

IEPA SOURCE WATER ASSESSMENT PROGRAM FACT SHEET



Illinois Environmental
 Protection Agency



Source Water Assessment Program

FACT SHEET

IL AMERICAN-CHAMPAIGN

CHAMPAIGN COUNTY

Prepared in cooperation with the U.S. Geological Survey.

Information and data used in the preparation of this Fact Sheet are provided by the Illinois EPA and are subject to revision.

IMPORTANCE OF SOURCE WATER:

The Illinois American Water Company-Champaign (Facility Number 0195300) obtains its water from 22 community water supply wells. Wells #35, #40, #41, #42, #43, #45, #46, #47, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, and #66 (Illinois EPA #45065, #46067, #45068, #45069, #45070, #45072, #45073, #45074, #45075, #45076, #45077, #45078, #45079, #45080, #45081, #45082, #45083, #45084, #00255, #00864, #01102, and #01336 respectively) provide an average of 21.3 million gallons per day to 45,990 direct services and 6,100 satellite services or a population of 141,000. Seymour Water District (Facility Number 0190060), Oaks of Illinois LLC MHP (0190070), the U of I-Champaign (Facility Number 0195500), Arcola/Tuscola Water Trans. Main (Facility Number 0410020), West Prairie Water Company (Facility Number 0410030), Egyptian Trail Water Corp. (Facility Number 0415150), the Villages of Sidney, Tolono, and Philo (Facility Numbers 0190850, 0191000, and 0190600, respectively) and the Cities of Arcola and Tuscola (Facility Numbers 0410050 and 0415030, respectively) also purchase and utilize source water from Illinois American Water Company--Champaign. These facilities have populations of 350, 378, 13,000, 45, 530, 44, 1,375, 2,700, 2,000, 2,750, and 4,484, respectively.

WATER SUPPLIES THAT OBTAIN SOURCE WATER FROM THIS FACILITY:

Facility Number	Facility Name	Status	Population
0190080	SEYMOUR WATER DISTRICT	A	350
0190070	OAKS OF ILLINOIS LLC MHP	A	330
0190800	PHILO	A	2000
0190850	SIDNEY	A	1062
0191000	TOLONO	A	2700
0195500	U OF I-CHAMPAIGN	A	13000
0410020	ARCOLA/TUSCOLA WTR TRANS MAIN	A	45
0410030	WEST PRAIRIE WATER COMPANY	A	530
0410050	ARCOLA	A	2750
0415030	TUSCOLA	A	4484
0415150	EGYPTIAN TRAIL WTR CORP	A	44

SOURCE OF WATER SUPPLY:

Well #43 is located north of Bradley Avenue. Wells #35, #40, #41, #42, #45, 46, and #47, are located south of Bradley Avenue. Well #53 is located east of Mattis Avenue, approximately 2.75 miles west of Well #43. Wells #56, #57, #58, #60, and #62 are located west of Mattis Avenue. Well #65 is approximately one mile north of Well #62. Well #66 (Illinois EPA #01336) is located approximately 0.5 miles north of Well #65. Wells #54, #55, #59,

#61, #63, and #64 are located west of Interstate 57. Wells #3, #26, #29, #30, and #33 (Illinois EPA #45060, #45061, #45062, #45063, and #45064, respectively) are no longer used as a source of water and have been properly abandoned. Wells #40, #41, #42, #43, #45, #46, #47, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65 and #66 produce at rates of 500, 275, 600, 700, 550, 375, 350, 375, 2,100, 3,000, 1,000, 2,100, 2,100, 2,800, 2,100, 2,400, 2,100, 2,430, 2,430, 1,400, 2,100 and 2,100 gallons per minute, respectively. The wells range in depth from 199 to 366 feet. Wells #35, #40, #41, #42, #43, #45, #46 and #47 utilize a Glasford formation sand and gravel aquifer. Wells #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65 and #66 utilize a Mahomet sand and gravel aquifer. Former Wells #36 and #52 have been designated as "observation wells" and are no longer used as a source of drinking water. The aquifers are overlain by relatively impermeable material. Permeability is a measurement of the capability of a soil or sediment to transmit fluids. The Illinois EPA does not consider these wells to be geologically sensitive.

WELL DATA FOR THIS FACILITY:

Well ID	Well Description	Status	Depth (Feet)	Min Setback (Feet)	Aquifer Description
00255	WELL 63 IN WEST WELL FIELD IN	A	300	200	Sand & Gravel
00864	WELL 64 IN WEST WELL FIELD, G	A	314	200	Sand & Gravel
45065	WELL 35 IN NORTH WELL FIELD	A	207	200	Sand & Gravel
45067	WELL 40 IN NORTH WELL FIELD	A	212	200	Sand & Gravel
45068	WELL 41 IN NORTH WELL FIELD	A	219	200	Sand & Gravel
45069	WELL 42 IN NORTH WELL FIELD	A	218	200	Sand & Gravel
45070	WELL 43 IN NORTH WELL FIELD	A	225	200	Sand & Gravel
45072	WELL 45 IN NORTH WELL FIELD	A	199	200	Sand & Gravel
45073	WELL 46 IN NORTH FIELD	A	217	200	Sand & Gravel
45074	WELL 47 IN NORTH WELL FIELD	A	215	200	Sand & Gravel
45075	WELL 53 IN WEST WELL FIELD, G	A	289	200	Sand & Gravel
45076	WELL 54 IN WEST WELL FIELD, G	A	331	200	Sand & Gravel
45077	WELL 55 IN WEST WELL FIELD, G	A	313	200	Sand & Gravel
45078	WELL 56 IN WEST WELL FIELD, G	A	315	200	Sand & Gravel
45079	WELL 57 IN WEST WELL FIELD, G	A	308	200	Sand & Gravel
45080	WELL 58 IN WEST WELL FIELD, G	A	329	200	Sand & Gravel
45081	WELL 59 IN WEST WELL FIELD, G	A	338	200	Sand & Gravel
45082	WELL 60 IN WEST WELL FIELD, G	A	340	200	Sand & Gravel
45083	WELL 61 IN WEST WELL FIELD, G	A	297	200	Sand & Gravel
45084	WELL 62 IN WEST WELL FIELD, G	A	343	200	Sand & Gravel
01102	WELL 65 IN WEST WELL FIELD, G	A	366	200	Sand & Gravel
45060	WELL 3	B	0	400	
45061	WELL 28	B	0	400	
45062	WELL 29	B	0	200	
45063	WELL 30	B	0	200	
45064	WELL 33	B	0	200	
01336	WELL 66 IS 2500 FEET NORTH OF	A	363	200	Sand & Gravel

SOURCE WATER QUALITY:

Illinois American Water Company-Champaign Wells #35, #40, #41, #42, #43, #45, #46, #47, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, and #65 were sampled beginning in 1983 as part of a Statewide Groundwater Monitoring Program. The samples were analyzed for inorganic chemicals (IOC). Wells #40, #43, #45, #46, #53, #54, #57, #58, #59, #60, #61, #62, #63, #64, and #65 were sampled for volatile organic compounds (VOC). In addition, Wells #43, #46, #53, #54, #55, #58, #62, and #63 were sampled for synthetic organic compounds (SOC). Wells #53 and #59 are also monitored biennially for VOC, IOC, and SOC as part of Illinois EPA's Ambient Groundwater Monitoring Network.

Review of the IOC data collected for these sampling efforts indicated that the IOC results were below the groundwater quality standards established in 35 Illinois Administrative Code Part 620.410 with the exception of lead. Concentrations of lead in the source water were above the 7.5 parts per billion (ppb) numerical groundwater

standard. The observed lead concentration in Well #54 varied between 10 and 40.7 ppb. Of particular interest to communities with wells utilizing certain aquifers, are naturally occurring elevated levels of arsenic. Arsenic was detected in the samples from these wells, but did not exceed the groundwater quality standard of 50 ppb. The observed arsenic concentrations in Wells #35, #40, #41, #42, #43, #45, #53, #57 varied between 10 and 17 ppb. The Illinois EPA believes that these levels are a result of natural mineralization in the sand and gravel aquifer.

VOC analyses detected 4.2 ppb of methylene chloride in Well #59. This level did not exceed the groundwater quality standard of 5 ppb. Concentrations of tetrachloroethylene in Well #54 varied between 3 and 4.1 ppb. This did not exceed the groundwater standard of 5 ppb. SOC analyses detected 0.96 ppb of di (2-ethylhexyl) phthalate in Well #63.

FINISHED WATER QUALITY:

Sampling performed after the water treatment process indicates that levels of lead, methylene chloride, di (2-ethylhexyl) phthalate, and tetrachloroethylene were reduced to below detection limits. The U.S. EPA has finalized a new drinking water standard for arsenic. This standard reduces the maximum allowable level of arsenic from 50 ppb to 10 ppb in finished water. The finished water arsenic level at this water supply was below detection. Further information on finished water quality data tables of monitored parameters, contaminants detected, health advisory information, drinking water standards, and maximum contaminant levels are available at <http://www.epa.gov/ogwdw/>. Similar information is also available in the Consumer Confidence Report supplied by the Illinois American Water Company-Champaign to its customers. Information is also available at www.illinoisamerican.com.

POTENTIAL SOURCES OF CONTAMINATION:

The sites labeled on the Wellhead Protection Planning Map and described in the following tables are considered "potential" sources of contamination. (Maps and tables are not available in the Visually Impaired Accessible version. However, the information presented in the maps and tables is summarized within the following text sections of this fact sheet.) These sites were predominantly identified through the Illinois EPA's Well Site Survey and Hazard Review Programs based on the nature of their activity, the availability of data in electronic databases, and their geographic proximity to the source water protection area. The Illinois EPA made use of the information from its leaking underground storage tank database (<http://epadata.epa.state.il.us/land/ust/search.asp>) and site remediation program database (<http://epadata.epa.state.il.us/land/srp/search.asp>) to further assess potential sources of contamination to the facility's source water. These databases include information from the Illinois EPA Division of Land Pollution Control (LPC) and the Illinois Emergency Management Agency (IEMA). The following is a list of facilities contained within these databases.

IEMA#	LPC #	Name--Address
20001172	0190105097	Champaign Co. Unit School Dist. #4 1400 North Hagan Dr. Champaign 61820
20001710	0190105194	Johnson Oil Co. 515 South Neil St. Champaign 61820
20002365	0190105299	Snodgrass, Larry 606 East University Ave. Champaign 61820
20002408	0190105300	Speedway SuperAmerica 872 Counry Rd. 1000 North Champaign 61821
20011910	0190105073	U.S. Tank Alliance 2401 West Springfield Rd. Champaign 61821
20011915	0190100019	U.S. Tank Alliance 1301 South Mattis Ave. Champaign 61821
861231	0190100006	Southland Dist. Ctr. Mattis Ave. & Rt. 150 Champaign 61824-4001
871915	0190100024	Illini Airport Illini Airport Champaign 61820
871964	0190100006	Southland Dist. Ctr. Mattis Ave. & Rt. 150, Champaign 61824-4001
890915	0190100025	Panzer, John 1200-02 North Mattis Champaign 61821
891014	0190100026	McDonalds 101 Kirby Champaign 61820
891093	0190100022	Champaign School Dist. 606 East Grove Champaign 61820
891094	0190100023	Champaign School Dist. 817 North Harris Champaign 61820
891443	0190105063	Interstate Brands 812 North Randolph Champaign 61820
891472	0198270008	University of Illinois 1117 South Oak Champaign 61820
891614	0190100021	Camp Farm Management Inc. 7103 North Mattis Champaign 61820
892075	0190100027	Zayre 2002 West Springfield Champaign 61820
892120	0190105023	Garber's Modern Cleaners 615 South Wright Champaign 61820
892207	0190105039	Parkhill Motor Sales Inc. 300 Carriage Ctr. Ct. Champaign 61820

- 892208 0190100019 Wareco Service Inc. 1301 Mattis Ave. Champaign 61820
- 0191055045 APL Engineered Products 406 North Busey Avenue Champaign 61801-
- 0190105279 Central Material Company 100 East Healey Street Champaign 61821-
- 0190105228 Christie Clinic 101 South State Street Champaign 61820-
- 0190105022 Country Squire Dry Cleaners 1805 West Springfield Avenue Champaign 61821-
- 0190100008 Illinois Power Town Gas Plant 502 East Hill Street Champaign 61820-
- 0190100054 Norris Tire & Auto Center 2103 West Springfield Avenue Champaign 61821-
- 0190105312 Porter Property 405 South Neil Street Champaign 61820-

SITE DATA FOR THIS FACILITY:

Well ID	Map Code	Site Name	Site Description	Distance (Feet)
00864	02473	STEVE GILBERT GRAVEL PIT	QUARRYING OF CONSOLIDATED	2800
45065	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	1950
45067	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	1250
45067	02463	PORTLAND YAMAHA	VEHICLE SALES	700
45068	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	1800
45069	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	2050
45070	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	2300
45072	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	1470
45073	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	1660
45074	02460	GREAT PLAINS MODEL MANUFA	CHEMICAL HANDLING (i.e. MANUF	2000
45075	02471	ILLINOIS POWER COMPANY	ELECTRICAL GENERATOR/SUBST	50
45075	02469	SOUTHLAND DISTRIBUTION CTR	BELOW GROUND STORAGE (PET	2200
45075	02472	GARDEN HILLS ELEMENTARY SC	BELOW GROUND STORAGE (PET	800
45075	02470	NORTHERN ILLINOIS WATER CO	LAGOON	1200
45076	02473	STEVE GILBERT GRAVEL PIT	QUARRYING OF CONSOLIDATED	400
45077	02473	STEVE GILBERT GRAVEL PIT	QUARRYING OF CONSOLIDATED	230
45078	02470	NORTHERN ILLINOIS WATER CO	LAGOON	100
45078	02468	CRESCENT ELECTRICAL SUPPL	ELECTRICAL GENERATOR/SUBST	2500
45078	02471	ILLINOIS POWER COMPANY	ELECTRICAL GENERATOR/SUBST	2700
45078	02467	VARSITY CONSTRUCTION	CONSTRUCTION/DEMOLITION CO	2500
45078	02466	MIDWEST POTTYHOUSE	STORE/SALES	2450
45078	02469	SOUTHLAND DISTRIBUTION CTR	BELOW GROUND STORAGE (PET	550
45079	02470	NORTHERN ILLINOIS WATER CO	LAGOON	2579
45080	02474	UNKNOWN GARAGE UST	BELOW GROUND STORAGE (PET	2020
45081	02473	STEVE GILBERT GRAVEL PIT	QUARRYING OF CONSOLIDATED	700
45082	02474	UNKNOWN GARAGE UST	BELOW GROUND STORAGE (PET	340
45084	02469	SOUTHLAND DISTRIBUTION CTR	BELOW GROUND STORAGE (PET	700
45084	02467	VARSITY CONSTRUCTION	CONSTRUCTION/DEMOLITION CO	1250
45084	02466	MIDWEST POTTYHOUSE	STORE/SALES	1500
45084	02468	CRESCENT ELECTRICAL SUPPL	ELECTRICAL GENERATOR/SUBST	1000
45084	02470	NORTHERN ILLINOIS WATER CO	LAGOON	2000
45084	14325	JEHOVAH WITNESSES KINGDOM	WELL	2430
45084	14326	JEHOVAH WITNESSES KINGDOM	SEPTIC SYSTEM	2575
45084	14324	JEHOVAH WITNESSES KINGDOM	SEPTIC SYSTEM	1950

OTHER IDENTIFIED POTENTIAL SOURCES:

For this community water supply, no additional potential sources of contamination have been identified beyond those in Illinois EPA databases.

SUSCEPTIBILITY TO CONTAMINATION:

To determine Illinois American Water Company-Champaign's susceptibility to groundwater contamination, a Well Site Survey Report from February 1991 and a source inventory conducted in 1999 by the Illinois Rural Water Association in cooperation with the Illinois EPA, were reviewed. Based on the information contained in these

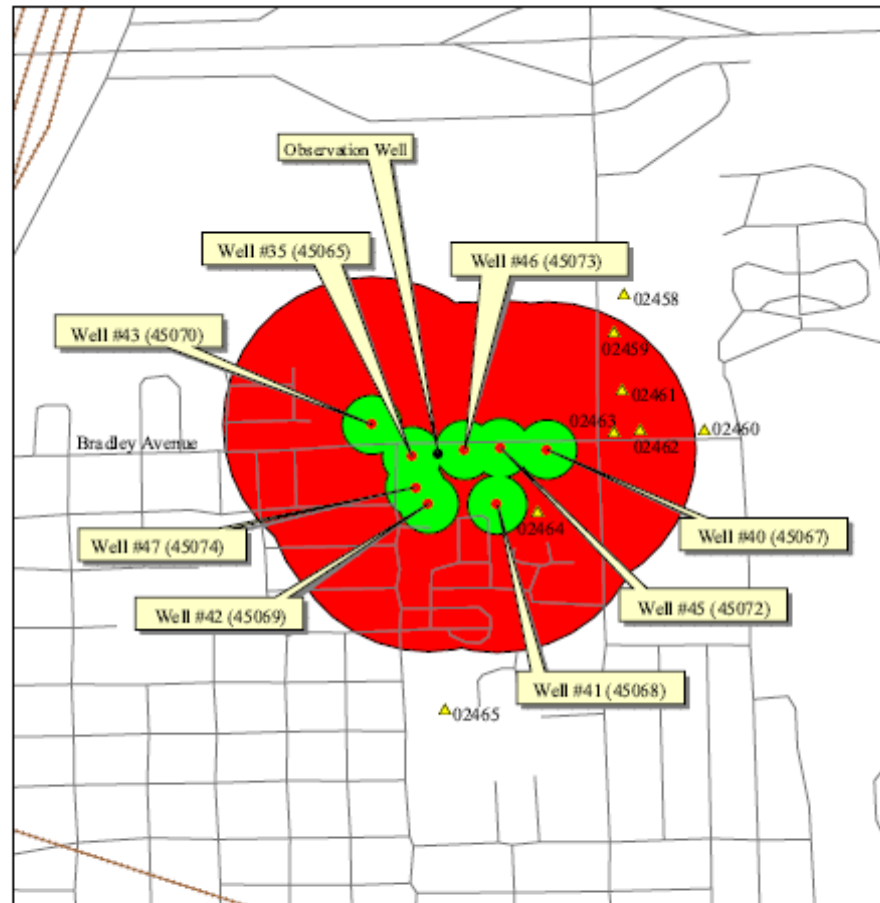
documents, nineteen potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the Illinois American Water Company-Champaign community water supply wells. These include three stores/sales, two printing companies, a manufacturing/processing of chemicals, a warehouse, a vehicle sales, two lagoons, a construction/demolition co., two electrical generators/substations, three below ground fuel storages, a quarrying of material, two septic systems, and a well.

The Illinois EPA has determined that Illinois American Water Company-Champaign Wells #35, #40, #41, #42, #43, #45, #46, and #47 are susceptible to IOC, VOC, and SOC contamination. Wells #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65 and #66 are not susceptible to IOC, VOC, or SOC contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data for the wells.

SOURCE WATER PROTECTION EFFORTS:

The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for the Illinois American Water Company-Champaign's wells. These minimum protection zones are regulated by the Illinois EPA. To further minimize the risk to the facility's groundwater supply, the Illinois EPA recommends that four additional activities be assessed. First, the facility should develop a source water protection program. An approved program may allow the facility to receive a monitoring waiver that will reduce the frequency of VOC and/or SOC monitoring. The reduced monitoring frequency may save the facility considerable analytical costs. Second, the facility may wish to have a "maximum setback zone" ordinance enacted. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to a fixed distance, normally 1,000 feet, from their wells. Third, the water supply staff may wish to revisit their contingency planning documents. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water. Finally, the water supply staff is encouraged to review their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all of the source water protection initiatives provided by the community and circumvent the natural protection provided to the aquifer.

**FIGURE 1: WELLHEAD PROTECTION PLANNING MAP
 FOR IL AMERICAN WATER CO.-CHAMPAIGN (FACILITY #0195300)**



- Legend**
- CWS Wells
 - ▲ Potential Sources Of Contamination
 - Rails
 - Roads
 - Streams
 - Minimum Setback Zone
 - Existing or Potential Maximum Setback Zone

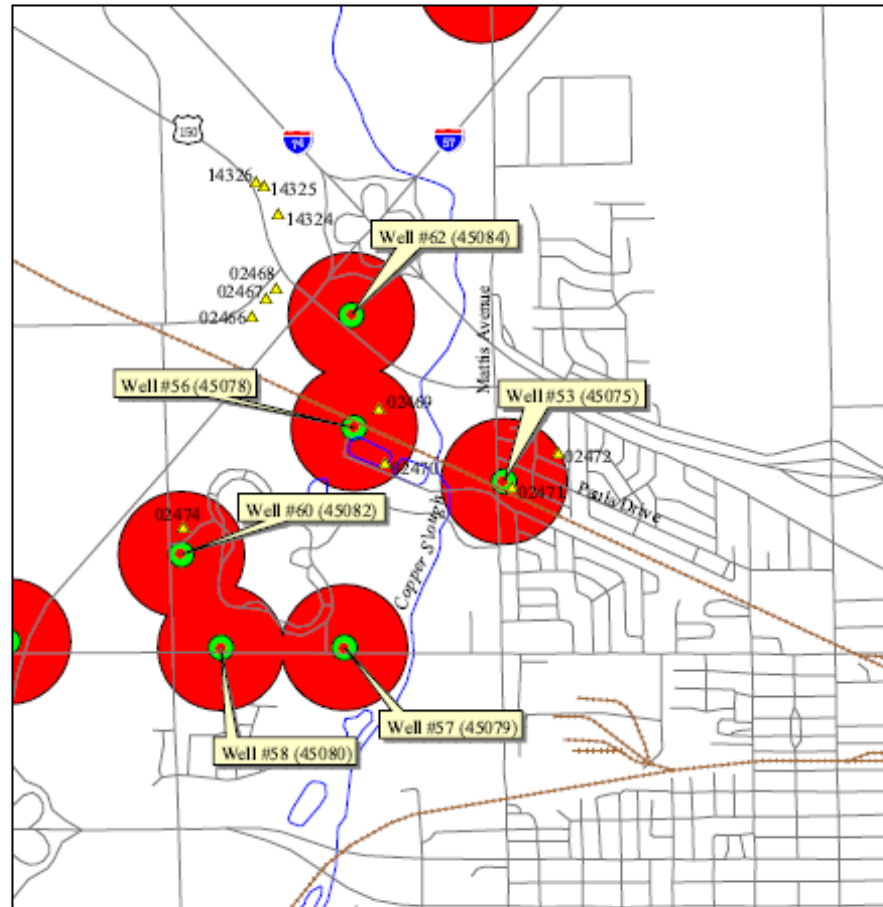
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FOR MORE INFORMATION CONTACT:

Groundwater Section, Bureau of Water
 Illinois Environmental Protection Agency
 1021 North Grand Avenue East
 Springfield, IL 62794-9276
 PH# (217)785-4787

Source Information:
 Roads, Rails, and Streams from Illinois DNR.
 CWS Wells and Potential Sources from Illinois EPA.
 Map compiled by Groundwater Section, Illinois EPA.

FIGURE 2: WELLHEAD PROTECTION PLANNING MAP FOR IL AMERICAN WATER CO.-CHAMPAIGN (FACILITY #0195300)



- Legend**
- CWS Wells
 - ▲ Potential Sources Of Contamination
 - Rails
 - Roads
 - Streams
 - Minimum Setback Zone
 - Existing or Potential Maximum Setback Zone

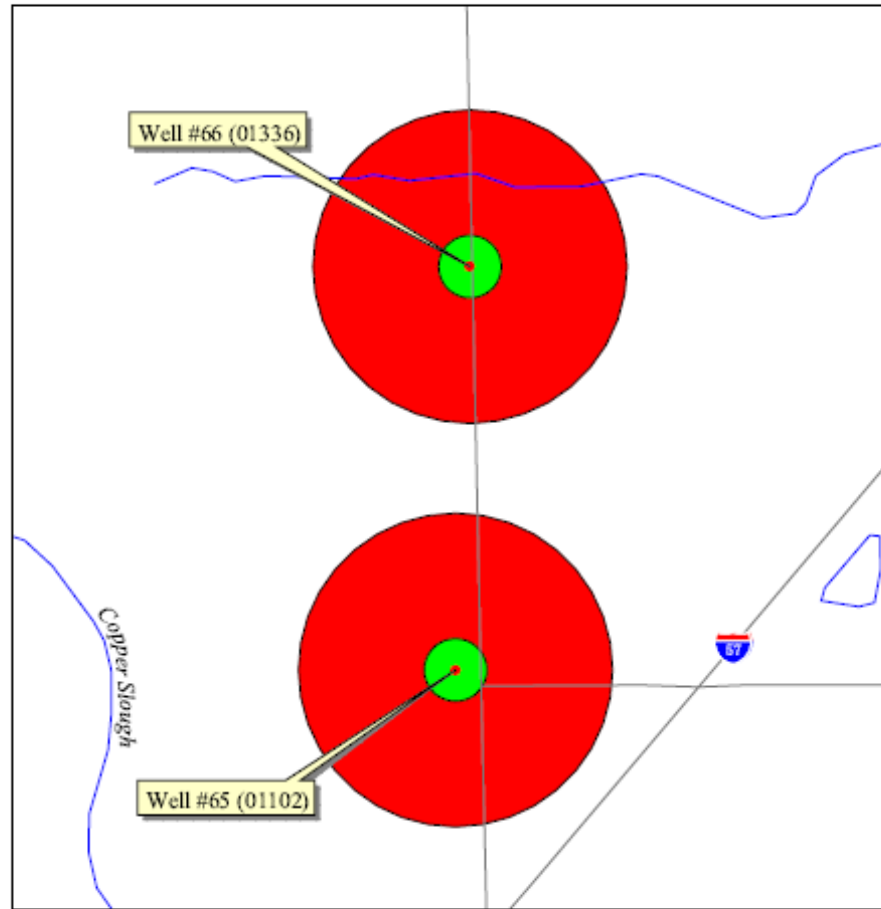
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FOR MORE INFORMATION CONTACT:

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 Illinois Environmental Protection Agency
 1021 North Grand Avenue East
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Source Information
 Roads, Rails, and Streams from Illinois DNR.
 CWS Wells and Potential Sources from Illinois EPA.
 Map compiled by Groundwater Section, Illinois EPA.

**FIGURE 3: WELLHEAD PROTECTION PLANNING MAP
 FOR IL AMERICAN WATER CO.-CHAMPAIGN (FACILITY #0195300)**



- Legend**
- CWS Wells
 - ▲ Potential Sources Of Contamination
 - Rails
 - Roads
 - Streams
 - Minimum Setback Zone
 - Existing or Potential Maximum Setback Zone

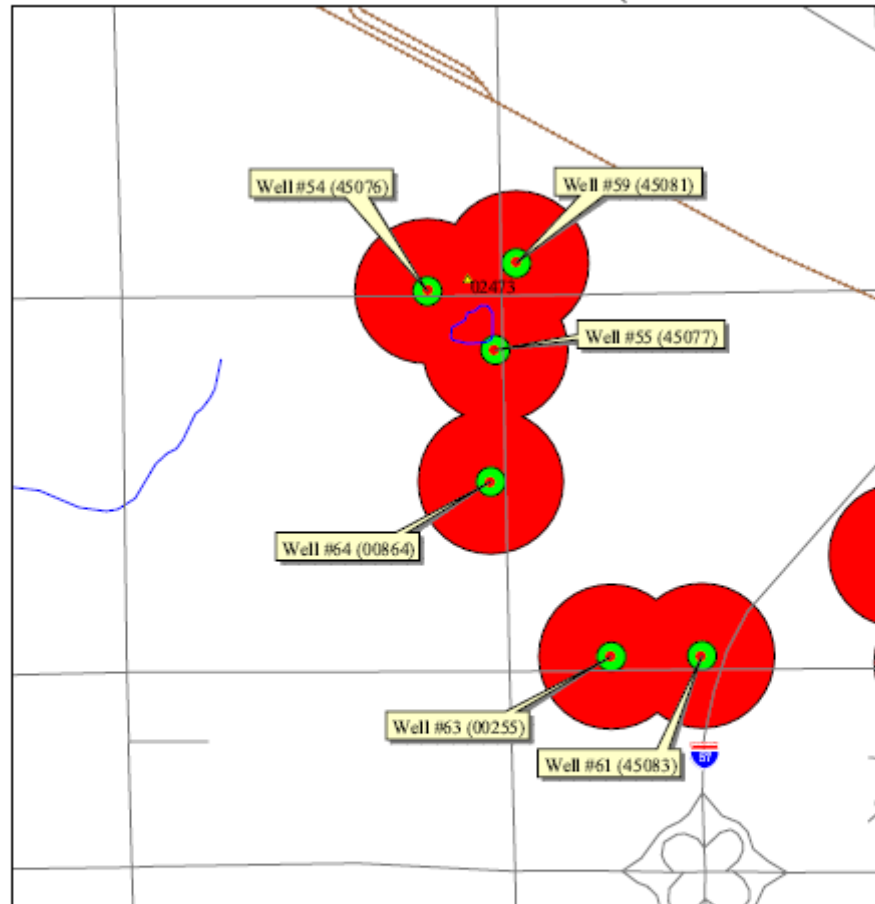
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FOR MORE INFORMATION CONTACT:

Groundwater Section, Bureau of Water
 Illinois Environmental Protection Agency
 1021 North Grand Avenue East
 Springfield, IL 62794-9276
 P# (217) 785-4787

Source Information
 Roads, Rails, and Streams from Illinois DNR.
 CWS Wells and Potential Sources from Illinois EPA.
 Map compiled by Groundwater Section, Illinois EPA.

**FIGURE 4: WELLHEAD PROTECTION PLANNING MAP
 FOR IL AMERICAN WATER CO.-CHAMPAIGN (FACILITY #0195300)**



- Legend**
- CWS Wells
 - ▲ Potential Sources Of Contamination
 - Rails
 - Roads
 - Streams
 - Minimum Setback Zone
 - Existing or Potential Maximum Setback Zone

500 0 500 1000 1500 Feet

FOR MORE INFORMATION CONTACT:

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 Illinois Environmental Protection Agency
 1021 North Grand Avenue East
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 Ph# (217)785-4787

Source Information
 Roads, Rails, and Streams from Illinois DNR.
 CWS Wells and Potential Sources from Illinois EPA.
 Map compiled by Groundwater Section, Illinois EPA.