

Illinois Environmental Protection Agency

Source Water Assessment Program

FACT SHEET

PINGREE GROVE

Kane

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.

Illinois EPA PWS Number: **IL0890160**

WATER PERCENTAGES:

Surface Water%	Surface Water Purchase%	Ground Water%	Ground Water Purchase%	Ground Water UDI%	Ground Water UDI Purchase%
0.00	0.00	100.00	0.00	0.00	0.00

IMPORTANCE OF SOURCE WATER:

The Village of Pingree Grove (Facility Number IL0890160) utilizes two active community water supply (CWS) wells. Wells #1 and #2 (Illinois EPA WL01631 and WL01632, respectively) produce an average of 633,000 gallons per day delivered to a population of 9,200 at 3,756 direct service connections.

SOURCE OF WATER SUPPLY:

The Village of Pingree Grove's wells are located off Reinking Road near Highland Avenue. Wells #1 and #2 are 1,345 feet in depth and each well can produce at a rate of 1,400 gallons per minute. Both wells utilize a confined bedrock aquifer overlain by impermeable layers. Permeability is a measure of the capability of a porous rock, soil, or sediment to transmit fluids. These wells are not considered geologically sensitive by the Illinois EPA due to the nature of the aquifer and overlying material.

WELL DATA FOR THIS FACILITY:

WELL ID	WELL DESCRIPTION	STATUS	DEPTH (feet)	MINIMUM SETBACK	PUMPAGE (gallons/year)	AQUIFER DESCRIPTION	MAXIMUM SETBACK	AQUIFER CODE
WL01631	WELL 1 (01631)	Active	1345.00	200		Deep Bedrock	0	8793
WL01632	WELL 2 (01632)	Active	1345.00	200		Deep Bedrock	0	8793

INTAKE DETAILS

INTAKE ID	SOURCE	DESCRIPTION	WATERSHED ID	STREAM SEGMENT ID	LAKE NAME

SOURCE WATER QUALITY:

Pingree Grove's wells were sampled by the Illinois EPA on 5/27/09 for inorganic chemicals (IOC) and volatile organic compounds (VOC). In addition, well #1 was sampled for synthetic organic compounds (SOC).

Review of the IOC data collected for these sampling efforts indicated that the parameters were consistent with other wells that utilize bedrock aquifers of similar character. It is important to note that the IOC results were below the groundwater quality standards established in 35 Ill. Adm. Part 620.410, with the exception of barium. Barium has a groundwater quality standard of 2,000 parts per billion (ppb) and was detected in the wells at levels ranging between 3,350 and 4,410 ppb. The Illinois EPA considers the elevated levels of barium observed in these wells a result of natural mineralization in the aquifer. Hence, the levels of barium are not considered a violation because of the stipulation in 35 Ill. Adm. Part 620.410 that no violation occurs as a result of the natural occurrence of an IOC.

All public water supplies utilizing groundwater are required by the Illinois EPA to sample their wells monthly for bacterial contaminants. Monitoring of Pingree Grove's wells did not indicate the presence of bacterial contaminants.

FINISHED WATER QUALITY:

After treatment all IOC, VOC, and SOC levels were below the Drinking Water Maximum Contaminant Levels. Further information on finished water quality data tables of monitored parameters, contaminants detected, health advisory information, drinking water standards, and maximum contaminant levels, is available at Drinking Water Watch (<http://water.epa.gov/drink/index.cfm>). Similar information is also available in the Consumer Confidence Report supplied by the Village of Pingree Grove to its consumers.

POTENTIAL SOURCES OF CONTAMINATION:

The sites labeled on the Wellhead Protection Planning Map and described in the following table are considered "potential" sources of contamination. The sources are identified based on the nature of their activity, the availability of data in electronic databases, and their geographic proximity to the source water protection area. As a result of multiple possible contamination sources at a facility, individual sites may be listed in the table more than once in relation to a well. The Illinois EPA performed a detailed Well Site Survey in 2009 to identify potential sources of contamination to Pingree Grove's wells. Data from the survey are in the table: SITE DATA FOR THIS

SYSTEM. In addition, the Illinois EPA made use of information from its leaking underground storage tank (UST) <http://epadata.epa.state.il.us/land/ust/> and site remediation program databases (SRP) <http://epadata.epa.state.il.us/land/srp/> to further assess potential sources of contamination to the source water. These databases include information from the Illinois EPA Division of Land Pollution Control (LPC) and the Illinois Emergency Management Agency (IEMA). No additional sites were found in these databases to be in the proximity of the wells.

In the SITE DATA FOR THIS FACILITY table below, the Description - Type codes are as follows: 450 - waste treatment facility

SITE DATA FOR THIS FACILITY:

Well Id	Site/GMZ Id	Map Code	Name	Description - Type	Distance (feet)	Description - Status
WL01631	000024970	24970	SEWAGE TREATMENT PLAN	450	500	Active
WL01632	000024970	24970	SEWAGE TREATMENT PLAN	450	1400	Active

SUSCEPTIBILITY TO CONTAMINATION:

The Illinois EPA does not consider Pingree Grove's source water to be susceptible to contamination. This determination was made based on the identification of potential sources and routes of contamination, land-use activities around the wells, available hydrogeological data, and monitoring results. During the survey of the source water protection area, a sewage treatment plant was identified within the combined 1,000-foot Phase I Wellhead Protection Areas (WHPA) for Well #1 and Well #2.

Sampling performed to assess for pathogenic contamination (e.g., virus, total coliform, e-coli) has also demonstrated that the source water is not susceptible to these types of contaminants.

SOURCE WATER PROTECTION EFFORTS:

The Illinois Environmental Protection Act establishes minimum protection zones of 200 feet for Pingree Grove's wells. These minimum protection zones are regulated by the Illinois EPA.






To further minimize the risk to Pingree Grove's water supply, the Illinois EPA recommends that the following activities be assessed. First, the supply may wish to enact a maximum setback zone ordinance. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to 1,000 feet for their wells. Second, the water supply staff is also encouraged to continue to revisit their contingency planning documents yearly in order to ensure that the plans are kept current and the water department and emergency response staff are aware of and adequately trained to implement emergency procedures. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe or adequate water. Third, the water supply staff is encouraged to conduct a biennial cross connection survey of the distribution system as outlined in the cross-connection control ordinance [Section 18 of the Environmental Protection Act 415 ILCS 5/1 et seq. (Act); 35 Ill. Adm. Code, Sections 607.104(d), 653.801(c)] and to review their cross-connection control ordinance 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 source water protection initiatives. Fourth, the water supply staff should pursue efforts to properly abandon any private well within the Phase I WHPA. Wells that are not properly abandoned (filled and sealed) can act as direct conduits into the aquifer which may allow surficial contaminants to enter the water supply and are considered "potential routes" of contamination under the Environmental Protection Act. Finally, the Illinois EPA recommends continuing efforts to evaluate additional source water protection management options to address the regulatory and non-regulatory land use activities within the WHPA of the community wells.

Wellhead Protection Planning Map Pingree Grove (Facility IL0890160)



0 1,000 2,000 Feet

Legend

-  CWS Wells
-  Potential Sources of Contamination
-  Streams
-  CWS Wells Minimum Setback Zone
-  CWS Wells Phase I WHPA



FOR MORE INFORMATION CONTACT:
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Source Information:
CWS Wells, Potential Sources, WHPAs,
Setback Zones, from Illinois EPA. Streams from NHD.