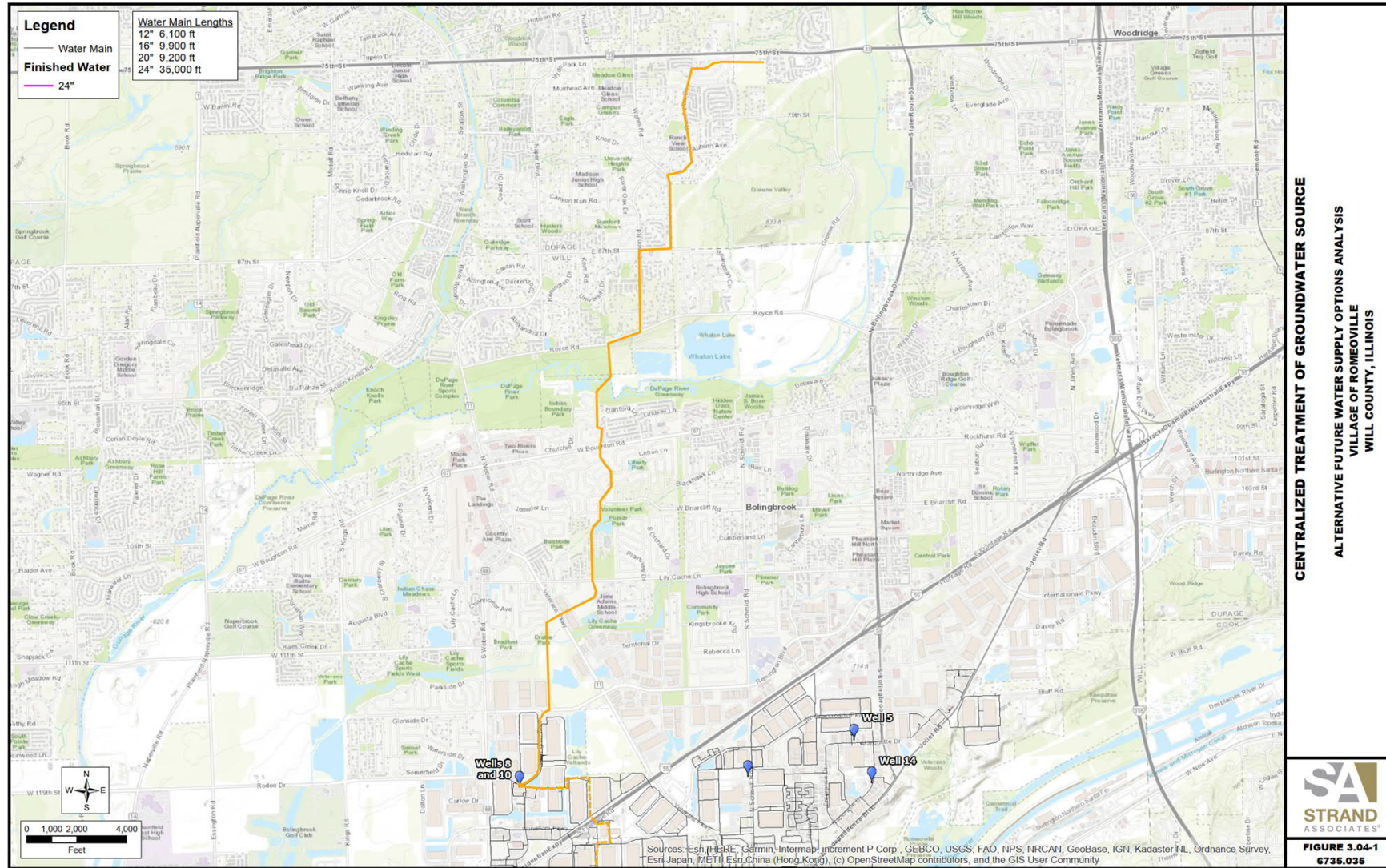


A REGIONAL SOLUTION:

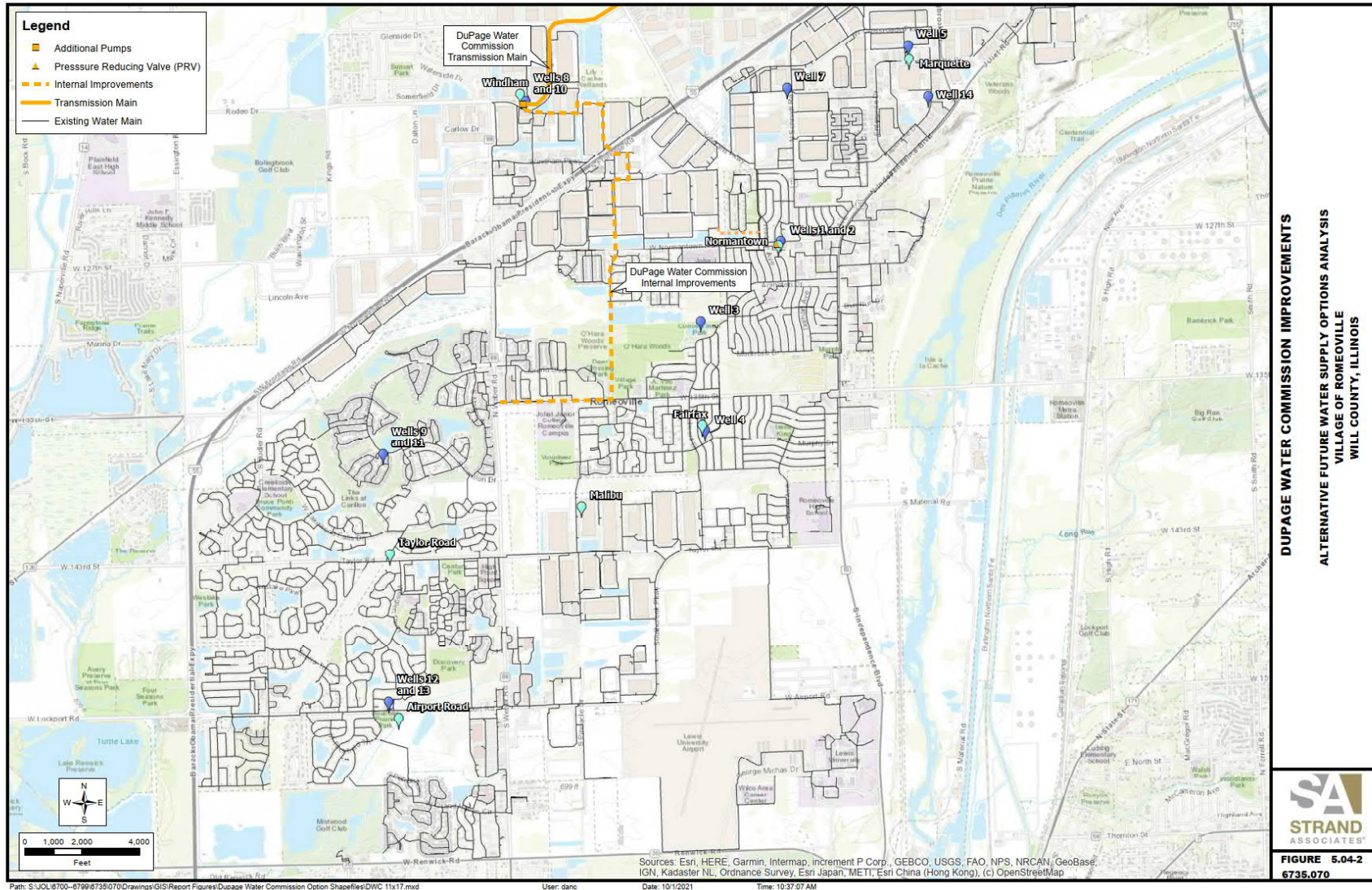
1.	Addison
2.	Argonne Labs
3.	Bartlett
4.	Bensenville
5.	Bloomingtondale
6.	Carol Stream
7.	IAWC
8.	Clarendon Hills
9.	Darien
10.	Downers Grove
11.	DuPage County
12.	Elmhurst
13.	Glen Ellyn
14.	Glendale Heights
15.	Hinsdale
16.	Itasca
17.	Lisle
18.	Lombard
19.	Naperville
20.	Oak Brook
21.	Oak Brook Terrace
22.	Roselle
23.	Villa Park
24.	Westmont
25.	Wheaton
26.	Willowbrook
27.	Winfield
28.	Wood Dale
29.	Woodridge



LAKE MICHIGAN WATER VIA DUPAGE WATER COMMISSION



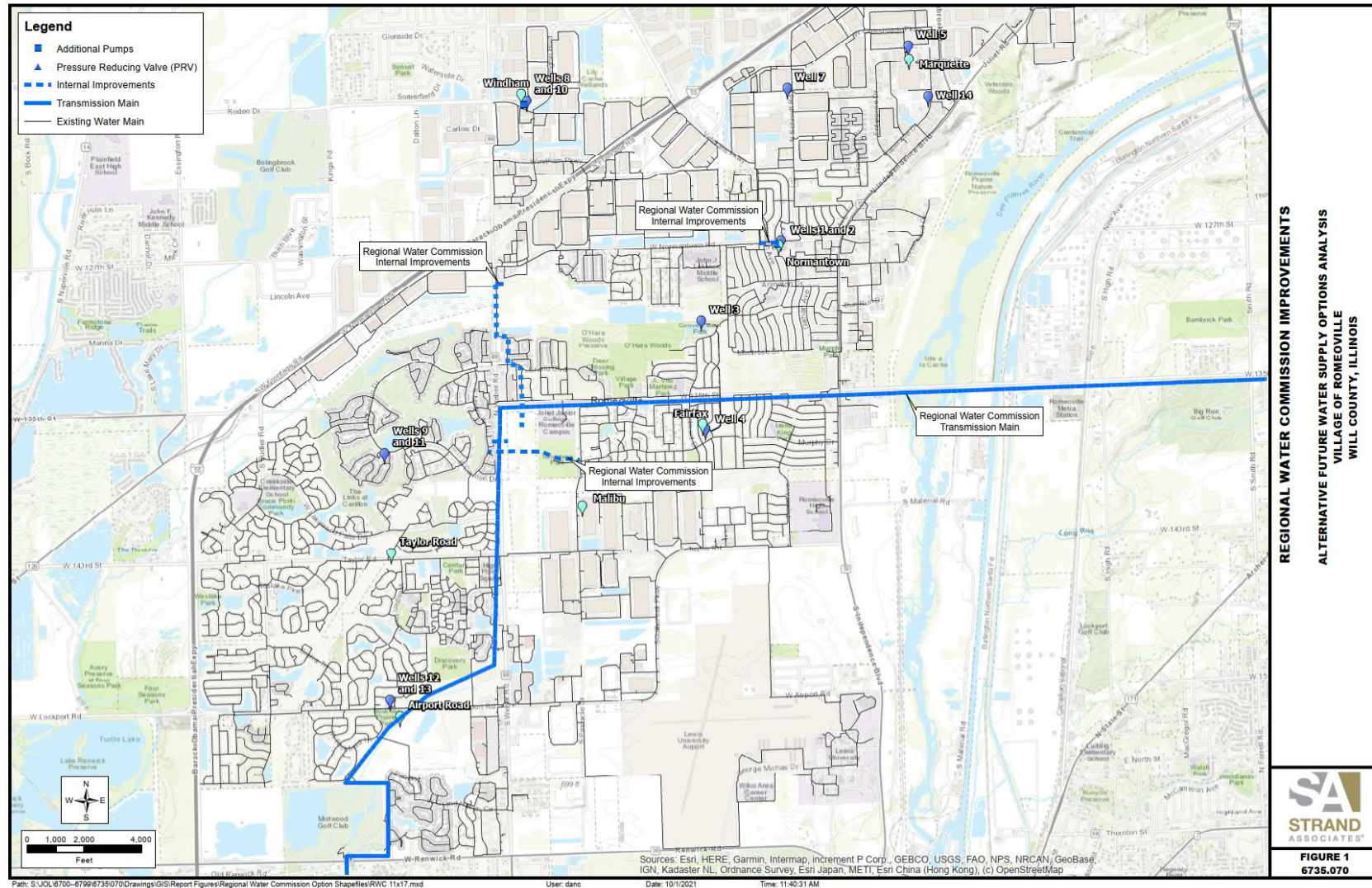
LAKE MICHIGAN WATER VIA DUPAGE WATER COMMISSION



ALTERNATE WATER SUPPLY STUDY

Lake Michigan Water –
Regional Water Commission
(Joliet)

LAKE MICHIGAN WATER VIA REGIONAL WATER COMMISSION



A REGIONAL SOLUTION:

WATER COMMISSION FORMATION TIMELINE

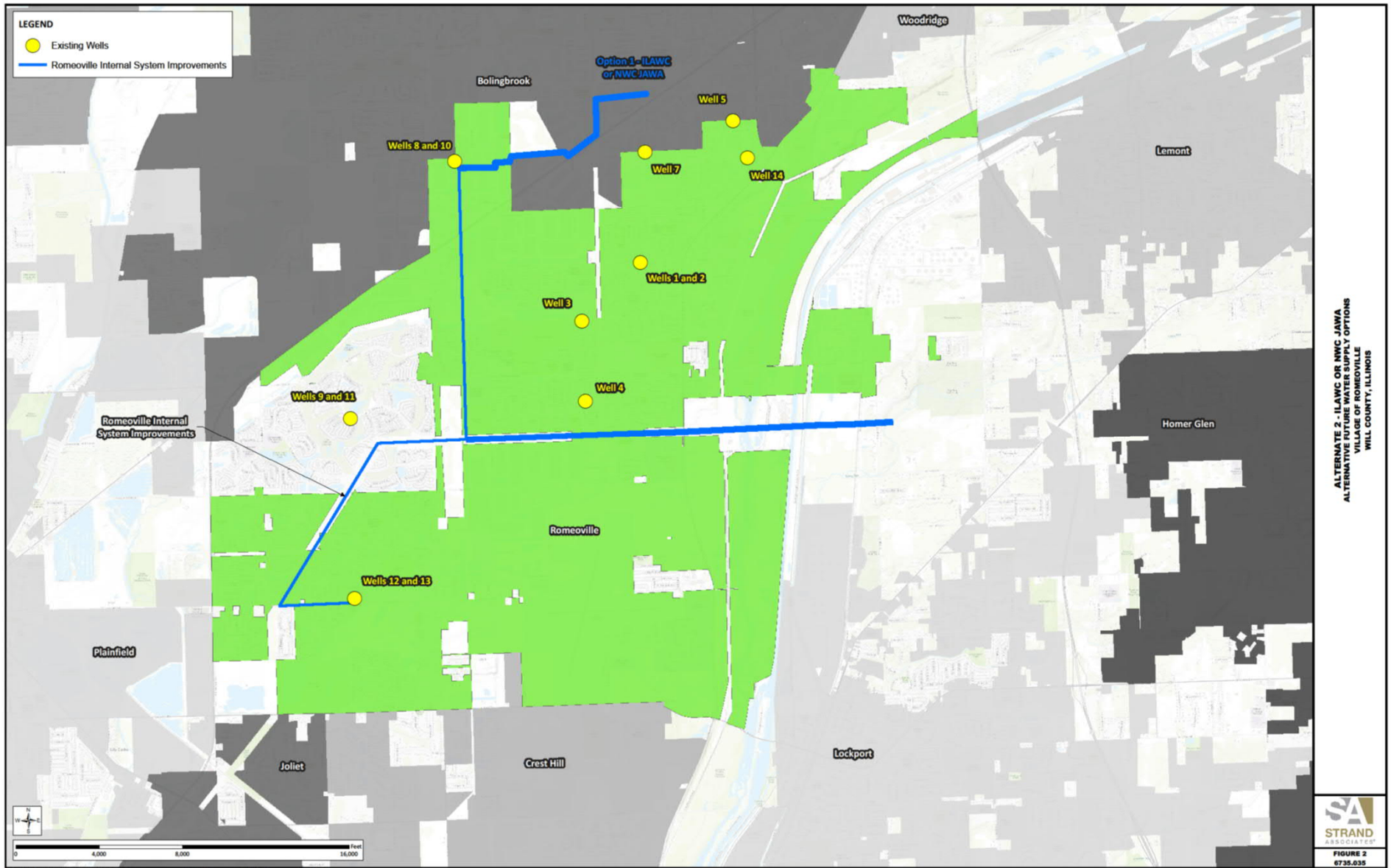


POTENTIAL REGIONAL PARTNERS

- Channahon
- Crest Hill
- Homer Glen
- Joliet
- Lemont
- Minooka
- Montgomery
- Oswego
- Rockdale
- Romeoville
- Shorewood
- Yorkville

ALTERNATE WATER SUPPLY STUDY

Northern Will County Water
Agency or Illinois American
Water Company



CONSIDERATIONS FOR NEXT STEP ALTERNATIVE EVALUATION – FURTHER COST ANALYSIS

DuPage Water Commission

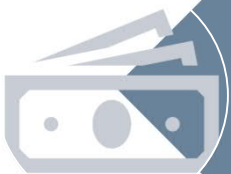
Regional Water Commission

All other evaluation criteria were very similar between these two options. Phase 2 will focus on more detailed cost analysis for comparison and conclusions.

FUTURE OPTION: ILAWC / NWCWA



ILAWC / NWCWA has very limited amount of data available for evaluation, but there is no firm timeline associated with this alternative.



Phase 1 review indicated that the bulk water purchase rate was going to be higher than the other two Lake Michigan Alternatives and improvements needed to implement will be similar in cost or more costly.



Although it is anticipated to be a higher cost alternative, it will also be further evaluated in Phase 2 to the extent possible.

POTENTIAL NWCWA PARTNERS

- Bolingbrook • Homer Glen
- Woodridge • Lemont

POTENTIAL ILAWC WHOLESALE SUPPLIER

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NEXT STEPS/TIMELINE

NEXT STEPS / TIMELINE



BEGIN STEPS TOWARDS LAKE MICHIGAN SUPPLY

