CITY OF SYCAMORE

SOURCE WATER PROTECTION REPORT

2023

Prepared with Assistance From:

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1 INTRODUCTION

1.1 VISION STATEMENT

The City of Sycamore is committed to serving its community with safe, clean, and reliable groundwater which constitutes the entirety of its drinking water supply. Through collaborative efforts with local stakeholders and adoption of improved technologies, the City aims on prioritizing water quality, promoting sustainability, and safeguarding the integrity of its water sources. By proactively investing in the protection and long-term viability of its water supply, the City exemplifies its commitment to environmental stewardship for the benefit of present and future generations.

1.2 PURPOSE & SCOPE

Drinking water suppliers strive to provide their customers and communities with the highest quality water. The Source Water Protection Plan (SWPP) establishes a baseline for the preservation of community source water that precludes contamination and exceedance of withdrawals. The American Water Works Association (AWWA) developed the AWWA Standard G300 with a primary objective of maintaining, safeguarding and/or improving the quantity and quality of a community's water source.

The Illinois Pollution Control Board ("IPCB") mandates that each community develop a Source Water Protection Plan in compliance with the AWWA Standard G300 (35 ILL. Admin. Code 604.300). This stipulation pertains to communities that treat surface or groundwater as a primary or emergency water supply.

The SWPP is a highly site-specific process with an emphasis to incentivize pollution prevention as opposed to remediation or treatment of contaminated water. In conformity with the AWWA Standard G300, the general framework for this SWP program comprises of five main sections:

1. A SWP Program Vision Statement
2. Source Water Characterization and Delineation
3. SWP Objectives
4. SWP Action Plan and Implementation
5. Evaluation and Revision

As part of the City's mission, a strategic planning team was developed to produce the source water protection plan. The members are outlined below.

Table 1-1: Strategic Planning Team for Source Water Protection

Member	Organization/Role
Matt Anderson	City of Sycamore – Director of Public Works
Jake Keck	City of Sycamore – Assistant Public Works Director
Mark Bushnell	City of Sycamore – City Engineer
Bryan Carlson	City of Sycamore – Water Division Foreman
Chris Marschinke	Trotter and Associates – Project Manager
Mary De Guzman	Trotter and Associates – Staff Engineer

1.3 CITY BACKGROUND

The City of Sycamore, situated in DeKalb County, has a rich history. It was initially established as a village in 1858 and later upgraded to a city in 1869. Covering an area of about 6,424 acres or 10 square miles, it surrounds the intersection of Route 64 and Route 23. The city's public water supply dates back to 1888 and continues to serve the community with a well-maintained water system that extends throughout its boundaries.

In 2020, the City had a Population Equivalent (P.E.) of 26,697 for all accounts connected to the public water supply and is currently projected at a total P.E. of 39,241 in the year 2030.

The City of Sycamore utilizes five (5) groundwater wells to supply an average daily demand of approximately 1.8 MGD for both residential and non-residential accounts. There are currently two (2) storage towers with a respective storage capacity of 750,00 gallons and 1,500,000 gallons as well as about 115 miles of water main throughout the City.

2 Source Water Characterization and Delineation

2.1 Water Sources

Groundwater primarily supplies the City's municipal-run water system. Groundwater is derived from shallow and deep bedrock aquifers throughout the area. Groundwater is accessed through wells that penetrate aquifers hundreds of feet below the surface. Surface water from watersheds recharges unconsolidated shallow aquifers through percolation or infiltration in granular sediments. Consolidated aquifers, on the other hand, are recharged at the outcrop since they are enclosed by confining units such as shale.

The City's water distribution system largely relies on deep bedrock aquifers at depths greater than 1000 ft, most of which are part of the Cambrian-Ordovician sandstone system. The diagrams in Figure 2-1 and Figure 2-2 illustrate a cross section of the aquifers underlying DeKalb County and surrounding areas. These diagrams were sourced from a groundwater study conducted by the Illinois State Water Survey in 2015, focusing on Northern Illinois and Southern Wisconsin. As shown, wells in DeKalb County, including the City of Sycamore, have a higher chance of reaching the Mt. Simon Aquifer at depths of 1000 feet or more.

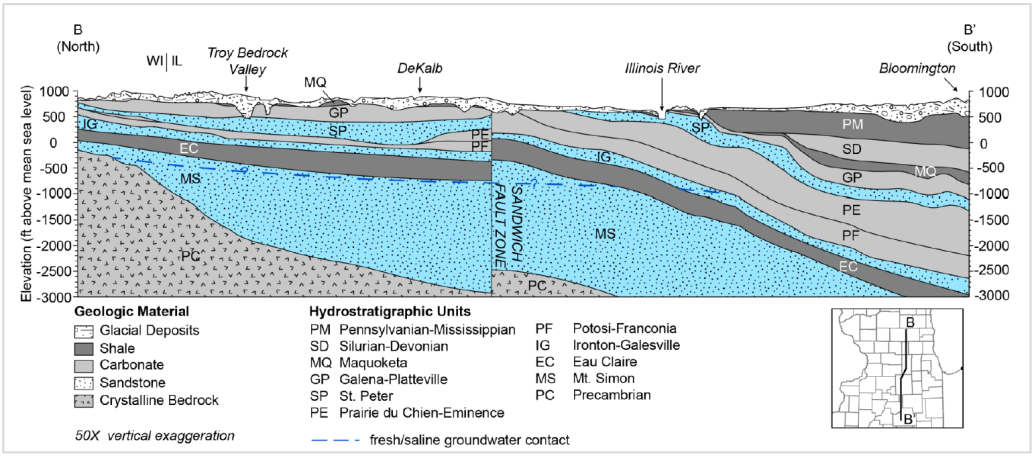

Figure 2-1: North-to-south cross section from southern Wisconsin to central Illinois showing the hydrostratigraphic units.

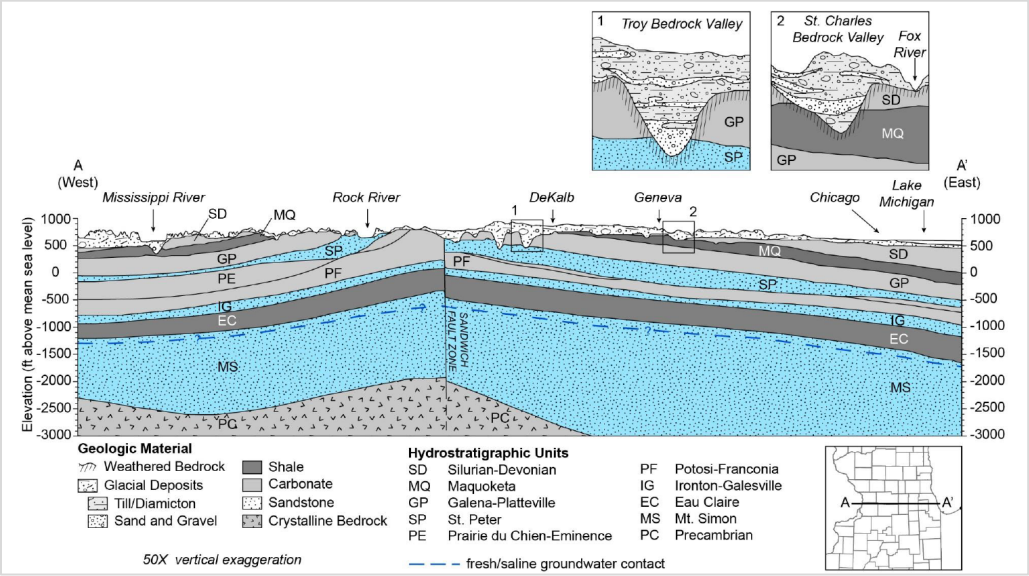

Figure 2-2: West-to-east cross section across northern Illinois showing the hydrostratigraphic units

The City of Sycamore operates five (5) community wells drilled between 1970 and 2010, ranging in depths from 1200 to 1300 feet. However, one well is currently on standby due to increased levels of radium. These groundwater wells are connected to two (2) water towers with a total capacity of 2.25 million gallons. The location of each well is shown in Figure 2-3, situated near the City's corporate boundary.

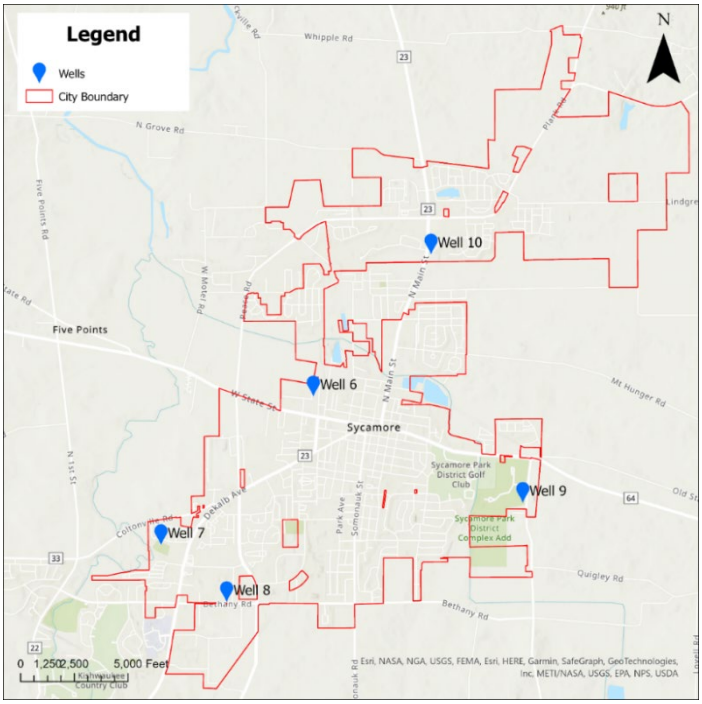

Figure 2-3: Community Well Locations

General information for the wells is borrowed from the Source Water Assessment Program Fact Sheet prepared by the IEPA as well as the Illinois Water and Related Wells (ILWATER) map by the Illinois State Geographical Survey (ISGS). A bulk of these includes the following data:

- Well ID, description, status, setback zones, pumpage at the time of construction, and aquifer description
- Finished Water Quality
- Source Water Quality history
- Well drill logs
- Well locations

Due to the lengthy nature of the drill logs, an abridged form is presented to simplify the information for the purpose of this document without compromising its integrity. The original document of each drill logs is displayed in Appendix C.

2.1.1 Active Community Wells

The City maintains four (4) wells in service: Well 6, 8, 9, and 10 with Well 9 having the highest design capacity at 1350 GPM.

Well No. 6 – WL11443

Well 6 was drilled in 1970 with a total depth of 1214 feet. However, In 1997, the well depth was increased by 800 feet to address elevated barium levels from the Mt. Simon Aquifer. It is located on Maertz Drive, near the center of the City and just north of the intersection of Center Cross St and State St. The well has a design capacity of 1,000 GPM or 1.44 MGD.

The table below presents the drill log for Well 6 when it was drilled in 1970. Under non-pumping conditions, the groundwater appears at a static level of 245 feet below grade, and pumping level 350 ft below grade. As observed in the log and mentioned in the original document, the well interconnects the Galena, St. Peter sandstone, Knox, Ironton, and Eau Claire formation aquifer.

Table 2-1: Well No. 6 Drill Log

Well No. 6	
Distance (ft)	**Description**
0 to 5	loam, silty clay, organic matter, non-calcareous, soil, Richland formation
5 to 45	till, loam, sand, pebbles, gravel@bs
45 to 55	sand and gravel, unsorted, outwash/ice contact
55 to 60	sand, ground, course gravel, more sorted/above
60 to 65	till, silty clay loam, sand, gravel,
65 to 80	outwash same as 55-60’ interval
80 to 90	till, loam, sandier than above, few organic material, non-calcareous
90 to 110	dolomite, limestone
110 to 165	limestone & shale

165 to 461	limestone
461 to 465	sandstone
465 to 485	limestone
485 to 495	sandy limestone
495 to 530	sandstone, streaks of dolomite
530 to 820	sandstone
820 to 875	sandy limestone
875 to 885	limestone w/ shale streaks
885 to 900	sandy limestone
900 to 910	dolomite
910 to 928	limestone
928 to 930	shale
930 to 935	sandy limestone with shale streaks
935 to 955	limestone
955 to 1020	sandy limestone
1020 to 1207	sandstone
1207 to 1214	shale & limestone

Well No. 8 – WL00173

Well 8 was drilled in 1988 with a total depth of 1,300 feet. It is located near the intersection of Bethany Road and Mediterranean Drive, just west of Peace Road. It has a design capacity of 1,200 GPM or 1.73 MGD but normally runs at 1,160 GPM.

A drill log was not available for Well 8, however, well data shows that it was drilled up to 1,300 feet. Formations encountered by the well include Galena, St. Peter, Ironton-Galesville, and Mt. Simon Aquifer. Under non-pumping conditions, the groundwater appears at a static level of 280 feet below grade, and under pumping conditions, groundwater is approximately between 430 to 440 feet below grade.

Well No. 9 – WL 01540

Well 9 was drilled in 2004 with a total depth of 1,285 feet by Layne-Western Co. It is on the far eastern part of town, west of Airport Road, and just north of Hillside Road, adjacent to the Park District's Community Center. Well 9 has a design capacity of 1,350 GPM or 1.94 MGD.

The table below presents the drill log for Well 9 when it was drilled in 1986. As observed in Table 2-3, the well mainly occupies carbonate, shale, and sandstone formations. In the original document, it was mentioned that the well is interconnected with the St. Peter and Galesville aquifer. Under non-pumping conditions, the groundwater appears at a static level of 295 feet below grade, and under pumping conditions, groundwater is at level 415 feet below grade.

Table 2-2: Well No. 9 Drill Log

Well No. 9	
Distance (ft)	**Description**
0 to 5	Sandy clay
5 to 33	Clay
33 to 110	Very sandy clay
110 to 165	Sandy clay mixed with gravel embedded
165 to 180	White lime
180 to 250	Gray & white lime mixed
250 to 330	White lime
330 to 340	90% lime, 10% shale
340 to 390	White lime
390 to 410	White and gray lime
410 to 530	Lime
530 to 545	sandy limestone some shale w/ 100% sandstone-St. Peter
545 to 600	Very sandy lime
600 to 810	Sandstone
810 to 850	Sandstone & lime streaks
850 to 935	sandstone
935 to 1020	Sandy lime with streaks of shale
1020 to 1065	50% gray lime with 50% sand
1065 to 1230	Galesville sandstone
1230 to 1285	lime & shale

Well No. 10 – WL01960

Well 10 was drilled in 2010 with a total depth of 1,325 feet by Municipal Well & Pump, Inc. It is located in the northern region of the City just east of Main Street and south of Heron Creek Drive. It has a design capacity of 1,200 GPM or 1.73 MGD

The table below presents the drill log for Well 10 when it was drilled in 2010. As observed in the log, the well mainly occupies carbonate, shale, and sandstone formations. Noted in the original document, the well encounters the St. Peter and Ironton-Galesville sandstone aquifers. Under non-pumping conditions, the groundwater appears at a static level of 255 feet below grade, and under pumping conditions, groundwater is at level 330 feet below grade.

Table 2-3: Well No. 10 Drill Log

Well No. 10	
Distance (ft)	**Description**
0 to 20	no record
20 to 90	drift
90 to 125	lime
125 to 140	lime/shale
140 to 170	lime/shale mix
170 to 175	shale
175 to 180	lime shale mix
180 to 455	lime
455 to 460	lime, shale mix
460 to 515	lime
515 to 520	shale
520 to 560	sandy shale lime
560 to 570	sandy lime cemented sandstone

570 to 790	sandstone shale mix
790 to 795	sandstone
795 to 825	sandstone shale mix
825 to 860	sandstone
860 to 865	cemented sandstone
865 to 875	sandy lime, cemented sandstone
875 to 880	red sandy lime
880 to 895	shale chint mix, sandy lime
895 to 900	shale lime sandy mix
900 to 905	shale mix cemented ss some lime
905 to 920	less shale sandy lime chint mix
920 to 925	chinty sandy lime
925 to 930	lime, shale, sandy lime, chint
930 to 935	sandy lime
935 to 945	lime, sandy lime, granite
945 to 955	sandy lime
955 to 1005	sandy lime shale mix
1005 to 1015	granity-type w/some shale mix
1015 to 1020	sand lime, lots of factors
1020 to 1025	tannish sands lime
1025 to 1035	sandy lime quartz mix factors
1035 to 1090	sand streaks, shale cemented streak
1090 to 1175	cemented sandstone, sand streaks shale
1175 to 1180	white sand-sticky shale bluish
1180 to 1185	brown lime hard
1185 to 1205	sticky shale little sand mix
1205 to 1215	sticky shale lime mix
1215 to 1225	sandy lime or cemented shale mix

Well No. 7 – WL11444

Well 7 was drilled in 1978 with a total depth of 1233 feet. It is located on Willow Street, east of DeKalb Avenue and south of Highland Drive, It has a design capacity of 1250 GPM or 1.87 MGD.

The table below presents the drill log for Well 7 when it was drilled in 1978. As observed in Table 2-5 and the original document, the well mainly occupies carbonate, shale, and sandstone formations. These include the Galena and St Peter sandstone aquifer.

In recent years Well 7 has begun exhibiting the potential for radium concentrations in excess of the MCL of 5.0 pCi/L. The Well is currently run at a reduced capacity with radium levels consistently below this threshold, and a new radium removal treatment facility is anticipated to begin construction in the summer of 2023.

Table 2-4: Well No. 7 Drill Log

Well No. 7	
Distance (ft)	**Description**
0 to 8	fill
8 to 25	clay
25 to 55	clay and gravel
55 to 115	sand and gravel
115 to 125	shale
125 to 145	limestone
145 to 155	limestone & shale
155 to 500	limestone
500 to 505	sand and shale
505 to 525	sandstone with limestone and shale
525 to 560	sandy limestone
560 to 809	sandstone
809 to 820	shale
820 to 880	sandstone w/ lime shells & shale
880 to 942	limestone
942 to 1060	sandy limestone with shale shells
1060 to 1080	sandstone and limestone
1080 to 1116	sandy limestone
1116 to 1205	sandstone
1205 to 1220	white sandy limestone
1220 to 1233	limestone and shale

2.1.2 Well Capacities

The Ten States Standards for Water Works recommends that a community should be capable of supplying enough water to meet the maximum day demand at firm capacity. Firm capacity is the available water for the system with the largest well out of service. The table below provides an overview of the active wells at design and firm capacities.

Table 2-5: Current Well Capacities

	Design Capacity (GPM)	Design Capacity (MGD)	Firm Capacity (GPM)	Firm Capacity (MGD)
Well 6	1000	1.44	1000	1.44
Well 7	-	-	-	-
Well 8	1200	1.73	1200	1.73
Well 9	1350	1.95	-	-
Well 10	1200	1.73	1200	1.73
TOTAL	**4750**	**6.64**	**3400**	**4.90**

Table 2-6: Current and Future Demand

	2022	2030
Average Day Demand (MGD)	1.8	2.3
Maximum Day Demand (MGD)	3.18	5.0

In 2022, the City of Sycamore had a maximum day demand of 3.18 MGD. Using a percent difference method, it was found that the design capacity is 109% greater than the maximum day demand and the firm capacity is 54.1%, the current firm capacity, 4.90 MGD, would not be able to keep up with future demands.

Since Well 7 is scheduled to be put back in service by 2024, the future design and firm capacity is projected to be 8.64 MGD and 6.7 MGD, respectively. It was determined that the design capacity exceeds the maximum day demand by 43.3% and the firm capacity exceeds it by 36.7% for 2030.

These values concur with 35 ILL. Admin. Code 604.230 which states that for a multiple well system, the combined delivery must equal or exceed the maximum average daily demand with the largest producing well out of service. Additionally, the City complies with the 35 Ill. Amin. Code 604.105 which states that the design capacity needs to be at least 20% greater than the maximum average daily demand.

Table 2-7: Future Well Capaciies

	Design Capacity (GPM)	Design Capacity (MGD)	Firm Capacity (GPM)	Firm Capacity (MGD)
Well 6	1,000	1.44	1,000	1.44
Well 7	1,250	1.80	1,250	1.80
Well 8	1,200	1.73	1,200	1.73
Well 9	1,350	1.95	-	-
Well 10	1,200	1.73	1,200	1.73
TOTAL	**6,000**	**8.64**	**4,650**	**6.70**

2.1.3 Aquifers

The Cambrian-Ordovician aquifer sandstone (NWIS Code: S300 CAMORD) is the primary source of The City's deep bedrock groundwater.

Since it is difficult to categorize, in great detail, the stratigraphy of an observed well, the aquifers encountered by Sycamore's wells are classified using two systems: the National Water Information System (NWIS) code and the Illinois State Water Survey (ISWS) code. The NWIS code identifies the age of the formation of the aquifer and provides the general principal aquifer name. These layers, in relation to the City's location, is shown in Figure 2-3 taken from the ISWS Illinois Groundwater Resources map and Table 2-7. The ISWS code identifies the generalized lithology of the aquifer open to the well. The first two digits indicate the upper stratigraphic unit while the last two digits indicate the lower stratigraphic unit open to the well.

Records from the Well factsheet and drill logs show that the wells are interconnecting multiple sandstone aquifers with Mt. Simon at the termination point for each well. Hydrostratigraphic units encountered by the wells include, in increasing depth, Galena, St. Peter, Knox, Ironton-Galesville, Eau Claire, and Mt. Simon.

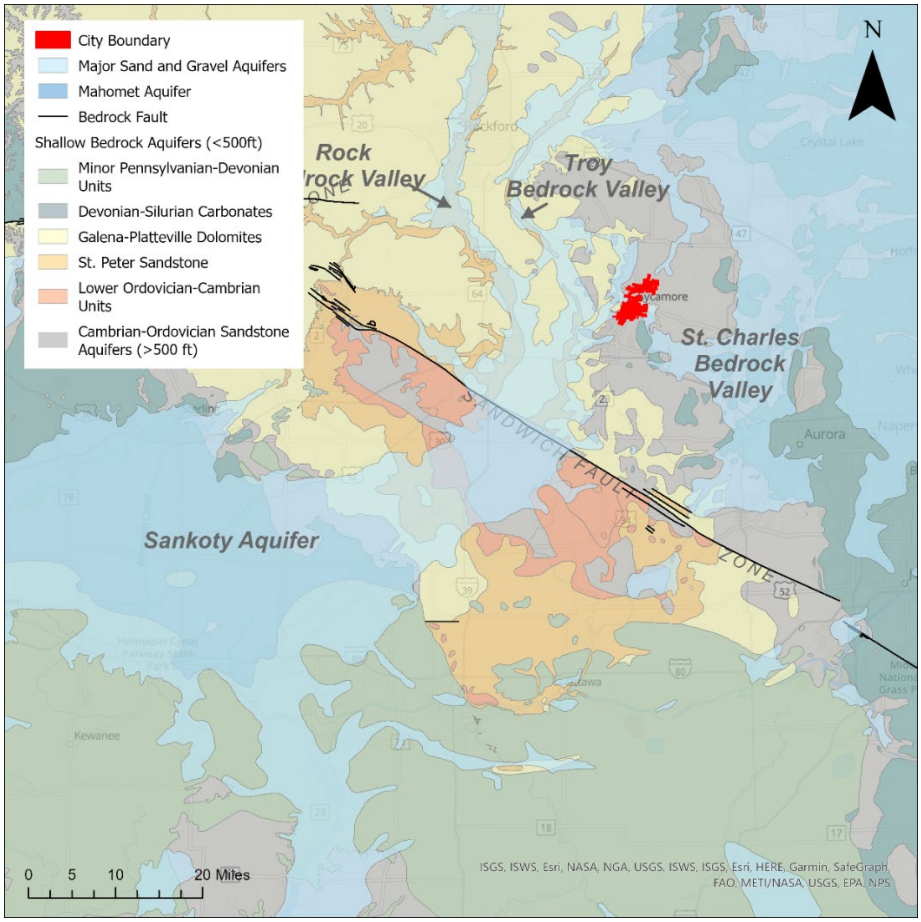

Figure 2-4: NWIS Aquifer Classification

A breakdown of the major aquifers for each well is shown in Table 2-7 in accordance with well depth. Specified hydrostratigraphic bedrock units, as shown for each depth, are retrieved from the original drill log documents, factsheet, and the 2019 Water Master Plan.

Table 2-8: Aquifer Classification

	Well 6	Well 7	Well 8	Well 9	Well 10
ISWS Code	6080	6080	6387	unspecified	unspecified
NWIS Code	**S300 CAMORD**	**S300 CAMORD**	**S300 CAMORD**	**S300 CAMORD**	**S300 CAMORD**
Depth < 500 ft	Galena	Galena	Galena	unspecified	unspecified
Depth > 500 ft	St. Peter Knox Ironton Eau Claire Mt. Simon	St. Peter Mt. Simon	St. Peter Ironton-Galesville Mt. Simon	St. Peter Galesville Mt. Simon	St. Peter Ironton-Galesville Mt. Simon

2.2 Water Quality

The City of Sycamore is committed to supplying a safe, reliable, and economical potable water supply to all residents and businesses within the City's service area. Due to the natural predisposition of radioactive materials within the aquifers, the City's community wells have experienced increasing amount of radium and barium concentrations. In response to this, the city initiated the construction of radium removal facilities from each community well to ensure all customers in the area have access to sufficient and safe drinking water.

2.2.1 Drinking Water Quality Report

The City of Sycamore releases a drinking water quality report annually to the public. The most recent report was generated for the period between January 1, 2022 to December 31, 2022. Results of the test are shown in Table 2-10 below. As evidenced, there are no current documented water quality violations of the drinking water supply and meet reasonable and accepted limits for contamination.

Table 2-9: Annual Drinking Water Quality Report (2022)

Regulated Contaminants								
Substance	Year Sampled	Amount Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Alpha Emitters	2022	9	2.2-9.01	0	15	pCi/L	No	Erosion of natural deposits
Barium	2021	1.38	1.38-1.38	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine	2022	1	0.32-2.1	MRDLG 4	MRDL 4	ppm	No	Water additive used to control microbes
Combined Radium	2022	5	1.234-6.43	0	5	pCi/L	No	Erosion of natural deposits
Fluoride	2022	0.74	0.57-0.80	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]	2022	6	6-6.16	N/A	60	ppb	No	By-product of drinking water disinfection
Iron	2021	135	135-135	N/A	1000	ppb	No	Erosion from naturally occurring deposits
Sodium	2021	11.7	11.7-11.7	N/A	N/A	ppm	No	Erosion of naturally occurring deposits; Used in water softener regeneration
Total Coliform Bacteria	2022	2	N/A	N/A	Treatment Technique	Positive Samples	No	Naturally present in the environment
TTHMS [total trihalomethanes]	2022	11.5	8.11-11.5	N/A	80	ppb	No	By-product of drinking water disinfection

Lead and Copper	Year Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over (AL)	Units	Violation	Likely Source of Contamination
Copper	2022	1.3	1.3	0.57	0	Ppb	No	Erosion of natural deposits, leaching from wood preserves; Corrosion of household plumbing systems
Lead	2022	0	15	6	0	Ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits

Table 2-10: Consumer Confidence Report Monitoring Violation

Combined Radium 226/228 and Gross Alpha			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine Major	4/1/2022	5/30/2022	The radium and gross alpha particle samples were collected and submitted to the laboratory within the specified sampling period. The laboratory did not submit the results to the Illinois EPA by the required reporting date. Once the laboratory analysis was completed, the results were submitted to the Illinois EPA. The results were below the maximum contaminant level.

2.2.2 Well Water Quality Report

The City of Sycamore had sent water samples from each well to the IEPA laboratory and tested the water samples for IOC, SOC, and VOC's. The lab results for each well, as shown in Appendix A, indicate that the concentration of the tested compounds in the sample is less than the Regulatory Level.

2.3 CONTAMINATION

Potential sources of contamination or PSSC, are certain facilities or activities that have the potential to release harmful materials into a drinking water supply. PSSCs can be identified through several methods, including regulatory data and local assessments. The USEPA developed the Drinking Water Mapping Application to Protect Source Waters (DWMAPS), an interactive tool that allow users to view federal regulatory data and ultimately assist in protecting source water throughout the United States.

Additionally, the USEPA has produced an interactive map and resource that identifies community water system wells and sites of Underground Storage Tanks (UST) facilities, a distinct type of PSSC. According to the EPA UST Finder User manual, an 'Open UST(s)' refers to facilities with at least one open or temporarily out of service UST while a 'Closed UST(s)' refers to facilities with only closed UST(s). Release refers to leaking UST's (LUST). An open release generally means that a LUST site has not been remediated and is undergoing assessment, treatment and/or monitoring. The application uses publicly available information to compile data from 2018-2021 and is made accessible for everyone.

Figure 2-3 shows compiled data for the City of Sycamore taken from the EPA's DWMAPS application and UST finder application. Note that this map is provided as shown on the applications and may be subject to change.

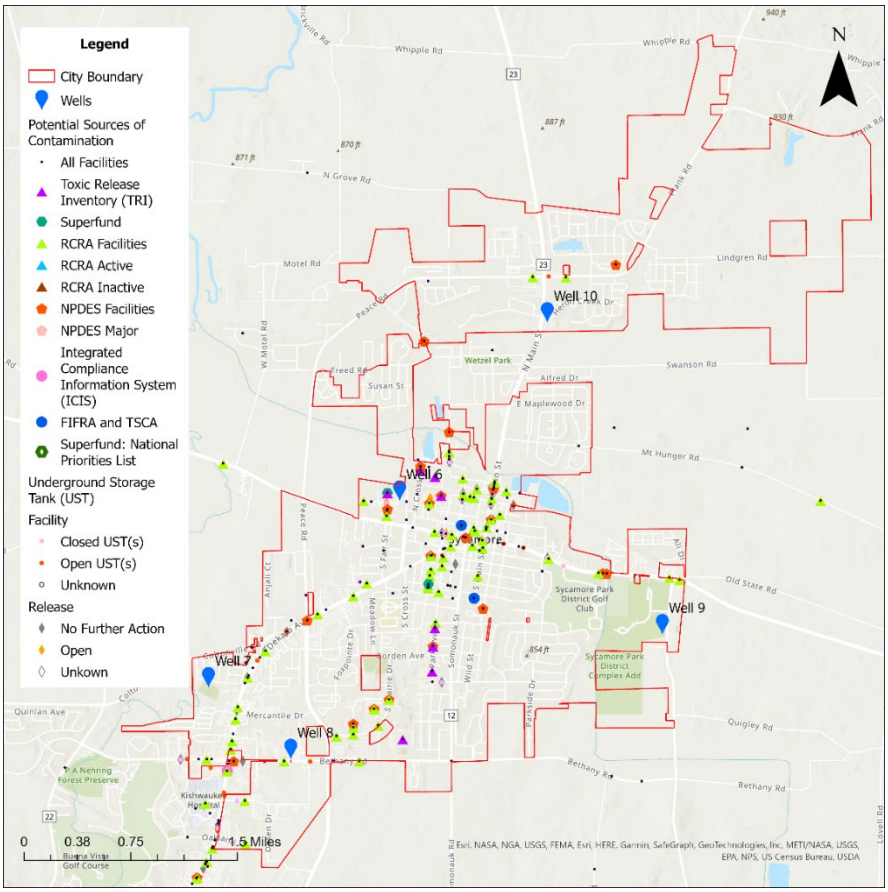

Figure 2-5: Potential Sources of Contamination

Every symbol on the map represents a facility, site, or place subject to environmental regulation or interest by the EPA. Several of these are accompanied by symbols which further identifies the PSSC. An RCRA site means the location is regulated and overseen by the Resource Conservation and Recovery Act which establishes the framework for waste control in the US. NPDES facilities refer to facilities that are under permit with the National Pollutant Discharge Elimination System which regulates point sources of water pollution. Locations that are regulated for pesticide use as well as produced or imported industrial chemicals fall under FIFRA and TSCA. Other facilities of interest (FOI) are tracked by the EPA that have an environmental interest are labeled as "All Facilities."

2.3.1 Potential Contamination Sources

Section 14.1 to 14.3 of the Illinois Groundwater Protection Act (IGPA) provides two levels of protection for a water supply well: a minimum setback zone and a maximum setback zone. The City of Sycamore adopted this regulation to protect the groundwater from contamination and ensure the City's water supply is safe for consumption.

Section 14.1 and 14.2 of the IGPA establishes the minimum setback zone for any existing or permitted potable water supply well. This setback zone prohibits any building of primary sources, secondary sources, and potential routes within 200 feet of the radial area. However, this minimum setback is increased to 400 feet when the water supply well derives water from an unconfined shallow fractured or highly permeable bedrock formation or from an unconsolidated and unconfined sand and gravel aquifer. All of the City's wells derive water from deep bedrock and have a minimum setback of 200 ft.

Section 14.3 of the IGPA regulates the maximum setback zone for a public or community water supply well which prohibits new potential primary sources or potential routes. The maximum setback zone is identified by analyzing the lateral radius of influence of the respective well. If the radius of influence is greater than 200 or 400 ft, a municipality can apply for a maximum zone up to 1000 ft. There are currently no established maximum setback zones for all wells. A summary of the setback zones for each well is shown in Table 2-11.

Table 2-11: Setback Zones

Well No.	Minimum Setback (ft)	Maximum Setback (ft)
6	200	0
7	200	0
8	200	0
9	200	0
10	200	0

In general, the minimum and maximum setback zones are integral components of the wellhead protection area (WHPA) which is designed to prevent or minimize contamination of the water source

Referencing Figure 2-4, Figures 2-5 to 2-9 provide a section view for reach well. It is worth mentioning that the City of Sycamore has not established a maximum setback zone for all community wells, therefore, a preliminary setback zone of 1000 ft was assumed.

Well No. 6

The exhibit below represents Well No. 6 and its surrounding potential sources of contamination within a setback zone of 1000 feet. As observed, there are 8 locations subject to regulation by EPA for potential contamination within the boundaries.

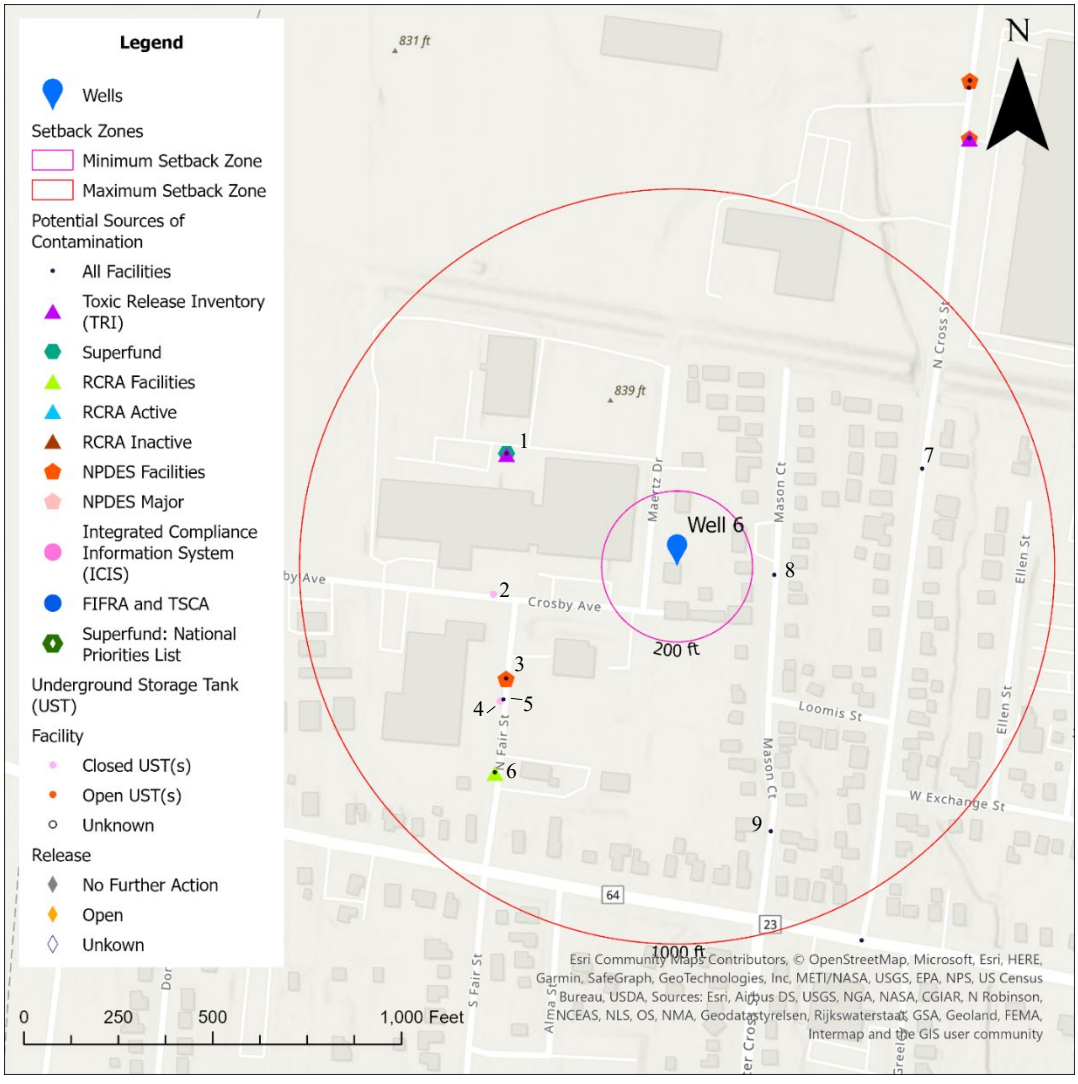

Figure 2-6: Well 6 Potential Sources of Contamination

Well No. 6 Potential Sources of Contamination			
Reference Number	**Facility Name**	**Identification**	**Distance from Well (Approximate Feet)**
1	Seymour of Sycamore Inc.	FOI, Superfund, TRI	540
2	Seymore of Sycamore Inc.	Closed UST	490
3	Sycamore West Elementary School	FOI, NPDES Facility	540
4	Sycamore Containers Inc	Closed UST	590
5	Amcor Packaging Distribution Inc.	FOI	590
6	Seymour of Sycamore Inc.	FOI, RCRA Facility, Closed UST	730
7	275 N Cross St.	FOI	700
8	275 Mason Ct.	FOI	260
9	Lee Peck Jewelry	FOI	740

The Seymore of Sycamore Inc. is a paint manufacturer located near the center of the City's corporate boundary. Although the facility falls within the minimum setback zone, the company implements various environmental programs to control contamination, including a solid waste program and a hazardous waste program. Other notable facilities of interest mentioned in the table and Figure 2-6 participate in assistance and support programs and/or adhere to regulations concerning air emissions.

Well No. 7

The exhibit below represents Well No. 7 and its surrounding potential sources of contamination. As observed, there are no potential sources of contamination within the assumed 1000-ft maximum setback zone.

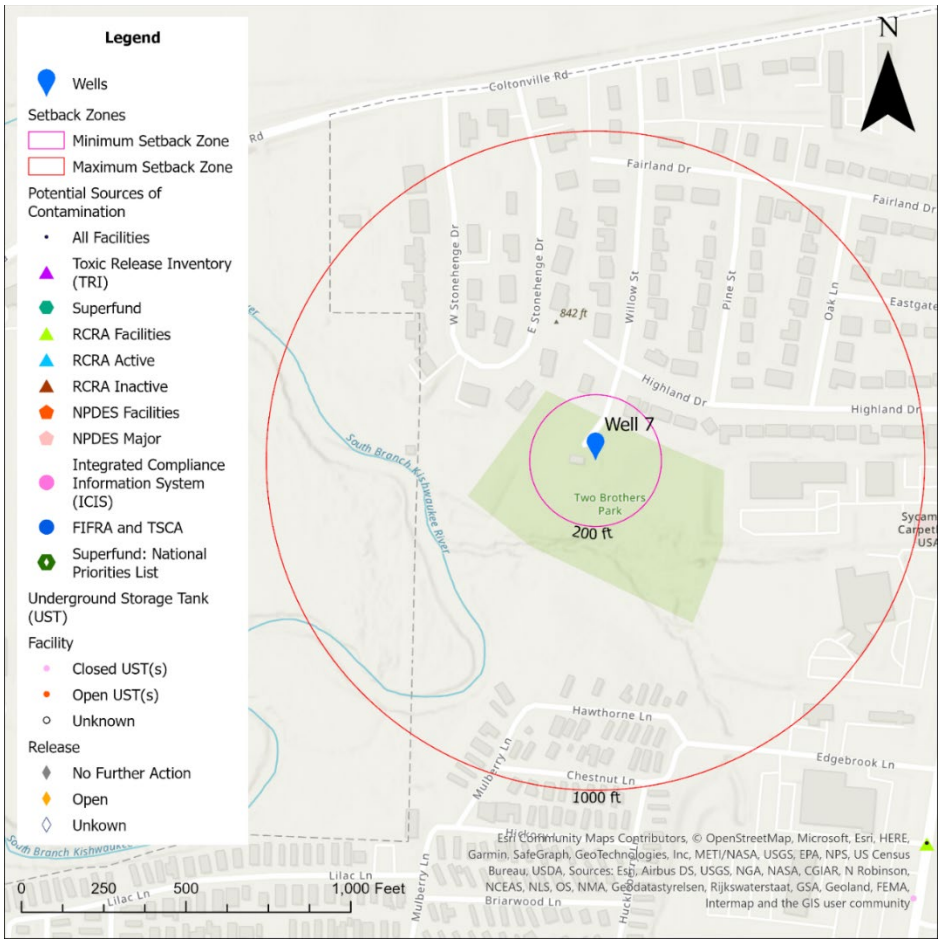

Figure 2-7: Well #7 Potential Sources of Contamination

Well No. 8

The exhibit below represents Well No. 8 and its surrounding potential sources of contamination within a setback zone of 1000 feet. As observed, there are three locations subject to regulation by EPA for potential contamination within the boundaries. However, there are no potential sources of contamination within the minimum setback zone ordinance.

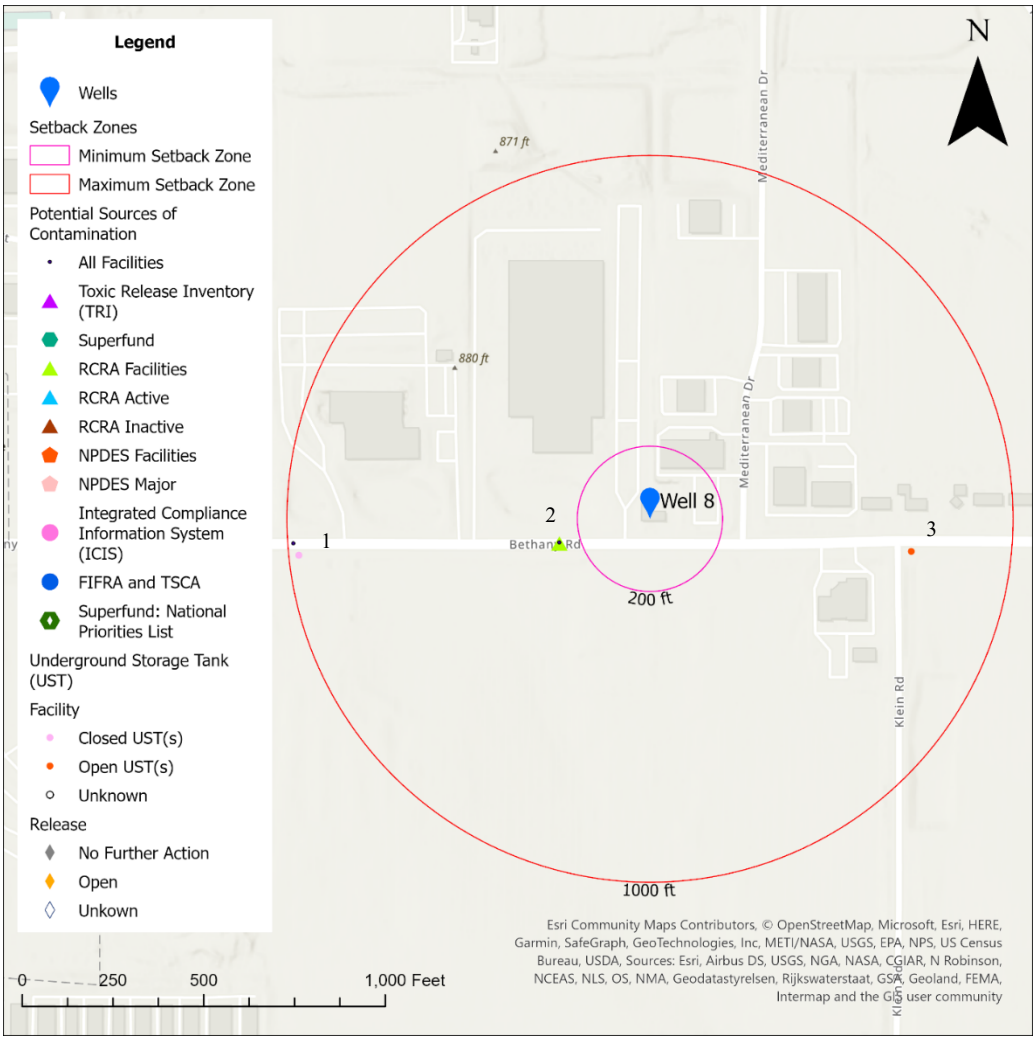

Figure 2-8: Well #8 Potential Sources of Contamination

Well No. 8 Potential Sources of Contamination			
Reference Number	**Facility Name**	**Identification**	**Distance from Well (Approximate Feet)**
1	DeKalb Genetics Corp	FOI, Closed UST	980
2	Johnson Controls Inc.	FOI, RCRA Facility	260
3	Voluntary Action Center of DeKalb County	Open UST	730

Well No. 9

The exhibit below represents Well No. 9 and its surrounding potential sources of contamination. As observed, there are no potential sources of contamination within the assumed 1000-ft maximum setback zone.

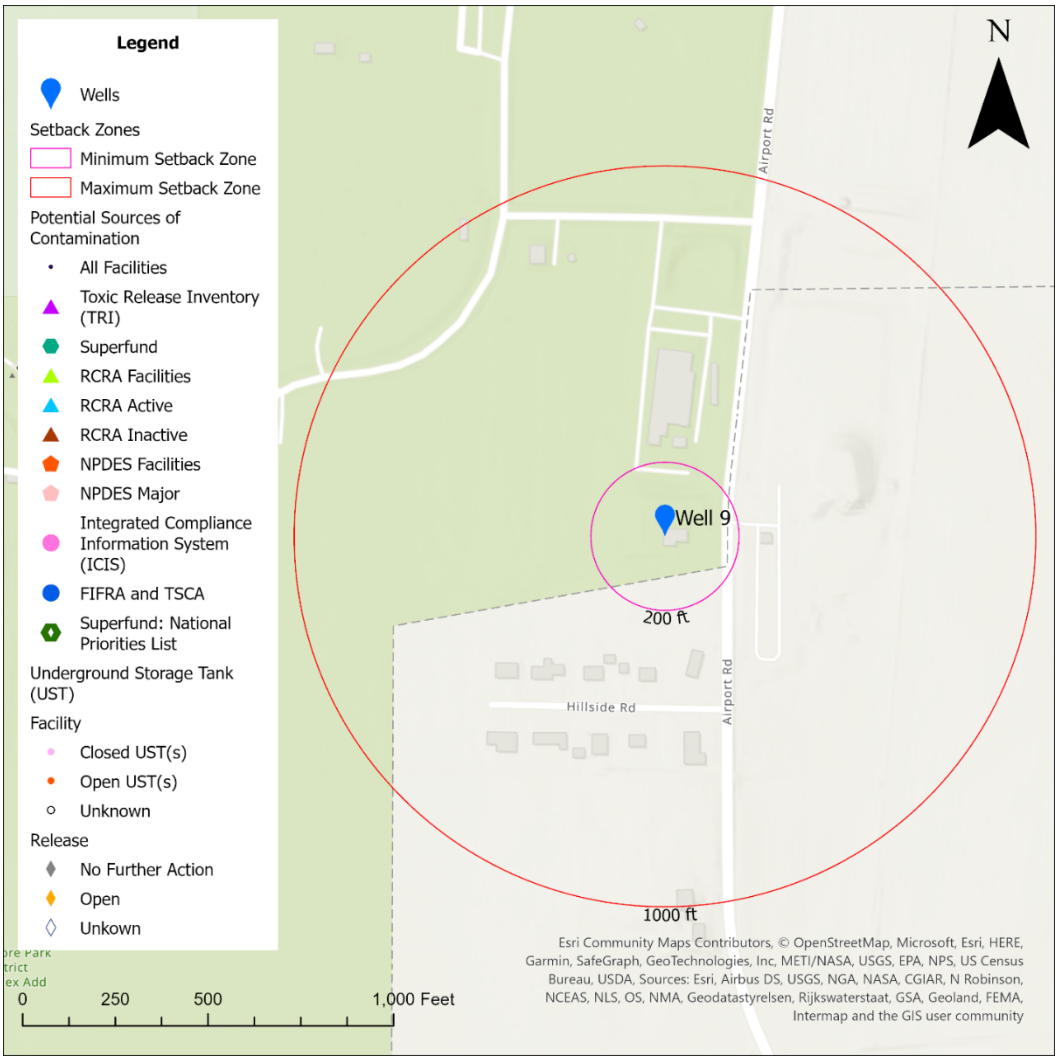

Figure 2-9: Well #9 Potential Sources of Contamination

Well No. 10

The exhibit below represents Well No. 10 and its surrounding potential sources of contamination. As observed, there are no potential sources of contamination within the assumed 1000-ft maximum setback zone.

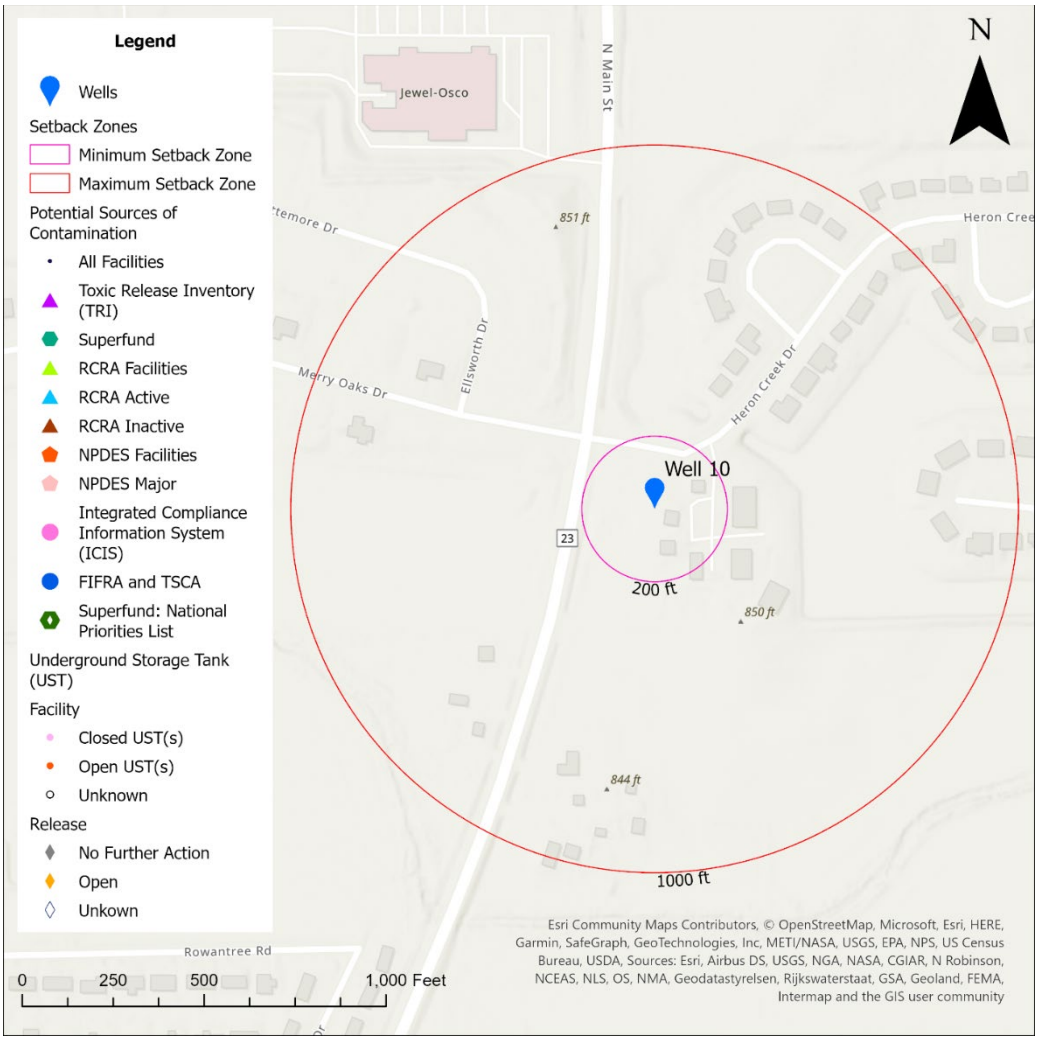

Figure 2-10: Well #10 Potential Sources of Contamination

2.3.2 Other Sources of Contamination

In addition to the outlined PSSC's, Section 150 of the 35 ILL. Admin. Code 604 requires that communities maintain a minimum distance to community wells for the following sources of contamination as also shown in Appendix B.

- Cesspools, leaching sewage disposal pits
- Privies
- Septic tanks and subsurface septic tanks effluent disposal tile
- Livestock, grazing areas or feedlots
- Sewers (non-watertight)
- Sewers (cast iron pipe, with leaded or mechanical joints)
- Sewers (extra-heavy cast iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe meeting water main standards, with pressure tested, leaded, mechanical or slip-on joints)
- Washwater sumps of reinforced concrete construction
- Fuel storage tanks above ground

Unlike the facilities regulated by the EPA in Figure 2-4, these sources of contamination are undetected from public domain and, on some occasions, are only known locally by a few parties. To further monitor contamination of their wells, the City of Sycamore will need to keep track of the aforementioned sources of contamination and document their distances to each well.

Flood Waters

It is important to note that a community water supply also needs to be distanced from flood water. In accordance with 35 ILL. Admin. Code 604.150, community wells need to be at least a horizontal distance of 15 feet away from flood waters as well as 2 feet of vertical distance. As seen in Figure 2-9, all active community wells are away from floodways by at least 44 ft. The flood hazards outlined in blue are based on data from the FEMA Flood Map Service, which may change over time.

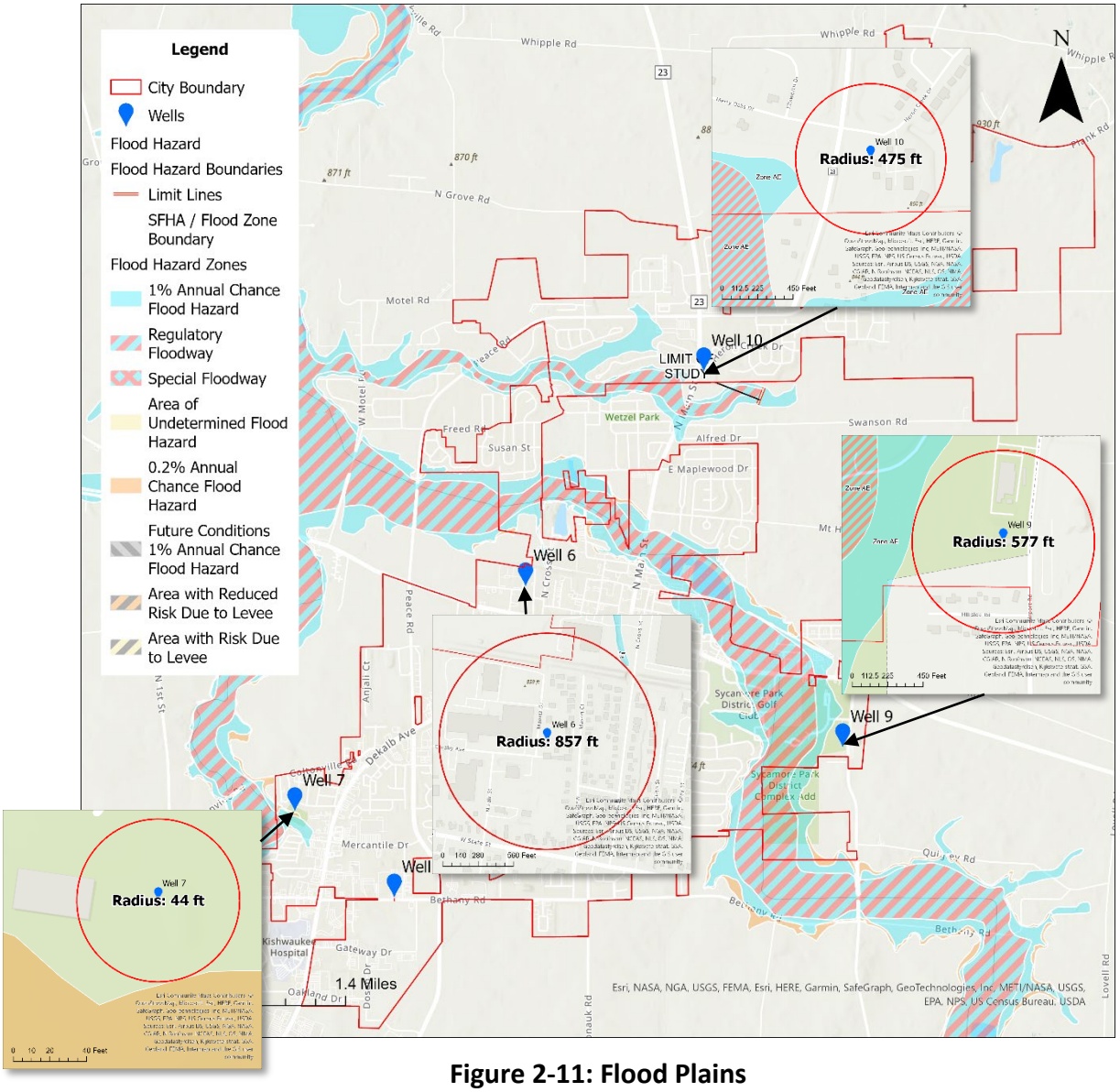

Figure 2-11: Flood Plains

Barium and Radium Contamination

Radium and barium are naturally occurring metals found in varying concentrations in aquifers. When groundwater moves through aquifers, it can dissolve and pick up these metals. Additionally, human activities, such as industrial processes, have been known to cause elevated concentrations of these metals in groundwater. To fully understand the potential health risks associated with radium and barium in drinking water, it's important to consider the sources of these chemicals. Moreover, understanding their concentration in groundwater can help determine appropriate treatment methods for ensuring safe drinking water.

The EPA has set the Maximum Contaminant Level (MCL) for barium at 2.0 mg/L or 2000 ppb. According to results presented in Table 12, all of City's community wells meet this standard, but the concentrations of barium at Well 8 and Well 10 are near the MCL limit. Therefore, it's crucial for the City to monitor the concentrations of contaminants that could potentially exceed this limit.

Table 2-12: Barium Concentrations

	MCL Limit (ppb)	Barium (ppb)
Well #6	2,000	1,150
Well #7		1,020
Well #8		1,810
Well #9		1,310
Well #10		1,710

The EPA regulates two specific isotopes of radium, Ra-226 and Ra-228, with a combined MCL limit of 5 pCi/L for safe drinking water. Due to the natural characteristics of the aquifers in the City, groundwater sourced from them was found to contain high concentrations of radium. Tests conducted on raw water samples indicate varying radium concentrations with some measurements as high as approximately 9.5 pCi/L, which exceeds the regulated MCL for radium. A compiled record of radium levels and their average for each well is shown in Figure 2-12.

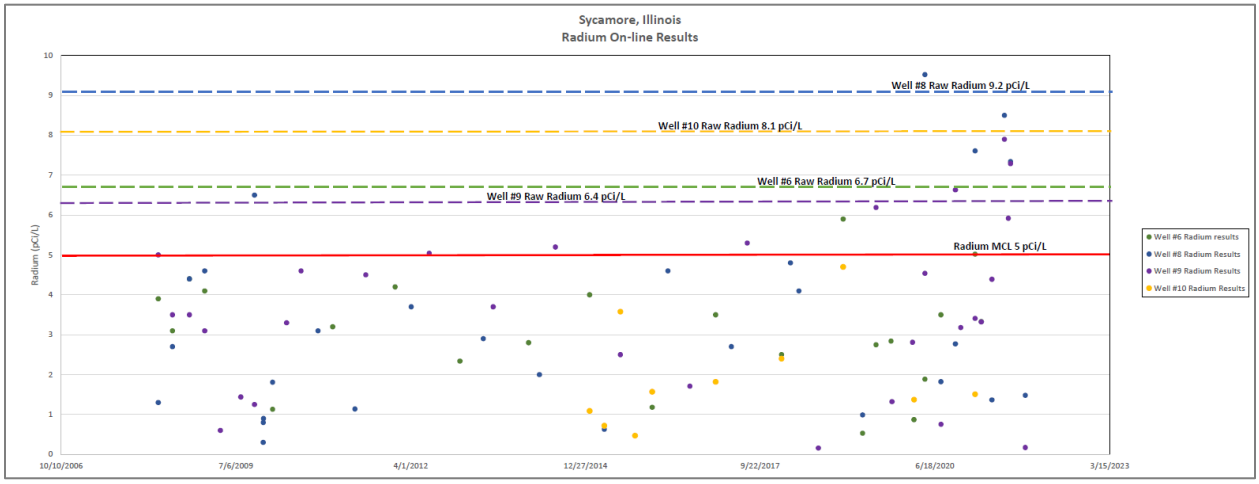

Figure 2-12: Radium Concentrations

To manage elevated levels of radium in its groundwater, the City operates four (4) radium treatment plants that treat water from Wells 6, 8, 9, and 10. In 2015, Well 7 was placed on emergency standby status due to increasing radium levels and is currently operating at a reduced capacity while undergoing rehabilitation

2.3.3 Existing Source Water Protection

The City of Sycamore recognizes the concern with the levels of radium in the groundwater and has implemented the following protection measures to provide safe drinking water for the community.

Water Reclamation Technology, LLC

In 2005, the City of Sycamore signed an agreement with Water Reclamation Technology, LLC (WRT) to implement radium removal facilities at Wells 6, 8, 9, and 10. Additionally, WRT is responsible for maintaining the facility, providing media for each system, and the removal and disposal of old or spent media to a licensed facility. With the implementation of the treatment facilities, radium levels, as shown in Table 2-10, are reduced and complies with the USEPA standards for drinking water.

Well 7 Radium Treatment

To meet future demands, Well #7 is scheduled to be rehabilitated and upgraded to comply with the increasing concentrations of radium. A new structure will be built for installation of HMO filtration radium removal equipment. This treatment facility is anticipated to be based on several of the City's existing facilities for Wells 6, 8, 9, and 10 and is scheduled to be finished by 2024.

2.3.4 Contamination Analysis

The maps provided by the USEPA were compiled and analyzed for Facilities of Interests (FOI), Potential Sources of Contamination (PSSC), and Leaking Underground Storage Tanks (LUST) surrounding each of the City's community wells. Since the City has not established a maximum setback zone for all five (5) wells, each well was reviewed with a 1,000-foot radius maximum setback zone with the enacted 200-foot minimum setback zone outlined in the Source Water Assessment Program Fact Sheet for the City of Sycamore.

By analyzing around the 1000-ft maximum setback zone, it was identified that potential sources of contamination regulated by the EPA are beyond the required maximum boundaries for regulation for Wells 7, 9, and 10. Eight (8) facilities were found to be in proximity with Well 6, as well as three (3) facilities within the 1000-ft boundary with Well 8. These suggest possible risks of contamination and it is imperative that the wells are consistently monitored. While seemingly alarming, there are no current violations of the raw or drinking water noted in the water quality report that has not been previously addressed.

Potential sources of contamination analysis assumes that the radius of influence of the well pump is at 1000 feet; however, if the radius caused by pumping groundwater doesn't extend beyond the minimum setback ordinance, PSSC's and UST sites will have a reduced impact on the well water and overall groundwater quality. Additionally, the wells are distanced from flood hazards and comply with mandatory minimum horizontal and vertical distances.

Elevated levels of radium from the wells are also managed by the City in contract with WRT to distribute safe and reliable drinking water that complies with the USEPA standards.

Overall, contamination analysis provides important information about the potential risks associated with these wells and can help inform decisions related to monitoring, mitigation, and potential relocation of these wells. Considerations for the City to maintain current levels and inhibit future contamination will need to address other sources outlined in 2.3.2 as well as monitoring and prevention of building any FOIs, PSSCs and /or LUSTs within the maximum setback zone.

3 OBJECTIVES

The main priority of this Source Water Protection Plan is to maintain water quality in the five (5) community wells in the City and ensure that the well water adequately meets all state and federal regulations. To satisfy this goal and the City's vision statement, the City of Sycamore and the Strategic Planning Committee (Table 1-1) cooperated to set specific program objectives and strategies for the Source Water Protection Plan. The section below represents the goals and strategies that will be used as a guideline for City use.

- **Barriers/Protection:** The City aims to establish a comprehensive and effective water source protection plan that includes physical barriers such as fencing, regular inspection and maintenance of the emergency well area as well as upholding setback zones to prevent contamination.

- **Injection:** The City looks to continue monitoring and prohibiting injection of hazardous substances near or into any well. This goal is essential to prevent contamination of the water supply due to improper waste disposal practices.

- **Testing:** The City plans to continue regular testing of the water supply to ensure that it meets or exceeds the minimum drinking water standards set by the Environmental Protection Agency and state regulations. The goal is to ensure that any contaminants or issues are detected early and addressed promptly.

- **Contaminants:** The City aims to develop an accidental and intentional contamination emergency response plan. This goal involves training personnel on emergency response protocols, properly informing the public, and ensuring that necessary equipment and resources are available to respond quickly to any incidents.

By establishing these goals and objectives, the City can identify potential risks to their water supply and take proactive steps to address them. These goals require a coordinated effort from City personnel, including officials, water utility, public works, and emergency responders. Through active partnership from the City of Sycamore and the Strategic Planning Team, it ensures that the water supply fulfills minimum standards for safe consumption and use during an emergency event. Additionally, implementing these goals benefits public trust in the City's water supply and demonstrates a commitment to protecting public health and the environment.

4 Action Plan

The City of Sycamore recognizes the importance of source water protection sustainability. The Action Plan consists of the core identification and actions needed to achieve the City's Objectives/goals. This includes descriptions of projects, programs, and other activities developed by the City for current and future needs. It also includes the identification of resources that are necessary to implement the plan as well as recognition of any potential problems or obstacles that may be faced.

Table 4-1: Action Plan

Maximum Setback Zone Ordinance		
Vision Statement: Through collaborative efforts with local stakeholders and adoption of improved technologies, the City aims on prioritizing water quality, promoting sustainability, and safeguarding the integrity of its water sources.		
Objective	Project/Program/Activity	Description
Barriers/Protection	Setback Zone Review	Review the feasibility for a maximum setback zone for the wells. This is examined by comparing the lateral radius of influence of each to the 200-ft minimum setback zone ordinance.
Barriers/Protection	New User Review	Establish a workflow for new and potential water users, both residential and commercial. Create sections for risk management.
Injection	Susceptibility Analysis	Monitor nearby sources of contamination not tracked by EPA within 300 ft of wellhead.
Testing	Water Quality Sampling	Continue to do annual drinking water quality report as well as update certified laboratory results for well water quality test.

Table 4-2: Emergency Response Plan

Emergency Response	
Objective Statement: To provide contingency plans or adaptations and revisions to all the current and future implementations to source water protection by the City.	
Project/Program/Activity	Description
Emergency Response Plan Update	Update the City's Emergency Response Plan as well as the emergency contacts as needed.
Accidental Response Plan Development	Develop an Accidental Response Plan that will go along with the Emergency Response Plan.

5 EVALUATION AND REVISION

This assessment report provides a structure for prioritizing resources within the City of Sycamore in protecting their source water. The characterization and delineation of source water is critical in providing the City with information regarding its water sources including the locations, potential contaminations, and other pieces of data and information. When the source water area information is combined with the potential contamination sources, the high vulnerability areas are then identified. This is also known as susceptibility analysis and should become the highest priority and addressed first when found.

The Action Plan informs the City of Sycamore's planning decisions for source water protection. It outlines multiple current and future projects, programs, and activities that will directly positively impact public safety and source water quality and protection.

The City of Sycamore is dedicated to ensuring the safety and quality of its drinking water supply through a comprehensive source water protection plan which will be updated every five (5) years. By implementing physical barriers, conducting regular inspections, and maintaining water wells and facilities, the City will strive to prevent contamination and safeguard source water for both present and future generations. Community engagement and education, along with collaboration with local officials, are crucial components of the City's efforts to protect its water source. By prioritizing the protection of its drinking water, Sycamore is creating a community where safe, clean, and reliable water is a fundamental right, and where the commitment to preserving this resource is a point of pride for the City.

6 APPENDICES

6.1 APPENDIX A – CERTIFIED LABORATORY RESULTS FOR WATER QUALITY TESTING

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well 6
IoC 2-17-17

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.0C		

Client Sample ID:	**IOC-CCG TP04**	Lab Sample ID:	**17G0690-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:00
Sample Type:		Collected By:	

Alkalinity by Standard Method 310.2

Method:	310.2	Prepared:	07/21/17 15:23
Units:	mg/L	Analyzed:	07/22/17 12:37

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Alkalinity *	**325**		10.0	

Chloride by Ion Chromatography 300.0

Method:	EPA 300.0	Prepared:	07/18/17 12:07
Units:	mg/L	Analyzed:	07/19/17 10:25

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Chloride	**4.00**		1.00	

Cyanide by EPA Method 335.4

Method:	335.4	Prepared:	07/20/17 10:24
Units:	mg/L	Analyzed:	07/20/17 14:35

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Cyanide	ND		0.20	0.2

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.0C		

Client Sample ID:	**IOC-CCG TP04**	Lab Sample ID:	**17G0690-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:00
Sample Type:		Collected By:	

Fluoride by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/18/17 12:07
Units:	mg/L	Analyzed:	07/19/17 10:25

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Fluoride	**0.64**		0.10	

Mercury by EPA Method 245.1

Method:	245.1	Prepared:	07/19/17 09:56
Units:	ug/L	Analyzed:	07/25/17 12:10

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Mercury	ND		0.06	

Metals (Drinking Water) by EPA 200 Series Methods ICP

Method:	200.7	Prepared:	07/24/17 07:46
Units:	ug/L	Analyzed:	07/24/17 14:33

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Calcium	**64400**		300	
Iron	**170**		50.0	1000
Hardness	**289000**		1980	
Sodium	**9010**		300	
Magnesium	**31100**		300	

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Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.00		

Client Sample ID:	**IOC-CCG TP04**	Lab Sample ID:	**17G0690-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:00
Sample Type:		Collected By:	

Metals (Drinking Water) by EPA 200 Series Methods ICP/MS

Method:	200.8	Prepared:	09/14/17 08:50
Units:	ug/L	Analyzed:	09/14/17 12:24

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Antimony	ND		2.00	6
Arsenic	ND		0.50	10
Barium	**120**		5.00	2000
Beryllium	ND		1.00	4
Cadmium	ND		3.00	5
Chromium	ND		5.00	100
Manganese	ND		15.0	150
Nickel	ND		25.0	
Selenium	ND		2.00	50
Thallium	ND		2.00	2
Zinc	ND		100	5000

Sulfate by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/18/17 12:07
Units:	mg/L	Analyzed:	07/19/17 10:25

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Sulfate	ND		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.0C		

Client Sample ID:	**IOC-CCG TP04**	Lab Sample ID:	**17G0690-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:00
Sample Type:		Collected By:	

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C*

Method:	2540C	Prepared:	07/20/17 15:30
Units:	mg/L	Analyzed:	07/20/17 15:30

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total Dissolved Solids *	**320**		10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.00		

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Report Authorized by:

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	5.00
Client Sample ID:	SOC-F TP04	Lab Sample ID:	SA10178-01
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	01/05/11 12:30		
Sample Type:		Sample Depth:	
Total Depth:	0		

EDB and DBCP by GC

Method:	504.1	Prepared:	01/10/11 13:07
Units:	ug/L	Analyzed:	01/11/11 06:28

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
1,2-Dibromoethane	ND		0.010	0.05
1,2-Dibromo-3-chloropropane	ND		0.020	0.2

Chlorinated Acids by GC

Method:	515.1	Prepared:	01/18/11 09:19
Units:	ug/L	Analyzed:	01/20/11 18:43

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Dalapon	ND		5.0	200
Dicamba	ND		0.25	
2,4-D	ND		1.0	10
Pentachlorophenol	ND		0.40	1
Silvex	ND		1.0	50
Dinoseb	ND		1.0	7
Picloram	ND		1.0	500
Acifluorfen	ND		0.50	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645).

Reported:
02/08/11 07:38

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	5.00
Client Sample ID:	SOC-F TP04	Lab Sample ID:	SA10178-01
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	01/05/11 12:30		
Sample Type:		Sample Depth:	
Total Depth:	0		

Organic Compounds by GC/MS

Method:	525.2	Prepared:	01/13/11 15:23
Units:	ug/L	Analyzed:	01/18/11 18:00

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Hexachlorocyclopentadiene	ND		0.50	50
Propachlor	ND		0.50	
Trifluralin	ND		0.050	
Hexachlorobenzene	ND		0.10	1
Simazine	ND		0.35	4
Atrazine	ND		0.30	3
gamma-BHC (Lindane)	ND		0.020	0.2
Acetochlor	ND		1.0	
Metribuzin	ND		0.10	
Alachlor	ND		0.20	2
Heptachlor	ND		0.040	0.1
Bromacil	ND		1.0	
Metolachlor	ND		0.25	
Aldrin	ND		0.050	1
Heptachlor epoxide	ND		0.020	0.1
Dieldrin	ND		0.050	1
Endrin	ND		0.10	2
Di(2-ethylhexyl)adipate	ND		0.60	400
Methoxychlor	ND		0.10	40
Di(2-ethylhexyl)phthalate	ND	J5	1.8	6
Benzo(a)pyrene	ND		0.10	0.2
Toxaphene	ND		1.0	3
Chlordane	ND		0.20	2
Total DDT	ND		1.0	50

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645).

Reported:
02/08/11 07:38

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	5.00
Client Sample ID:	SOC-F TP04	Lab Sample ID:	SA10178-01
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	01/05/11 12:30		
Sample Type:		Sample Depth:	
Total Depth:	0		

Organic Compounds by GC/MS

Method:	525.2	Prepared:	01/13/11 15:23
Units:	ug/L	Analyzed:	01/18/11 18:00

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total PCBs	ND		0.40	

Carbamates by HPLC

Method:	531.1	Prepared:	01/13/11 03:00
Units:	ug/L	Analyzed:	01/14/11 02:16

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Oxamyl	ND		2.0	200
3-Hydroxycarbofuran	ND		1.0	
Carbofuran	ND		0.90	40

Endothall by GC/MS

Method:	548.1	Prepared:	01/06/11 12:12
Units:	ug/L	Analyzed:	01/12/11 15:40

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Endothall	ND		9	100

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645).

Reported:
02/08/11 07:38

Well 6

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/16/14
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	2.00
Client Sample ID:	VOC TP04 WELLSITE 6	Lab Sample ID:	SA40288-01
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 01/15/14 7:40
Sample Type:	Finished	Sample Depth:	Total Depth: 0

Volatile Organic Compounds by GC/MS

Method:	524.2	Prepared:	01/21/14 10:30
Units:	ug/L	Analyzed:	01/21/14 15:59

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Vinyl chloride	ND		0.50	2
1,1-Dichloroethene	ND		0.50	7
Methylene chloride	ND		0.50	5
trans-1,2-Dichloroethene	ND		0.50	100
Methyl tert-butyl ether	ND		0.50	
cis-1,2-Dichloroethene	ND		0.50	70
1,2-Dichloroethane	ND		0.50	5
1,1,1-Trichloroethane	ND		0.50	200
Carbon tetrachloride	ND		0.50	5
Benzene	ND		0.50	5
1,2-Dichloropropane	ND		0.50	5
Trichloroethene	ND		0.50	5
1,1,2-Trichloroethane	ND		0.50	5
Toluene	ND		0.50	1000
Tetrachloroethene	ND		0.50	5
Chlorobenzene	ND		0.50	100
Ethylbenzene	ND		0.50	700
Styrene	ND		0.50	100
1,4-Dichlorobenzene	ND		0.50	75
1,2-Dichlorobenzene	ND		0.50	600
1,2,4-Trichlorobenzene	ND		0.50	70
Xylenes, total	ND		0.50	10000

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Reported:
01/28/14 09:38

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	**SYCAMORE**		
Project/Facility Number:	0370550	Date Received :	07/16/14
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	2.00
Client Sample ID:	**IOC-F TP05** well 7	Lab Sample ID:	**SG40848-01**
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	07/15/14 10:15		
Sample Type:	Finished	Sample Depth:	
Total Depth:	0		

Metals (Drinking Water) by EPA 200 Series Methods ICP

Method:	200.7	Prepared:	07/23/14 08:10
Units:	ug/L	Analyzed:	07/23/14 15:07

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Iron	**234**		50.0	1000
Sodium	**10800**		300	

Metals (Drinking Water) by EPA 200 Series Methods ICP/MS

Method:	200.8	Prepared:	07/22/14 08:48
Units:	ug/L	Analyzed:	07/22/14 11:15

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Antimony	ND		2.00	6
Arsenic	ND		0.50	10
Barium	**364**		5.00	2000
Beryllium	ND		1.00	4
Cadmium	ND		3.00	5
Chromium	ND		5.00	100
Manganese	ND		15.0	150
Nickel	ND		25.0	
Selenium	ND		2.00	50
Thallium	ND		2.00	2
Zinc	ND		100	5000

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Reported:
10/10/14 11:44

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	07/16/14
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	2.00
Client Sample ID:	**IOC-F TP05**	Lab Sample ID:	**SG40848-01**
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 07/15/14 10:15
Sample Type:	Finished	Sample Depth:	Total Depth: 0

Cyanide by EPA Method 335.4

Method:	335.4	Prepared:	07/17/14 09:00
Units:	mg/L	Analyzed:	07/17/14 14:11

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Cyanide	ND		0.20	0.2

Fluoride by Standard Method 4500-F C

Method:	4500F-C	Prepared:	07/16/14 11:40
Units:	mg/L	Analyzed:	07/16/14 13:11

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Fluoride	**1.09**		0.10	2

Mercury by EPA Method 245.1

Method:	245.1	Prepared:	07/18/14 07:30
Units:	ug/L	Analyzed:	07/22/14 09:18

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Mercury	ND		0.06	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
10/10/14 11:44

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	**SYCAMORE**		
Project/Facility Number:	0370550	Date Received :	07/31/14
Funding Code:	PW32	Visit Number:	
Trip ID:	well 7	Temperature C:	2.00
Client Sample ID:	**IOC-F TP05**	Lab Sample ID:	**SG41819-02**
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 07/30/14 7:40
Sample Type:	Finished	Sample Depth:	Total Depth: 0

Sulfate by EPA Method 375.2

Method:	375.2	Prepared:	08/08/14 14:47
Units:	mg/L	Analyzed:	08/14/14 14:46

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Sulfate	ND		100	

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Reported:
10/01/14 13:21

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	**SYCAMORE**		
Project/Facility Number:	0370550	Date Received :	07/31/14
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	2.00
Client Sample ID:	**IOC-F TP04**	Lab Sample ID:	**SG41819-01**
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 07/30/14 7:30
Sample Type:	Finished	Sample Depth:	Total Depth: 0

Sulfate by EPA Method 375.2

Method:	375.2	Prepared:	08/08/14 14:47
Units:	mg/L	Analyzed:	08/14/14 14:45

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Sulfate	ND		100	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
10/01/14 13:21

WELL 8 IOC
7-19-17

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	2.00		

Client Sample ID:	**IOC-CCG TP06**	Lab Sample ID:	**17G0692-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:30
Sample Type:		Collected By:	

Alkalinity by Standard Method 310.2

Method:	310.2	Prepared:	07/21/17 15:23
Units:	mg/L	Analyzed:	07/22/17 12:38

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Alkalinity *	**303**		10.0	

Chloride by Ion Chromatography 300.0

Method:	EPA 300.0	Prepared:	07/18/17 12:07
Units:	mg/L	Analyzed:	07/19/17 10:54

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Chloride	**4.13**		1.00	

Cyanide by EPA Method 335.4

Method:	335.4	Prepared:	07/20/17 10:24
Units:	mg/L	Analyzed:	07/20/17 14:39

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Cyanide	ND		0.20	0.2

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	2.0C		

Client Sample ID:	**IOC-CCG TP06**	Lab Sample ID:	**17G0692-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:30
Sample Type:		Collected By:	

Fluoride by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/18/17 12:07
Units:	mg/L	Analyzed:	07/19/17 10:54

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Fluoride	**0.65**		0.10	

Mercury by EPA Method 245.1

Method:	245.1	Prepared:	07/19/17 09:56
Units:	ug/L	Analyzed:	07/25/17 12:10

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Mercury	ND		0.06	

Metals (Drinking Water) by EPA 200 Series Methods ICP

Method:	200.7	Prepared:	07/24/17 07:46
Units:	ug/L	Analyzed:	07/24/17 14:36

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Calcium	**59200**		300	
Iron	**117**		50.0	1000
Hardness	**267000**		1980	
Sodium	**11800**		300	
Magnesium	**29300**		300	

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Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State. Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	2.00		

Client Sample ID:	**IOC-CCG TP06**	Lab Sample ID:	**17G0692-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:30
Sample Type:		Collected By:	

Metals (Drinking Water) by EPA 200 Series Methods ICP/MS

Method:	200.8	Prepared:	09/14/17 08:50
Units:	ug/L	Analyzed:	09/14/17 12:27

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Antimony	ND		2.00	6
Arsenic	ND		0.50	10
Barium	**1810**		5.00	2000
Beryllium	ND		1.00	4
Cadmium	ND		3.00	5
Chromium	ND		5.00	100
Manganese	ND		15.0	150
Nickel	ND		25.0	
Selenium	ND		2.00	50
Thallium	ND		2.00	2
Zinc	ND		100	5000

Sulfate by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/18/17 12:07
Units:	mg/L	Analyzed:	07/19/17 10:54

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Sulfate	ND		10.0	

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Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	2.00		

Client Sample ID:	**IOC-CCG TP06**	Lab Sample ID:	**17G0692-01**
Matrix:	Drinking Water	Date/Time Collected:	07/17/17 12:30
Sample Type:		Collected By:	

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C*

Method:	2540C	Prepared:	07/20/17 15:30
Units:	mg/L	Analyzed:	07/20/17 15:30

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total Dissolved Solids *	**310**		10	

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Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	07/18/17
Adress:	308 W STATE ST	Facility Number:	0370550
City. State. Zip:	SYCAMORE. IL 60178	Funding Code:	PW32
Temperature C:	2.00		

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Report Authorized by:

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Reported:
09/20/17 15:31

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.00
Client Sample ID:	SOC-F TP06	Lab Sample ID:	SA10177-01
Matrix:	Drinking Water	Collected By:	
		Date/Time Collected:	01/05/11 13:00
Sample Type:		Sample Depth:	
		Total Depth:	0

Organic Compounds by GC/MS

Method:	525.2	Prepared:	01/13/11 15:23
Units:	ug/L	Analyzed:	01/18/11 17:23

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Hexachlorocyclopentadiene	ND		0.50	50
Propachlor	ND		0.50	
Trifluralin	ND		0.050	
Hexachlorobenzene	ND		0.10	1
Simazine	ND		0.35	4
Atrazine	ND		0.30	3
gamma-BHC (Lindane)	ND		0.020	0.2
Acetochlor	ND		1.0	
Metribuzin	ND		0.10	
Alachlor	ND		0.20	2
Heptachlor	ND		0.040	0.1
Bromacil	ND		1.0	
Metolachlor	ND		0.25	
Aldrin	ND		0.050	1
Heptachlor epoxide	ND		0.020	0.1
Dieldrin	ND		0.050	1
Endrin	ND		0.10	2
Di(2-ethylhexyl)adipate	ND		0.60	400
Methoxychlor	ND		0.10	40
Di(2-ethylhexyl)phthalate	ND	J5	1.8	6
Benzo(a)pyrene	ND		0.10	0.2
Toxaphene	ND		1.0	3
Chlordane	ND		0.20	2
Total DDT	ND		1.0	50

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Reported:
02/08/11 07:38

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.00
Client Sample ID:	SOC-F TP06	Lab Sample ID:	SA10177-01
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 01/05/11 13:00
Sample Type:		Sample Depth:	Total Depth: 0

Organic Compounds by GC/MS

Method:	525.2	Prepared:	01/13/11 15:23
Units:	ug/L	Analyzed:	01/18/11 17:23

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total PCBs	ND		0.40	

Carbamates by HPLC

Method:	531.1	Prepared:	01/13/11 03:00
Units:	ug/L	Analyzed:	01/14/11 01:39

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Oxamyl	ND		2.0	200
3-Hydroxycarbofuran	ND		1.0	
Carbofuran	ND		0.90	40

Endothall by GC/MS

Method:	548.1	Prepared:	01/06/11 12:12
Units:	ug/L	Analyzed:	01/12/11 15:24

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Endothall	ND		9	100

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Reported:
02/08/11 07:38

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.00

Notes and Definitions

J5	Blank spike failed high, result was non-detect - impact on data may be minimal.
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
*	Non-NELAP accredited

Report Authorized by:

Celeste M. Crowley

Celeste M. Crowley
Assistant Laboratory Manager

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Reported:
02/08/11 07:38

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/06/11
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.00
Client Sample ID:	SOC-F TP06	Lab Sample ID:	SA10177-01
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	01/05/11 13:00		
Sample Type:		Sample Depth:	
Total Depth:	0		

EDB and DBCP by GC

Method:	504.1	Prepared:	01/10/11 13:07
Units:	ug/L	Analyzed:	01/11/11 05:56

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
1,2-Dibromoethane	ND		0.010	0.05
1,2-Dibromo-3-chloropropane	ND		0.020	0.2

Chlorinated Acids by GC

Method:	515.1	Prepared:	01/18/11 09:19
Units:	ug/L	Analyzed:	01/20/11 18:03

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Dalapon	ND		5.0	200
Dicamba	ND		0.25	
2,4-D	ND		1.0	10
Pentachlorophenol	ND		0.40	1
Silvex	ND		1.0	50
Dinoseb	ND		1.0	7
Picloram	ND	J3	1.0	500
Acifluorfen	ND		0.50	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645).

Reported:
02/08/11 07:38

Well 8

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	01/16/14
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	2.00
Client Sample ID:	**VOC TP06 WELLSITE 8**	Lab Sample ID:	**SA40288-03**
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 01/15/14 8:40
Sample Type:	Finished	Sample Depth:	Total Depth: 0

Volatile Organic Compounds by GC/MS

Method:	524.2	Prepared:	01/23/14 09:31
Units:	ug/L	Analyzed:	01/23/14 13:34

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Vinyl chloride	ND		0.50	2
1,1-Dichloroethene	ND		0.50	7
Methylene chloride	ND		0.50	5
trans-1,2-Dichloroethene	ND		0.50	100
Methyl tert-butyl ether	ND		0.50	
cis-1,2-Dichloroethene	ND		0.50	70
1,2-Dichloroethane	ND		0.50	5
1,1,1-Trichloroethane	ND		0.50	200
Carbon tetrachloride	ND		0.50	5
Benzene	ND		0.50	5
1,2-Dichloropropane	ND		0.50	5
Trichloroethene	ND		0.50	5
1,1,2-Trichloroethane	ND		0.50	5
Toluene	ND		0.50	1000
Tetrachloroethene	ND		0.50	5
Chlorobenzene	ND		0.50	100
Ethylbenzene	ND		0.50	700
Styrene	ND		0.50	100
1,4-Dichlorobenzene	ND		0.50	75
1,2-Dichlorobenzene	ND		0.50	600
1,2,4-Trichlorobenzene	ND		0.50	70
Xylenes, total	ND		0.50	10000

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Reported:
01/28/14 09:38

W-9 IOC 7/19/18

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	07/19/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	5.00		

Client Sample ID:	**IOC-CCG TP07**	Lab Sample ID:	**18G0748-01**
Matrix:	Drinking Water	Date/Time Collected:	07/18/18 13:10
Sample Type:	Finished	Collected By:	

Alkalinity by Standard Method 310.2

Method:	310.2	Prepared:	07/24/18 08:35
Units:	mg/L	Analyzed:	07/24/18 14:33

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Alkalinity	**322**		10.0	

Chloride by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/20/18 07:11
Units:	mg/L	Analyzed:	07/20/18 15:03

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Chloride	**4.82**		1.00	

Cyanide by EPA Method 335.4

Method:	335.4	Prepared:	07/26/18 09:47
Units:	mg/L	Analyzed:	07/26/18 12:53

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Cyanide	ND		0.20	0.2

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
08/24/18 13:59

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	07/19/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	5.00		

Client Sample ID:	**IOC-CCG TP07**	Lab Sample ID:	**18G0748-01**
Matrix:	Drinking Water	Date/Time Collected:	07/18/18 13:10
Sample Type:	Finished	Collected By:	

Fluoride by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/20/18 07:11
Units:	mg/L	Analyzed:	07/20/18 15:03

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Fluoride	**0.73**		0.10	2

Mercury by EPA Method 245.1

Method:	245.1	Prepared:	08/01/18 10:00
Units:	ug/L	Analyzed:	08/02/18 10:53

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Mercury	ND		0.06	

Metals (Drinking Water) by EPA 200 Series Methods ICP

Method:	200.7	Prepared:	08/13/18 08:31
Units:	ug/L	Analyzed:	08/13/18 10:48

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Calcium	**65400**		300	
Iron	**223**		50.0	1000
Hardness	**283000**		1980	
Sodium	**12000**		300	
Magnesium	**29100**		300	

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Reported:
08/24/18 13:59

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	07/19/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	5.00		

Client Sample ID:	**IOC-CCG TP07**	Lab Sample ID:	**18G0748-01**
Matrix:	Drinking Water	Date/Time Collected:	07/18/18 13:10
Sample Type:	Finished	Collected By:	

Metals (Drinking Water) by EPA 200 Series Methods ICP/MS

Method:	200.8	Prepared:	08/15/18 09:32
Units:	ug/L	Analyzed:	08/15/18 13:20

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Antimony	ND		2.00	6
Arsenic	ND		0.50	10
Barium	**1310**		5.00	2000
Beryllium	ND		1.00	4
Cadmium	ND		3.00	5
Chromium	ND		5.00	100
Manganese	ND		15.0	150
Nickel	ND		25.0	
Selenium	ND		2.00	50
Thallium	ND		2.00	2
Zinc	ND		100	5000

Sulfate by Ion Chromatography 300.0

Method:	300.0	Prepared:	07/20/18 07:11
Units:	mg/L	Analyzed:	07/20/18 15:03

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Sulfate	ND		10.0	500

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Reported:
08/24/18 13:59

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	07/19/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	5.00		

Client Sample ID:	**IOC-CCG TP07**	Lab Sample ID:	**18G0748-01**
Matrix:	Drinking Water	Date/Time Collected:	07/18/18 13:10
Sample Type:	Finished	Collected By:	

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C*

Method:	2540C	Prepared:	07/23/18 13:03
Units:	mg/L	Analyzed:	07/23/18 13:03

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total Dissolved Solids	**330**		10	

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Reported:
08/24/18 13:59

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	07/19/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	5.00		

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Report Authorized by:

Tom Weiss
Laboratory Manager

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Reported:
08/24/18 13:59

W-9 SOC

4/13/18

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	04/13/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	6.00		

Client Sample ID:	**SOC-P TP07**	Lab Sample ID:	**18D0326-01**
Matrix:	Drinking Water	Date/Time Collected:	04/12/18 13:30
Sample Type:		Collected By:	

Organic Compounds by GC/MS

Method:	525.2	Prepared:	04/17/18 13:35
Units:	ug/L	Analyzed:	05/03/18 19:39

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Hexachlorocyclopentadiene	ND		0.50	50
Propachlor	ND		0.50	
Trifluralin	ND		0.050	
Hexachlorobenzene	ND		0.10	1
Simazine	ND		0.35	4
Atrazine	ND		0.30	3
gamma-BHC (Lindane)	ND		0.020	0.2
Acetochlor	ND		1.0	
Metribuzin	ND		0.10	
Alachlor	ND		0.20	2
Heptachlor	ND		0.040	0.1
Bromacil	ND		1.0	
Metolachlor	ND		0.25	
Aldrin	ND		0.050	1
Heptachlor epoxide	ND		0.020	0.1
Dieldrin	ND		0.050	1
Endrin	ND		0.10	2
Di(2-ethylhexyl)adipate	ND		0.60	400
Methoxychlor	ND		0.10	40
Di(2-ethylhexyl)phthalate	ND		1.8	6
Benzo(a)pyrene	ND		0.10	0.2
Toxaphene	ND		1.0	3
Chlordane	ND		0.20	2
Total DDT	ND		1.0	50

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Reported:
05/22/18 11:42

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	04/13/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	6.00		

Client Sample ID:	**SOC-P TP07**	Lab Sample ID:	**18D0326-01**
Matrix:	Drinking Water	Date/Time Collected:	04/12/18 13:30
Sample Type:		Collected By:	

Organic Compounds by GC/MS

Method:	525.2	Prepared:	04/17/18 13:35
Units:	ug/L	Analyzed:	05/03/18 19:39

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total PCBs	ND		0.40	

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Reported:
05/22/18 11:42

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	04/13/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	6.00		

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Report Authorized by:

Tom Weiss
Laboratory Manager

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Reported:
05/22/18 11:42

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

W-9 5-2-17

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.00
Client Sample ID:	SOC-F TP07	Lab Sample ID:	17E0088-01
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	05/02/17 13:45		
Sample Type:		Sample Depth:	
Total Depth:	0		

EDB and DBCP by GC

Method:	504.1	Prepared:	05/03/17 17:30
Units:	ug/L	Analyzed:	05/04/17 04:21

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
1,2-Dibromoethane	ND		0.010	0.05
1,2-Dibromo-3-chloropropane	ND		0.020	0.2

Chlorinated Acids by GC

Method:	515.1	Prepared:	05/12/17 07:30
Units:	ug/L	Analyzed:	05/24/17 11:09

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Dalapon	ND		5.0	200
Dicamba	ND		0.25	
2,4-D	ND		1.0	10
Pentachlorophenol	ND		0.40	1
Silvex	ND		1.0	50
Dinoseb	ND		1.0	7
Picloram	ND		1.0	500
Acifluorfen	ND		0.50	

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Reported:
06/01/17 08:36

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.0C
Client Sample ID:	**SOC-F TP07**	Lab Sample ID:	**17E0088-01**
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	05/02/17 13:45		
Sample Type:		Sample Depth:	
Total Depth:	0		

Organic Compounds by GC/MS

Method:	525.2	Prepared:	05/04/17 14:11
Units:	ug/L	Analyzed:	05/19/17 14:58

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Hexachlorocyclopentadiene	ND		0.50	50
Propachlor	ND		0.50	
Trifluralin	ND		0.050	
Hexachlorobenzene	ND		0.10	1
Simazine	ND		0.35	4
Atrazine	ND		0.30	3
gamma-BHC (Lindane)	ND		0.020	0.2
Acetochlor	ND		1.0	
Metribuzin	ND		0.10	
Alachlor	ND		0.20	2
Heptachlor	ND		0.040	0.1
Bromacil	ND		1.0	
Metolachlor	ND		0.25	
Aldrin	ND		0.050	1
Heptachlor epoxide	ND		0.020	0.1
Dieldrin	ND		0.050	1
Endrin	ND		0.10	2
Di(2-ethylhexyl)adipate	ND		0.60	400
Methoxychlor	ND		0.10	40
Di(2-ethylhexyl)phthalate	ND		1.8	6
Toxaphene	ND		1.0	3
Chlordane	ND		0.20	2
Total DDT	ND		1.0	50
Total PCBs	ND		0.40	

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Reported:
06/01/17 08:36

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.0C
Client Sample ID:	**SOC-F TP07**	Lab Sample ID:	**17E0088-01**
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 05/02/17 13:45
Sample Type:		Sample Depth:	Total Depth: 0

Carbamates by HPLC

Method:	531.1	Prepared:	05/04/17 08:00
Units:	ug/L	Analyzed:	05/04/17 20:30

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Oxamyl	ND		2.0	200
3-Hydroxycarbofuran	ND		1.0	
Carbofuran	ND		0.90	40

Diquat by HPLC

Method:	549.2	Prepared:	05/05/17 09:00
Units:	ug/L	Analyzed:	05/08/17 14:20

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Diquat	ND		2.0	20

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Reported:
06/01/17 08:36

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.00

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

* Non-NELAP accredited

17E0088-01: Sample failed to meet all of the quality control requirements for Method 548. A resample was requested for this analysis on 5/17/2017.
17E0088-01: Sample failed to meet QC requirements for benzo(a)pyrene, Method 525. Resample was requested for BAP on 5/30/2017.

Report Authorized by:

Tom Weiss
Laboratory Manager

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Reported:
06/01/17 08:36

W-9 VOC
2/23/18

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	01/23/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.00		

Client Sample ID:	**VOC TP07**	Lab Sample ID:	**18A0385-01**
Matrix:	Drinking Water	Date/Time Collected:	01/22/18 9:30
Sample Type:	Finished	Collected By:	

Volatile Organic Compounds by GC/MS

Method:	524.2	Prepared:	01/29/18 09:00
Units:	ug/L	Analyzed:	01/29/18 18:52

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Vinyl chloride	ND		0.50	2
1,1-Dichloroethene	ND		0.50	7
Methylene chloride	ND		0.50	5
trans-1,2-Dichloroethene	ND		0.50	100
Methyl tert-butyl ether	ND		0.50	
cis-1,2-Dichloroethene	ND		0.50	70
1,2-Dichloroethane	ND		0.50	5
1,1,1-Trichloroethane	ND		0.50	200
Carbon tetrachloride	ND		0.50	5
Benzene	ND		0.50	5
1,2-Dichloropropane	ND		0.50	5
Trichloroethene	ND		0.50	5
1,1,2-Trichloroethane	ND		0.50	5
Toluene	ND		0.50	1000
Tetrachloroethene	ND		0.50	5
Chlorobenzene	ND		0.50	100
Ethylbenzene	ND		0.50	700
Styrene	ND		0.50	100
1,4-Dichlorobenzene	ND		0.50	75
1,2-Dichlorobenzene	ND		0.50	600
1,2,4-Trichlorobenzene	ND		0.50	70
Xylenes, total	ND		0.50	10000

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Reported:
02/15/18 14:17

1/23/18 WEU # 10 IOC

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	01/23/18
Adress:	308 W STATE ST	Facility Number:	0370550
City. State. Zip:	SYCAMORE. IL 60178	Funding Code:	PW32
Temperature C:	1.00		

Client Sample ID:	**IOC-CCG TP08**	Lab Sample ID:	**18A0384-01**
Matrix:	Drinking Water	Date/Time Collected:	01/22/18 10:00
Sample Type:	Finished	Collected By:	

Alkalinity by Standard Method 310.2

Method:	EPA 310.2	Prepared:	01/24/18 08:50
Units:	mg/L	Analyzed:	01/24/18 10:35

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Alkalinity	333		10.0	

Chloride by Ion Chromatography 300.0

Method:	300.0	Prepared:	01/23/18 13:22
Units:	mg/L	Analyzed:	01/23/18 17:58

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Chloride	4.04		1.00	

Cyanide by EPA Method 335.4

Method:	335.4	Prepared:	01/25/18 08:53
Units:	mg/L	Analyzed:	01/25/18 11:28

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Cyanide	ND		0.20	0.2

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Reported:
02/28/18 08:00

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	01/23/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.0C		

Client Sample ID:	**IOC-CCG TP08**	Lab Sample ID:	**18A0384-01**
Matrix:	Drinking Water	Date/Time Collected:	01/22/18 10:00
Sample Type:	Finished	Collected By:	

Fluoride by Ion Chromatography 300.0

Method:	300.0	Prepared:	01/23/18 13:22
Units:	mg/L	Analyzed:	01/23/18 17:58

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Fluoride	**0.71**		0.10	2

Mercury by EPA Method 245.1

Method:	245.1	Prepared:	01/24/18 09:15
Units:	ug/L	Analyzed:	01/26/18 11:41

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Mercury	ND		0.06	

Metals (Drinking Water) by EPA 200 Series Methods ICP

Method:	200.7	Prepared:	02/13/18 07:26
Units:	ug/L	Analyzed:	02/13/18 09:36

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Calcium	**69700**		300	
Iron	**306**		50.0	1000
Hardness	**314000**		1980	
Sodium	**6990**		300	
Magnesium	**34100**		300	

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Reported:
02/28/18 08:00

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	01/23/18
Adress:	308 W STATE ST	Facility Number:	0370550
City. State. Zip:	SYCAMORE. IL 60178	Funding Code:	PW32
Temperature C:	1.00		

Client Sample ID:	**IOC-CCG TP08**	Lab Sample ID:	**18A0384-01**
Matrix:	Drinking Water	Date/Time Collected:	01/22/18 10:00
Sample Type:	Finished	Collected By:	

Metals (Drinking Water) by EPA 200 Series Methods ICP/MS

Method:	200.8	Prepared:	02/08/18 08:50
Units:	ug/L	Analyzed:	02/08/18 11:50

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Antimony	ND		2.00	6
Arsenic	ND		0.50	10
Barium	**1710**		5.00	2000
Beryllium	ND		1.00	4
Cadmium	ND		3.00	5
Chromium	ND		5.00	100
Manganese	ND		15.0	150
Nickel	ND		25.0	
Selenium	ND		2.00	50
Thallium	ND		2.00	2
Zinc	ND		100	5000

Sulfate by Ion Chromatography 300.0

Method:	300.0	Prepared:	01/23/18 13:22
Units:	mg/L	Analyzed:	01/23/18 17:58

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Sulfate	ND		10.0	500

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Reported:
02/28/18 08:00

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	01/23/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.0C		

Client Sample ID:	**IOC-CCG TP08**	Lab Sample ID:	**18A0384-01**
Matrix:	Drinking Water	Date/Time Collected:	01/22/18 10:00
Sample Type:	Finished	Collected By:	

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C*

Method:	2540C	Prepared:	01/24/18 12:30
Units:	mg/L	Analyzed:	01/24/18 12:30

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total Dissolved Solids	334		10	

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Reported:
02/28/18 08:00

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	01/23/18
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	1.0C		

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

* Non-NELAP accredited

Report Authorized by:

Tom Weiss
Laboratory Manager

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Reported:
02/28/18 08:00

W-10 6/17

SOC

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client: SYCAMORE
Adress: 308 W STATE ST
City, State, Zip: SYCAMORE, IL 60178
Temperature C: 7.00

Date Received : 06/07/17
Facility Number: 0370550
Funding Code: PW32

Client Sample ID: **SOC-F TP08** W-10
Matrix: Drinking Water
Sample Type:

Lab Sample ID: **17F0263-01**
Date/Time Collected: 06/06/17 13:00
Collected By:

Organic Compounds by GC/MS

Method: 525.2
Units: ug/L

Prepared: 06/14/17 14:11
Analyzed: 06/19/17 17:48

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Hexachlorocyclopentadiene	ND		0.50	50
Propachlor	ND		0.50	
Trifluralin	ND		0.050	
Hexachlorobenzene	ND		0.10	1
Simazine	ND		0.35	4
Atrazine	ND		0.30	3
gamma-BHC (Lindane)	ND		0.020	0.2
Acetochlor	ND		1.0	
Metribuzin	ND		0.10	
Alachlor	ND		0.20	2
Heptachlor	ND		0.040	0.1
Bromacil	ND		1.0	
Metolachlor	ND		0.25	
Aldrin	ND		0.050	1
Heptachlor epoxide	ND		0.020	0.1
Dieldrin	ND		0.050	1
Endrin	ND		0.10	2
Di(2-ethylhexyl)adipate	ND		0.60	400
Methoxychlor	ND		0.10	40
Di(2-ethylhexyl)phthalate	ND		1.8	6
Benzo(a)pyrene	ND		0.10	0.2
Toxaphene	ND		1.0	3
Chlordane	ND		0.20	2
Total DDT	ND		1.0	50

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Reported:
07/07/17 08:53

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	SYCAMORE	Date Received :	06/07/17
Adress:	308 W STATE ST	Facility Number:	0370550
City. State. Zip:	SYCAMORE. IL 60178	Funding Code:	PW32
Temperature C:	7.00		

Client Sample ID:	**SOC-F TP08**	Lab Sample ID:	**17F0263-01**
Matrix:	Drinking Water	Date/Time Collected:	06/06/17 13:00
Sample Type:		Collected By:	

Organic Compounds by GC/MS

Method:	525.2	Prepared:	06/14/17 14:11
Units:	ug/L	Analyzed:	06/19/17 17:48

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Total PCBs	ND		0.40	

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Reported:
07/07/17 08:53

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	06/07/17
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	7.0C		

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
*	Non-NELAP accredited

Report Authorized by:

Tom Weiss
Laboratory Manager

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Reported:
07/07/17 08:53

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

W-10
5-2-17

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.0C
Client Sample ID:	SOC-F/TP08	Lab Sample ID:	17E0087-01
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	05/02/17 14:00		
Sample Type:		Sample Depth:	
Total Depth:	0		

EDB and DBCP by GC

Method:	504.1	Prepared:	05/03/17 17:30
Units:	ug/L	Analyzed:	05/04/17 03:49

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
1,2-Dibromoethane	ND		0.010	0.05
1,2-Dibromo-3-chloropropane	ND		0.020	0.2

Chlorinated Acids by GC

Method:	515.1	Prepared:	05/12/17 07:30
Units:	ug/L	Analyzed:	05/24/17 10:04

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Dalapon	ND		5.0	200
Dicamba	ND		0.25	
2,4-D	ND		1.0	10
Pentachlorophenol	ND		0.40	1
Silvex	ND		1.0	50
Dinoseb	ND		1.0	7
Picloram	ND		1.0	500
Acifluorfen	ND		0.50	

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Reported:
06/01/17 08:36

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.0C
Client Sample ID:	**SOC-F TP08**	Lab Sample ID:	**17E0087-01**
Matrix:	Drinking Water	Collected By:	
Date/Time Collected:	05/02/17 14:00		
Sample Type:		Sample Depth:	
Total Depth:	0		

Organic Compounds by GC/MS

Method:	525.2	Prepared:	05/04/17 14:11
Units:	ug/L	Analyzed:	05/16/17 18:48

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Hexachlorocyclopentadiene	ND		0.50	50
Propachlor	ND		0.50	
Trifluralin	ND		0.050	
Hexachlorobenzene	ND		0.10	1
Simazine	ND		0.35	4
Atrazine	ND		0.30	3
gamma-BHC (Lindane)	ND		0.020	0.2
Acetochlor	ND		1.0	
Metribuzin	ND		0.10	
Alachlor	ND		0.20	2
Heptachlor	ND		0.040	0.1
Bromacil	ND		1.0	
Metolachlor	ND		0.25	
Aldrin	ND		0.050	1
Heptachlor epoxide	ND		0.020	0.1
Dieldrin	ND		0.050	1
Endrin	ND		0.10	2
Di(2-ethylhexyl)adipate	ND		0.60	400
Methoxychlor	ND		0.10	40
Di(2-ethylhexyl)phthalate	ND		1.8	6
Toxaphene	ND		1.0	3
Chlordane	ND		0.20	2
Total DDT	ND		1.0	50
Total PCBs	ND		0.40	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
06/01/17 08:36

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.0C
Client Sample ID:	**SOC-F TP08**	Lab Sample ID:	**17E0087-01**
Matrix:	Drinking Water	Collected By:	Date/Time Collected: 05/02/17 14:00
Sample Type:		Sample Depth:	Total Depth: 0

Carbamates by HPLC

Method:	531.1	Prepared:	05/04/17 08:00
Units:	ug/L	Analyzed:	05/04/17 19:52

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Oxamyl	ND		2.0	200
3-Hydroxycarbofuran	ND		1.0	
Carbofuran	ND		0.90	40

Diquat by HPLC

Method:	549.2	Prepared:	05/05/17 09:00
Units:	ug/L	Analyzed:	05/08/17 14:11

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Diquat	ND		2.0	20

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Reported:
06/01/17 08:36

Illinois Environmental Protection Agency Laboratory
825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	SYCAMORE		
Project/Facility Number:	0370550	Date Received :	05/03/17
Funding Code:	PW32	Visit Number:	
Trip ID:		Temperature C:	6.0C

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

* Non-NELAP accredited

17E0087-01: Sample failed to meet all of the quality control requirements for Method 548. A resample was requested for this analysis on 5/17/2017.
17E0087-01: Sample failed to meet QC requirements for benzo(a)pyrene, method 525. A resample was requested for BAP on 5/30/2017.

Report Authorized by:

Tom Weiss
Laboratory Manager

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Reported:
06/01/17 08:36

well #10

Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

2/13/19

LABORATORY RESULTS

Client:	**SYCAMORE**	Date Received :	01/11/19
Adress:	308 W STATE ST	Facility Number:	0370550
City, State, Zip:	SYCAMORE, IL 60178	Funding Code:	PW32
Temperature C:	2.00		

Client Sample ID:	**VOC TP08**	Lab Sample ID:	**19A0280-01**
Matrix:	Drinking Water	Date/Time Collected:	01/10/19 10:00
Sample Type:	Finished	Collected By:	

Volatile Organic Compounds by GC/MS

Method:	524.2	Prepared:	01/14/19 08:00
Units:	ug/L	Analyzed:	01/14/19 19:12

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Vinyl chloride	ND		0.50	2
1,1-Dichloroethene	ND		0.50	7
Methylene chloride	ND		0.50	5
trans-1,2-Dichloroethene	ND		0.50	100
Methyl tert-butyl ether	ND		0.50	
cis-1,2-Dichloroethene	ND		0.50	70
1,2-Dichloroethane	ND		0.50	5
1,1,1-Trichloroethane	ND		0.50	200
Carbon tetrachloride	ND		0.50	5
Benzene	ND		0.50	5
1,2-Dichloropropane	ND		0.50	5
Trichloroethene	ND		0.50	5
1,1,2-Trichloroethane	ND		0.50	5
Toluene	ND		0.50	1000
Tetrachloroethene	ND		0.50	5
Chlorobenzene	ND		0.50	100
Ethylbenzene	ND		0.50	700
Styrene	ND		0.50	100
1,4-Dichlorobenzene	ND		0.50	75
1,2-Dichlorobenzene	ND		0.50	600
1,2,4-Trichlorobenzene	ND		0.50	70
Xylenes, total	ND		0.50	10000

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Reported:
01/30/19 11:36

6.2 Appendix B – EPA Part 604: Sources of Contamination Minimum Distances

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ADMINISTRATIVE CODE

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE F: PUBLIC WATER SUPPLIES
CHAPTER I: POLLUTION CONTROL BOARD
PART 604 DESIGN, OPERATION AND MAINTENANCE CRITERIA
SECTION 604.150 PROTECTION OF COMMUNITY WATER SUPPLY STRUCTURES

Section 604.150 Protection of Community Water Supply Structures

a) Each community water supply must protect its wells, clear water reservoirs, suction lines, gravity filters, iron removal, chlorine reaction and wet salt storage basins from sources of contamination by maintaining the following minimum distances:

Source of Contamination	**Distance for Clay or Loam Soils**	**Distances for Soils with Higher Permeability than Clay or Loam**
Cesspools, leaching sewage disposal pits	150'	300'
Privies	150'	300'
Septic tanks and subsurface septic tanks effluent disposal tile	75'	150'
Livestock, grazing areas or feedlots	50'	100'
Sewers (non-watertight)	50'	50'
Sewers (cast iron pipe, with leaded or mechanical joints)	25'	25'
Sewers (extra-heavy cast iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC (polyvinyl chloride) pipe meeting water main standards, with pressure tested, leaded, mechanical or slip-on joints	10'	10'
Washwater sumps of reinforced concrete construction	10'	10'
Flood waters – A horizontal distance must be maintained by natural earth or fill. In addition, wells must meet the requirements of Section 604.240(k).	15'*	15'*
Flood waters – A vertical distance must be maintained to which structure and earth protection must be carried above maximum high water elevation. In addition, wells must meet the requirements of Section 604.240(k).	2'	2'
Fuel storage tanks above ground	25'**	25'**

* The Agency must consider special structural arrangements equivalent to earthen construction for protection of the well when horizontal earth protection is impractical.
** unless otherwise approved by the Agency under Section 604.145(b)

b) Wells must meet the setback requirements of the Act.

c) Fuel storage tanks located at a community water supply facility must be above ground and must have secondary containment.

6.3 Appendix C – Illinois State Geological Survey Well Drill Logs

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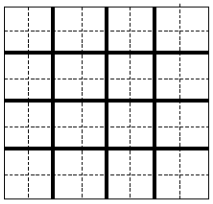
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
SS #57376	0	0
l,sty cl,org,blk,non calc,soil,Richland	0	5
tl,lm,f/med s,pbls,pnk brn7.5yr54,gvl@bs	5	45
s&gvl,unsrtd,otwsh/ice contact;Tiskilwa?	45	55
s,f/med grnd,few crs gvl,more srtd/above	55	60
tl,sty cl lm,f/med s,gvl,gry/brn,glyd?	60	65
outwash same as 55-60' interval	65	80
tl,lm,sandier than abv,few org,non calc	80	90
dolomite, hard brown limestone	90	95
Medium dark gray limestone	95	110
med dk gry limestone & shale, static 18'	110	165
hard, gray limestone, static 16'	165	225
medium gray limestone, static 14'	225	350
hard, gray limestone, static 16'	350	461
hard dark gray sandstone, static 16'	461	465
hard gray limestone	465	485
hard white, sandy limestone	485	495
hard white sandstone, streaks of dol	495	530
hard white sandstone	530	540
medium white sandstone, static 150'	540	575
medium to soft white sandstone	575	610
soft white sandstone, static 180'	610	705
hard white sandstone	705	710
medium white sandstone, static 170'	710	750

Permit Date: **Permit #:** 9506

COMPANY owner
FARM Sycamore, City Of
DATE DRILLED July 21, 1970 **NO.** 6
ELEVATION 845TM **COUNTY NO.** 00923
LOCATION 900'N line, 800'W line of NW
LATITUDE 41.992509 **LONGITUDE** -88.69608
COUNTY **DeKalb** **API** **120370092300** **32 - 41N - 5E**



ILLINOIS STATE GEOLOGICAL SURVEY

soft white sandstone	750	820
hard, buff sandy limestone	820	875
hard gry limestone w/green shale streaks	875	885
hard gray sandy limestone	885	895
hard buff sandy limestone	895	900
hard gray dolomite	900	910
medium gray limestone	910	928
medium green shale	928	930
red sandy limestone with shale streaks	930	935
hard gray limestone	935	955
hard gray sandy limestone, static 170'	955	1020
hard white sandstone, static 172'	1020	1070
medium white sandstone	1070	1080
hard white sandstone	1080	1100
medium white sandstone	1100	1110
medium to soft white sandstone	1110	1125
soft white sandstone	1125	1185
medium red sandstone, static 175	1185	1195
medium white sandstone	1195	1207
hd dk gray shale & limestone,static 175'	1207	1214
Galena	165	
St Peter	530	
Knox	885	
Ironton	1020	
Eau Claire	1195	
		1214

owner Sycamore, City O 6

COUNTY DeKalb **API 120370092300** **32 - 41N - 5E**

Total Depth 26" STEEL CASING from -1' to 96'
20" STEEL CASING from -1' to 506'
Static level 185' below casing top which is 1' above GL
Pumping level 272' when pumping at 1227 gpm for 7 hours

Remarks: Length of test: 12 hours
Driller's Log filed
Sample set # 57376 (0' - 1220') Received: February 11, 1971

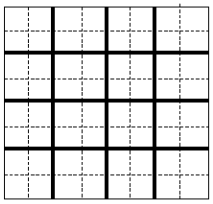
Owner Address: ,
Location source: Platbook verified

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
SS #61713 (0'-1230')	-8	0
fill	0	8
clay	8	25
clay and gravel	25	55
sand and gravel	55	115
shale	115	125
broken limestone	125	145
broken limestone & shale static lvl 18'	145	155
hard gray limestone static level 18'	345	500
hard sand and green shale	500	505
hard sandstone with limestone and shale	505	525
hard sandy limestone	525	560
hard white sandstone static level 16'	560	575
white soft sandstone static level 208'	575	793
firm pinkish sandstone	793	809
reddish shale	809	820
med / hd ss w/lime shls & red & grn sh	820	880
hard limestone (no cuttings 908 - 917')	880	942
med / hd sy limestone with shale shells	942	1060
hard white sandstone and limestone	1060	1080
white sandy limestone	1080	1116
medium white sandstone	1116	1123
soft white sandstone static level 210'	1123	1195
medium white sandstone	1195	1205

Permit Date: **Permit #:** 75734

COMPANY owner
FARM Sycamore, City of
DATE DRILLED November 13, 1978 **NO.** 7
ELEVATION 840TM **COUNTY NO.** 21656
LOCATION 2400'N line, 2000'E line of NE
LATITUDE 41.973429 **LONGITUDE** -88.722076
COUNTY **DeKalb** **API** **120372165600** **1 - 40N - 4E**



ILLINOIS STATE GEOLOGICAL SURVEY

white sandy limestone	1205	1220
limestone and shale	1220	1233
Galena	125	
St Peter	560	
Total Depth		**1233**

Casing: 26" STEEL .375" from 0' to 160'
" STEEL .375" from -4' to 574'

Size hole below casing: 19"

Static level 210' below casing top which is 0' above GL
Pumping level 246' when pumping at 1560 gpm for 12 hours

Survey Sample Study filed
Sample set # 61713 (0' - 1230') Received: November 10, 1978

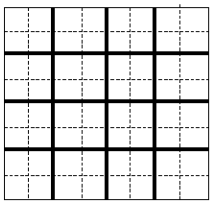
Owner Address: ,

ILLINOIS STATE GEOLOGICAL SURVEY

Municipal Water Supply	Top	Bottom
Total Depth		1300
Casing: 26" BLACK STEEL from 0' to 163'		
22" BLACK STEEL from 0' to 630'		
18" BLACK STEEL from 909' to 1080'		
Size hole below casing: 0"		
Sample set # 66740 (0' - 1300') Received: November 20, 1989		
Owner Address: 535 DeKalb Avenue Sycamore, IL		
Location source: Location from permit		

Permit Date: March 27, 1987 **Permit #:** 130486

COMPANY Wehling, Richard H.
FARM City of Sycamore
DATE DRILLED **NO.** 8
ELEVATION 0 **COUNTY NO.** 21921
LOCATION 100'S line, 1053'W line of section
LATITUDE 41.966169 **LONGITUDE** -88.710789
COUNTY DeKalb **API 120372192100** **6 - 40N - 5E**

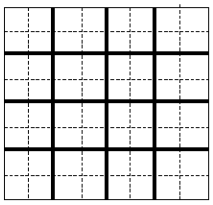


ILLINOIS STATE GEOLOGICAL SURVEY

Municipal Water Supply	Top	Bottom
SS #69338 (95'-1295')	0	0
sandy clay	0	5
clay	5	33
very sandy clay	33	110
sand clay with gravel embedded	110	165
white lime	165	180
gray & white lime mixed	180	250
white lime	250	330
90% lime, 10% shale	330	340
white lime	340	390
white & gray lime, taking lots of fluids	390	410
lime	410	530
sdy ls some grn shale w/100% ss-St Peter	530	545
very sandy lime	545	600
sandstone	600	810
sandstone & lime streaks	810	850
sandstone with reddish tint	850	880
sandstone	880	935
sandy lime with streaks of shale	935	1020
50% gray lime with 50% sand	1020	1065
Galesville sandstone	1065	1230
lime & shale	1230	1285
Total Depth		**1285**
Casing: 26" 1/2" STEEL from -4' to 178' 20" 3/8" STEEL from -2' to 645'		

Permit Date: **Permit #:**

COMPANY Layne-Western Co.
FARM Sycamore, City of
DATE DRILLED March 1, 2004 **NO.** 9
ELEVATION 0 **COUNTY NO.** 23440
LOCATION 670'S 160'W NE/c NE
LATITUDE 41.979021 **LONGITUDE** -88.66012
COUNTY **DeKalb** **API** **120372344000** **4 - 40N - 5E**



Static level 263' below casing top which is 0' above GL
Pumping level 381' when pumping at 1397 gpm for 24 hours

Remarks: PICS 03790550 #9

Sample set # 69338 (95' - 1295') Received: September 15, 2005

Owner Address: ,

Address of well: West side of Airport Rd,
.4 mi. south of Route 64

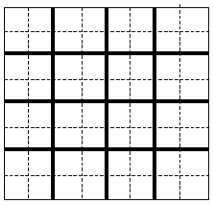
Location source: Location from the driller

ILLINOIS STATE GEOLOGICAL SURVEY

Municipal Water Supply	Top	Bottom
no record	0	20
drift	20	90
lime	90	125
gray lime/shale mis	125	140
gry lm/shale mix, some lt blue mix	140	170
blue shale	170	175
tan lime blue gray shale mix	175	180
tan lime	180	325
brown/tan lime	325	360
brown/tan lime with areas of gray lime	360	395
brown/gray lime	395	430
brown/tan lime	430	455
brown/tan lime, blue shale mix	455	460
brown/tan lime gray	460	475
gray lime	475	480
tan gray lime	480	485
brownish lime	485	500
brownish lime gray mix	500	515
blue shale	515	520
sandy shale lime	520	540
sandy lime shale mix bluish	540	545
sandy lime shale mix brownish	545	550
sandy lime shale mix tanish	550	560
grayish sandy lime cemented sandstone	560	565

Permit Date: March 24, 2011 **Permit #:** 0791-FY

COMPANY Municipal Well & Pump, Inc.
FARM Sycamore, city of
DATE DRILLED September 29, 2011 **NO.** 10
ELEVATION 849GL **COUNTY NO.** 23707
LOCATION SE SW SW
LATITUDE 42.010725 **LONGITUDE** -88.676009
COUNTY **DeKalb** **API** **120372370700** **21 - 41N - 5E**



ILLINOIS STATE GEOLOGICAL SURVEY

grayish tan sandy lime cemented ss mix	565	570
blue-greenish shale mix sandstone	570	595
white sandstone greenish shale mix	595	600
coarse white sandstone shale mix	600	670
clean white sandstone little shale mix	670	755
tan to white sandstone shale mix	755	790
tan to brown sandstone	790	795
white sandstone shale mix	795	825
tan sandstone	825	860
hard cemented sandstone	860	865
very hard sandy lime, cemented ss	865	875
red sandy lime	875	880
rd shale chint mix sandy lime	880	895
red/green shale tan/red lime sandy mix	895	900
green shale mix cemented ss some lime	900	905
less shale wh sandy lime white chint mix	905	920
white chinty sandy lime	920	925
mix tan brnish lm grn shale sdy lm chint	925	930
bluish greenish sandy lime	930	935
tan lm bluish grn sandy lime hd granite	935	945
tan greenish more sandy lime	945	955
grnish tan/red sandy lm grn shale mix	955	965
more reddish grn sandy lm grn shale mix	965	985
grn sandy lm some red mix grn shale mix	985	1005

more reddish granity type some shale mix	1005	1015
greenish tanish sand lm lots of fractors	1015	1020
tannish sands lime	1020	1025
reddish pinkish sandy lm qtz mix factors	1025	1035
pink-tan s strks grn shale cemented strk	1035	1090
strks pnk cmted ss,rd wh s strks grn sh	1090	1175
white sand-sticky shale bluish	1175	1180
brown lime hard	1180	1185
sticky blue shale little sand mix	1185	1205
sticky blue shale tan-brown lime mix	1205	1215
tan brn sandy lm or cmntd bl shale mix	1215	1225
Total Depth		**1225**

Casing: 26" STEEL ASTM A53B .500 from 0' to 92'
20" STEEL ASTM A53B .375 from 0' to 670'

Grout: NEAT CEMENT from 0 to 94.

Grout: NEAT CEMENT from 0 to 670.

Water from St Peter&Ironton-Gal at 670' to 1225'.
Static level 260' below casing top which is 2' above GL
Pumping level 415' when pumping at 1800 gpm for 6 hours

Remarks: driller's est. well yield 1,300 gpm

Sample set # 69968 (20' - 1225') Received: November 16, 2011

Owner Address: ,

Address of well: 1710 N. Main Street
Sycamore, IL

Location source: Global Positioning System verified

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