Richton Park

Source Water Protection Plan

July 2023

Village of Richton Park, IL
Cook County
Public Water Supply ID No. 0312550

“Our constant goal is to provide you with a safe and dependable supply of drinking water. The Village of Richton Park continually strives to improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water.”

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Section 1 Introduction

Ensuring that drinking water is safe is a constant goal of the Village of Richton Park (Village). The purpose of this document is to guide the Village through the source water protection (SWP) process. SWP is an important component of a multi-faceted approach – along with effective treatment, distribution, and monitoring – to provide high quality and reliable drinking water to the public. This Source Water Protection Program (SWPP) has been developed in accordance with applicable regulations set for by the Illinois Environmental Protection Agency (IEPA) as part of the SWPP to continue to provide reliable drinking water to our customers. The SWP Plan involves identifying potential risks that could impact the drinking water supply and managing those risks, when possible, to maintain supply quality and quantity.

The Village corporate limits lie within Cook County and has a population of 12,775 customers (2020 Census). The Community Water System (CWS) is municipally owned and relies 100% on groundwater sources 418 to 455 feet below the ground surface (BGS). The location of the Village and the three wells are shown in Figure 1 in Appendix A. Table 1 provides information on the Village, pertinent to the SWP Plan.

Table 1: Village of Richton Park Public Works Department Contact Information

PWS SYSTEM NAME	Village of Richton Park, IL
PWS ID	0312550
SYSTEM ADDRESS	Village Hall, 4455 Sauk Trail
SYSTEM PHONE	(708) 481-8950
CONTACT PERSON	Mike Wegrzyn, Public Works Director
CONTACT PHONE	(708) 481-8950

Vision Statement and Goals

A key component of the SWP Plan is listing a vision statement and goals. The goals will be the foundation for the Action Plan. The Vision Statement, listed below as the mission statement, explains the commitment from the Village to provide excellent service to customers. The vision statement, and five goals, have been established to support the SWP Plan, that aligns its responsibilities with detailed actions intended to address water quantity and quality. The Vision Statement and goals were established by the Steering Committee and are recognized by the Village Department of Public Works.

Mission Statement[1]

The mission of the Public Works Department is to effectively deliver quality and responsive public services to enhance the living and working environment of the community as well as to maintain a reputation for reliability. Public services are based upon the needs of the residents as set forth in

[1] Richtonpark.org – Public Works Mission Statement

the policies and ordinances established by the board of elected officials. The mission is carried out through collective efforts of a motivated and professional Public Works staff. The department's vision is to be recognized as an outstanding provider of public works services to the community. This is accomplished through partnership, teamwork, quality customer service, employee development, continuous improvement, and a positive public image.

Goal #1 – Deliver Quality Water: Continue to provide innovation with treatment techniques. Identify and understand potential contamination sources (PCS) and emerging threats to the existing source of water, such as Per-and Polyfluoroalkyl Substances (PFAS) and conduct regular monitoring to address other potential water quality and quantity concerns, and remain ready to respond to emergencies and other unforeseen events.

Goal #2 – Public Outreach: Remain responsive to public request and ensure the public is continuously updated on a new water source, if needed, the plan to obtain the source, and provide updates on the effort to obtain a new source. Share the SWP Plan with the public and engage stakeholders and collaborate to share ideas and practices with other agencies and the public through the Village's website, social media outlets, press releases, and similar methods.

Goal #3 – **Collaborative Management**: Utilize and build on relationships with the counties, neighboring communities, state, and federal agencies to ensure that plans to protect the water source are written, implemented, and updated. Ensure resources are available to support actions that protect the existing water supply and work towards providing a new water source for the future.

Goal #4 – Resource Sustainability: Continue to work towards infrastructure maintenance and expansion to provide a sustainable water source. Continue long-term water supply planning efforts and implement cost-effective solutions to operate the system, manage operational risks related to water supply, and optimize treatment based on source conditions. Plan for the long-term by establishing a contingency plan for a new groundwater source.

Disclaimer: The information contained in this "SWP Plan" is limited to that available from public records and the water supplier. Other "PCS" or threats to the water supply may exist in the SWP area that are not identified in this "Plan". Identification of a site as a "PCS" should not be interpreted as that this site has or will cause contamination of the water supply.

There are six steps in the process of developing a successful SWP Plan at the water utility level. A list of commonly utilized acronyms and abbreviations can be found in Appendix B.

1. Organize a local committee to serve as a community planning team.
2. Delineate and map the SWP area.
3. Identify and inventory PCS of groundwater contamination within the delineated SWP area.
4. Develop a SWP Plan to protect your SWP area.
5. Develop an emergency plan to define actions in the event the SWP area is threatened by contamination.

6. Implement the SWP Plan.

Section 2 Description of Water Supply

The Village Public Works Department maintains three active wells, each with its own treatment and elevated tank for water storage providing a total maximum daily pumping capacity of 3,400 Gallons Per Minute. The Village maintains a capacity of 250,000 gallons of storage in the Richton Hills subdivision; another 250,000 gallons in the Lakewood subdivision; and a capacity of 500,000 gallons in the Lincoln Crossings subdivision. The well locations are shown in Figure 1 in Appendix A. The CWS is comprised of approximately 42 miles of water main (varying from 6 to 16 inches in diameter), 650 hydrants and 600 valves in the distribution system, and approximately 3,500 water meters. To ensure bacteria is not present in the water system chlorine is added, along with fluoride to benefit public health and a corrosion inhibitor. The Village employes multiple licensed Water Operators that maintain and operate the water supply system.

The Village's three primary wells produce groundwater from Silurian-age shallow bedrock aquifer, while the fourth well (Well #1), is decommissioned, was constructed within the Cabrian-Ordovician-age shallow bedrock aquifer. A list of the active wells is provided in Table 2.

Table 2: Active Well Information Summary

Well ID (Well No.)	Location	Well Depth (ft.)	Minimum Setback Distance (ft)	Aquifer Source
20587 (Well 2)	Near the water tower southwest of Birchwood Rd & Karlov Ave.	439	200	Silurian
20588 (Well 3)	Near the water tower near Amy Dr. & Arquilla Dr.	418	200	Silurian
01274 (Well 4)	At the water tower on Latonia Ln.	455	200	Silurian

The Illinois Environmental Protection Act has established a minimum well setback for each CWS. The 200-foot minimum setback zone prohibits the placement of new potential primary, potential secondary, and potential routes (abandoned and improperly plugged wells) within the designated radial setback. The Village recognizes the minimum 200-foot setback for all three active wells.

The Village Consumer Confidence Report (CCR), also known as the water quality report or drinking water quality report, is a requirement of the U.S. Environmental Protection Agency (USEPA) of every community water supplier. The CCR, shown in Appendix C, is also available and updated annually on the Village's website. Information from the CCR was used to describe the water system. The CCR describes:

1. SWA Summary
2. Description of the Water Source
3. Summary of Public Meetings

4. Description of the Water Treatment Process
5. Health Information
6. Potential Substances found in Water
7. Conservation Tips and Definitions
8. Water Quality Test Results

Regular water quality monitoring results are shared with IEPA and serve as the basis of the CCR.

Section 3 Purpose of Plan Development

The IEPA has outlined the purpose and requirements of SWP Plans for CWS in Title 35 – Environmental Protection. The purpose of this SWP Plan is for the Village to recognize the possibility of potential threats to its water supply, provide information to the public on SWP, and to facilitate protection of the source water quality and quantity. The Village, led by a five-member Steering Committee, has established the SWP Plan based upon IEPA guidance and assistance from their engineering consultant, HR Green and subconsultant LRE Water. The SWP Plan will be used as a tool to educate the public on SWP, to share the vision for the community's SWP efforts, and as a management tool, through implementation of actions identified in the Action Plan Matrix.

Through the planning effort, the Public Works Water and Sewer Department has communicated and collaborated with other Village Departments, gaining a comprehensive understanding of the future land use and development potential of the community and how that development may affect the supply and demand of the water supply. The Village staff understands the purpose of the SWP Plan and makes it available to the public and other stakeholders.

Section 4 Overview of the Source Water Assessment Program

The IEPA continuously implements a SWAP to provide public water suppliers with technical and financial assistance to develop wellhead and watershed protection plans to protect public drinking water supplies. The 1996 amendments to the federal Safe Drinking Water Act established several programs that help water suppliers continue to provide safe, adequate, and affordable water to their customers. As required by these amendments, the IEPA, in cooperation with water utilities and other stakeholders, has developed the Illinois SWAP, approved by the USEPA.

The purpose of SWAP is to:

- Identify areas that supply drinking water to the public,
- Inventory potential sources of contamination,
- Determine the susceptibility of the source water to contamination,
- Inform the public of assessment results, and
- Encourage protection of source water.

In Illinois, more than 11 million people rely on public water supplies for drinking water. Source Water Assessments will be conducted for all public water supplies in Illinois, including approximately 1,800 community water supplies. Nearly all of these have been completed. In addition, more than 4,100 non-community water supplies will be assessed.

Illinois SWAP activities are divided into the following areas:

1. Community surface water supplies
2. Non-community surface water supplies
3. Great Lakes (Lake Michigan) water supplies
4. Community groundwater supplies
5. Non-community groundwater supplies
6. Mixed ground and surface water community

The IEPA website has a wide array of information to support community SWP efforts, regardless of whether the system uses groundwater or surface water. To view a summary version of the Source Water Assessments, the system should access the information at the IEPA website listed below. For a CWS, this summary information describes pertinent sub-sections of each completed assessment including:

- Importance of Source Water
- Susceptibility to Contamination Determination
- Documentation / Recommendation of SWP Efforts

It should be noted that these Source Water Assessment summaries are presented in strict compliance with the IEPA security policy on the release of sensitive information. Therefore, all locational data and maps pertaining to wells, aquifers and/or surface water intakes have been removed.

The IEPA has amble resources online as follows:

- **SWPP Factsheets** – Provides a summary version of completed Source Water Assessments sorted by county or public water supply name.

http://dataservices.epa.illinois.gov/swap/factsheet.aspx

- **Drinking Water Watch** – Provides water system details including links to sampling results, summarizes the sources of water, number of connections, and key points of contact.
  https://water.epa.state.il.us/dww/index.jsp
- **Source Water Assessment Mapping Tool –** A web application providing data active wells, irrigation, bedrock layers, extraterritorial jurisdiction, and source water assessment protection data.

For more information on the SWAP for Illinois contact the IEPA, Bureau of Water, Groundwater Section, at 217-785-4787. Questions pertaining to public non-community water supplies should be directed to local health departments or the Illinois Department of Public Health at 217-782-5830.

Section 5 Steering Committee and Public Participation

The Steering Committee was established based upon the guidelines outlined in the Operational Guide to American Water Works Association (AWWA) Standard G300 for Source Water Protection, Second Edition (AWWA, 2016). As noted in the document, the purpose of a stakeholder involvement program is fourfold:

1. Bring a diverse group of stakeholders together to understand the benefits and impacts of the proposed program.
2. Jointly identify a variety of opportunities and impacts of the program,
3. Bring various resources, expertise, staff, and funding; and,
4. Identify common ground that relates to the improvement of watershed health and/or aquifer conditions.

Development of the SWP Plan was overseen by the Steering Committee and written by two consultants (HR Green and their subconsultant LRE Water). The Steering Committee will utilize the Village website and other outlets to inform the public about the SWP Plan process and make the document available. The members of the Steering Committee, along with title and email, are provided below in Table 3.

Table 3: Steering Committee

Name	Title	Email
Matt Riechers	Assistant Public Works Director	mriechers@richtonpark.org
Michael Wegrzyn	Director of Public Works	mwegrzyn@richtonpark.org
Ravi Jayaraman, PE	HR Green - Consultant	rjayaraman@hrgreen.com
Scott Creech, PE	HR Green - Consultant	screech@hrgreen.com
Jonathan Mohr	LRE Water - Consultant	jon.mohr@lrewater.com

Other Key Contacts

- IEPA -Michael Summers, P.G., Bureau of Water, Groundwater Section, 1021 North Grand Ave. East, P.O. Box 19276, Springfield, IL 62794-9276
- Illinois Rural Water Association, 3305 Kennedy Road; Taylorville, IL 62568

Meeting Summary

A summary of meetings held during development of the SWP Plan are listed below:

Kickoff Meeting – April 11, 2023

- Introduction of the project team to Village staff
- Discussion of why the Village is developing a SWP Plan

- A group discussion on PCS and mapping
- Discussion of data needs
- Establishment of the steering committee
- Review of the project schedule

Steering Committee #1 – June 22, 2023

- Discussed work that has been completed thus far.
- Reviewed the PCS and well setback maps to ensure wells were accurately represented and to see if any other PCS should be listed.
- Reviewed the draft vision and goals.
- Discussed and reviewed the draft Action Plan Matrix.
- Discussed data needs.
- Reviewed the project schedule.

Section 6 Source Water Protection Area Delineation

As previously mentioned, the Village currently recognizes a 200-foot radial setback area as the minimum setback zones around each wellhead as their official SWP area. The 200-foot setback is typical for shallow and deep bedrock wells. Within a SWP area, potential sources of contamination are inventoried, and management is encouraged to prevent pollution of the water used by the system. The goal is to ensure that PCS are managed in a manner that protects drinking water used by the CWS by recognizing the existing PCS.

Useful Web Site References

Below is a list of web resources available to find SWP information. Appendix D list detailed SWP planning contact information.

www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl - IEPA SWAP Fact Sheets
www.isgs.illinois.edu/ - Illinois State Geological Survey
www.isws.illinois.edu – Illinois State Water Survey (ISWS)
www.epa.state.il.us/water/groundwater/protection-planning.html - IEPA Regional Groundwater Protection Planning Program
www.terraserver.com – satellite photographs
www.epa.gov – GIS generated maps –Choose Databases and Software-EnviroFacts
www.delorme.com – private company that sells mapping software
www.usgs.gov – more maps for free download and purchase
www.epa.gov/win - Watershed Information Network

Groundwater Protection Planning Regions

Since 1991 the IEPA, in cooperation with the Illinois Department of Natural Resources (IDNR), has designated four Priority Groundwater Protection Planning Regions. These regional designations took into account the location of appropriate recharge areas that were identified and mapped by IDNR. Further, the Director of IEPA establishes a regional planning committee for each Priority Groundwater Protection Planning Region.

Each regional planning committee is responsible for the following;

- Identification of and advocacy for region-specific groundwater protection matters;
- Monitoring and reporting the progress made within the region regarding implementation of protection for groundwater;
- Maintaining a registry of instances where the IEPA has issued an advisory of groundwater contamination hazard within the region;
- Facilitating informational and educational activities relating to groundwater protection within the region;
- Recommending to the IEPA whether there is a need for regional protection pursuant to state adopted regulated recharge area; and,
- Integration of Wellhead Protection Programs has been, and will continue to be, implemented for CWS wells in Priority Groundwater Protection Planning Regions.

There are indicators that show CWS groundwater protection progress within the Priority Groundwater Protection Planning Regions. In general, the first step of developing a CWS groundwater protection program involves determining the recharge area for CWS wells in unconfined aquifers utilizing existing aquifer property data. In Illinois, the recharge area is based on

a minimum five-year time of travel delineation. During the past two years, the IEPA has continued to complete recharge area delineations for 24 prioritized CWSs within the Groundwater Protection Planning Regions.

Groundwater Source Characteristics

According to the State of Illinois, Bedrock Aquifers of Northeastern Illinois, "The shallow bedrock aquifer system consists of those bedrock units that commonly directly underlie the glacial drift and are recharged locally from precipitation. The major units in this system are the Silurian age dolomite, which yields most of the water, and the Maquoketa Group, which underlies the Silurian dolomite and separates the shallow bedrock aquifer system from underlying deep bedrock aquifer systems." The Village's water supply sources are from Silurian-age shallow bedrock.

A condensed stratigraphic column of the Northern Illinois region is provided in Table 4. The aquifer codes were developed by Illinois State Water Survey (ISWS) to denote the uppermost and lowermost stratigraphic unit included in the open hole interval of a well. This numbering system is used for each well to denote the probable sources of the groundwater produced. Table 5 displays the well depths, aquifer type, and aquifer source code.

Table 4: Stratigraphic Column of Northern Illinois

Geologic Period	Group or Formation (ISWS Aquifer Code)	Dominant Geology Type	Characteristics
Quaternary	Unspecified (01)	Clay, silt, sand, gravel, bounders deposited as alluvium, till, outwash deposits, pond water deposits, and loess	Yields range from poor to excellent depending on isolated deposits.
Devonian and Silurian	**Unspecified (50)**	**Limestone**	**Yields from fractured beds**
Ordovician	Maquoketa Group (61)	Shale	Yields from fractured beds
	Galena Group (63) Platteville Group (65)	Dolomite	Potential large yields from dolomite crevices and sandstones
	Prairie du Chien (71-77)	Dolomite, sandy, interbedded with sandstone	
Cambrian	Eminence Potosi. (81)	Dolomite, increasingly sandy with depth	

Geologic Period	Group or Formation (ISWS Aquifer Code)	Dominant Geology Type	Characteristics
	Franconia Fm. (83)	Shale with sandstone layers	
	Ironton Galesville SS (87)	Sandstone	
	Eau Claire Fm. (93)	Siltstone, shale, sandstone	
	Mt. Simon SS (97)	Sandstone; minor: shale lenses	Sparse data, water quality deteriorates with depth

Unspecified = undifferentiated Hydro-stratigraphic Unit or Aquifer Code
SS = sandstone

Table 5: Well Source Summary

Well ID (Year Constructed)	Aquifer Type Classification	Aquifer Source Codes (upper unit – lower unit)	Well Depth (ft bgs)
Well #4 ()	Silurian System	56	455
Well #2 (1968)	Silurian System	56	439
Well #3 (1969)	Silurian System	56	418

ft bgs = feet below ground surface

Potential Contamination Sources (PCS)

A review was completed to identify PCS within or near the well setbacks by the consultants using two primary methods: 1) A review of IEPA datasets, specifically PCS listed on the SWAP Mapping Tool, and 2) Feedback from the Steering Committee on PCS not listed by IEPA. The Steering Committee reviewed maps that included the CWS well, IEPA PCS, and the 200-foot well setbacks. Figures 2 through 4 in Appendix A, show each well, location of known PCS and the source ranking. Based upon the desktop review, there are no significant PCS within or near the 200-foot setback of all wells.

A review of current land use, land cover, and the potential for development around each well is another indicator of PCS. A summary is provided per well below:

- Well #2 – The well is land locked by single-family development with some open space immediately adjacent to the wellhouse. There appears to be no potential for development at this location.

- Well #3 – This area is surrounded by transportation routes and single-family development to the southwest, south, and east. There is open space immediately to the north and west that appears to have the potential for development.

- Well #4 – This well is surrounded by woodlands to the west and north and multi-family dwellings to the south and east. There appears to be limited potential for development.

Based upon the Richton Park CWS IEPA Fact Sheet, as of 1992, the IEPA has determined that the Village source water supply is not susceptibility to contamination. This is based upon: a well site survey published in 1992 by IEPA, monitoring conducted at the wells, review of IEPA databases, and available hydrogeologic data. A primary factor in the low susceptibility is the depth of primary CWS wells, ranging from 418 to 455 feet BGS in the Silurian aquifer.

Section 7 Source Water Protection Action Plan

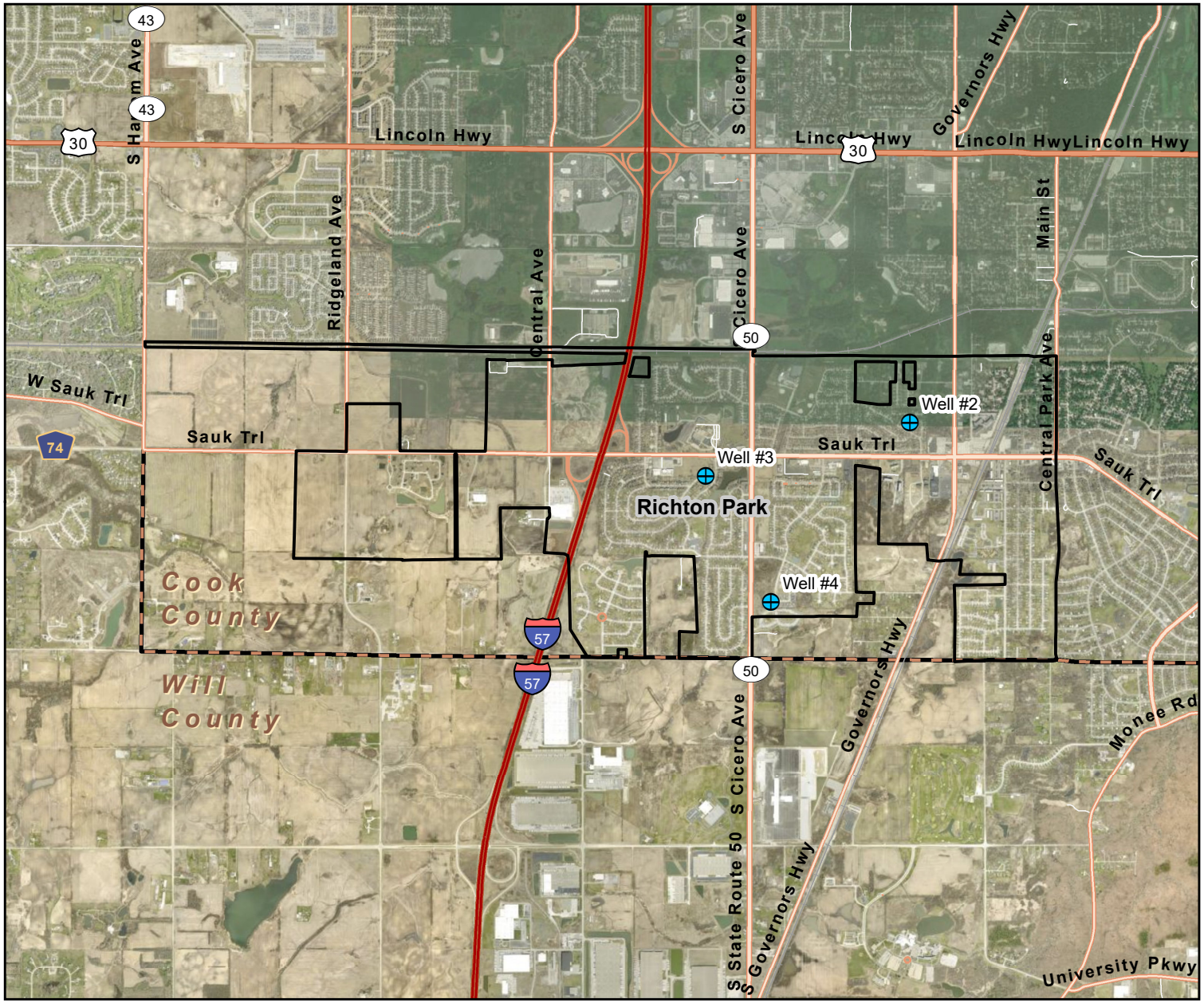
The SWP Action Plan, established under Section 604.320, summarizes the Village's actions intended to meet the five SWP goals outlined above, including:

- Goal #1 – Deliver Quality Water and Sustain the Resource
- Goal #2 – Public Outreach
- Goal #3 – Collaborative Management
- Goal #4 – Infrastructure Expansion and Maintenance

The SWP Action Plan includes previously listed actions from other plans and procedure documents, ongoing maintenance activities, regulatory requirements, and strategies specific to mitigate existing and future threats to the source water quality.

The strategy has been summarized within the Action Plan Matrix, shown in Appendix E, including the goal and objectives, a description, schedule, necessary resources (cost, staffing, funds, and comments), and potential challenges of implementation. The SWP Action Plan was reviewed, edited, and modified by the Steering Committee.

Appendix A: Figures



Notes:

Well locations are approximate and not survey grade.

Sources:

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

IL Site

LRE WATER
CONNECTING WATER TO LIFE

Prepared By:
LRE Water
Nebraska Office
Lincoln, NE

HR GREEN
RICHTON PARK IL SWPP
RICHTON PARK, ILLINOIS

VILLAGE OF RICHTON PARK WELLS

FILE: 6006HRG03_01a.MXD	DATE: 6/7/2023	FIGURE: 1

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Village Well

200-Foot Setback

Potential Contaminant Source Ranking

- 1-Negligible Risk of Negative Environmental Impact
- 2-Low/Moderate Risk of Negative Environmental Impact
- 3-Elevated Risk of Environmental Impact
- 4-Significant Risk of Environmental Impact

No potential contaminant source sites in setback.

N

0 150 Feet

Notes:

Well locations are approximate and not survey grade.

Sources:

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community
DPWS, BOL, IEPA

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IL Site

LRE WATER
CONNECTING WATER TO LIFE

Prepared By:
LRE Water
Nebraska Office
Lincoln, NE

HR GREEN
SOURCE WATER PROTECTION PLAN
RICHTON PARK, ILLINOIS

WELL #2 SETBACK AND PCS

FILE: 6006HRG03_01b.MXD	DATE: 6/28/2023	FIGURE: 2

Village Well

200-Foot Setback

Potential Contaminant Source Ranking

- 1-Negligible Risk of Negative Environmental Impact
- 2-Low/Moderate Risk of Negative Environmental Impact
- 3-Elevated Risk of Environmental Impact
- 4-Significant Risk of Environmental Impact

No potential contaminant source sites in setback.

N

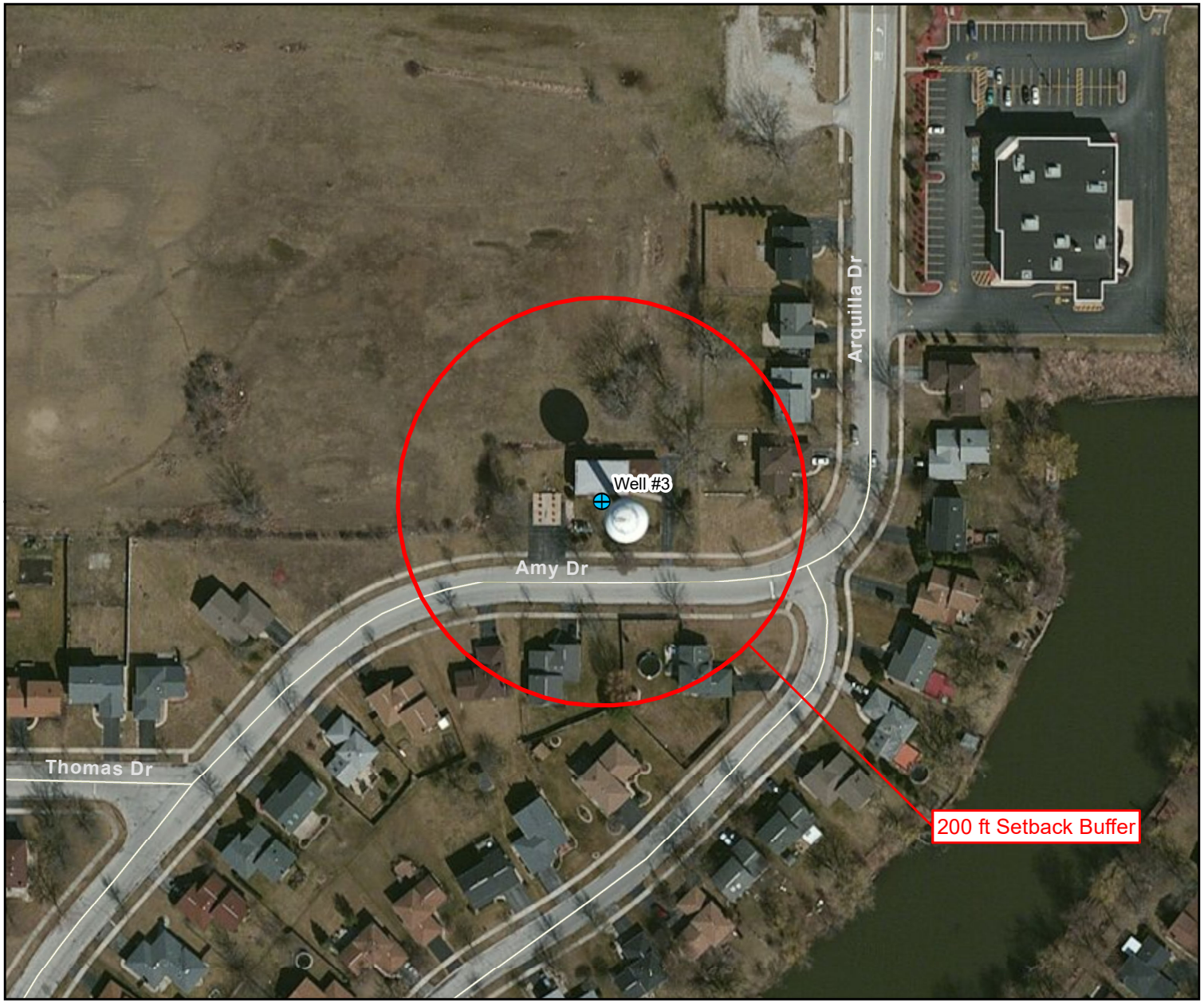
0 150 Feet

Notes:

Well locations are approximate and not survey grade.

Sources:

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community
DPWS, BOL, IEPA



IL Site

LRE WATER
CONNECTING WATER TO LIFE

Prepared By:
LRE Water
Nebraska Office
Lincoln, NE

HR GREEN
SOURCE WATER PROTECTION PLAN
RICHTON PARK, ILLINOIS

WELL #3 SETBACK AND PCS

FILE: 6006HRG03_01c.MXD | DATE: 6/28/2023 | FIGURE: 3

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Village Well

200-Foot Setback

Municipal Boundaries

Potential Contaminant Source Ranking

- 1-Negligible Risk of Negative Environmental Impact
- 2-Low/Moderate Risk of Negative Environmental Impact
- 3-Elevated Risk of Environmental Impact
- 4-Significant Risk of Environmental Impact

No potential contaminant source sites in setback.

N

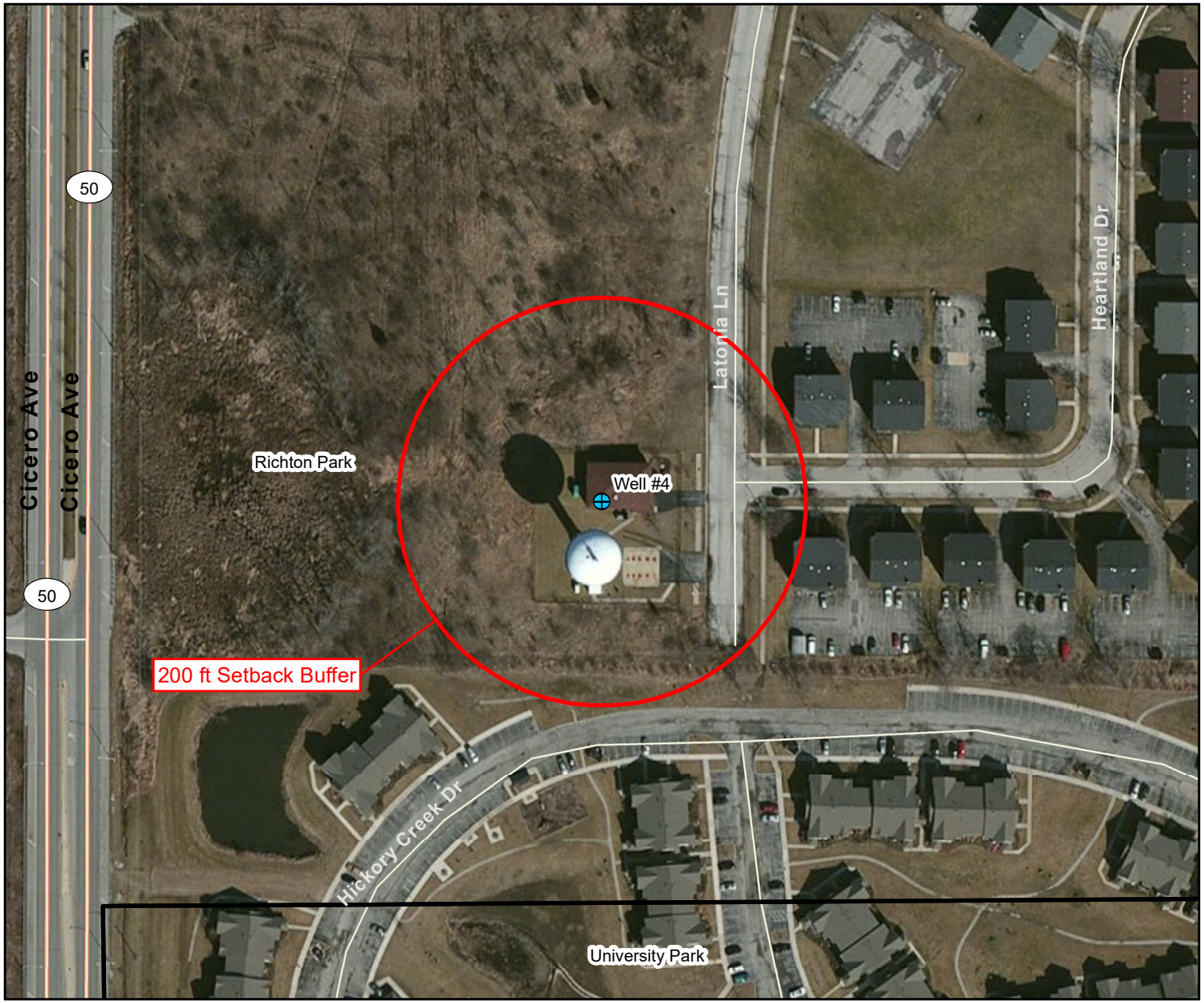
0 150 Feet

Notes:

Well locations are approximate and not survey grade.

Sources:

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community
DPWS, BOL, IEPA



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IL Site

LRE WATER
CONNECTING WATER TO LIFE

Prepared By:
LRE Water
Nebraska Office
Lincoln, NE

HR GREEN
SOURCE WATER PROTECTION PLAN
RICHTON PARK, ILLINOIS

WELL #4 SETBACK AND PCS

FILE: 6006HRG03_01d.MXD	DATE: 6/28/2023	FIGURE: 4

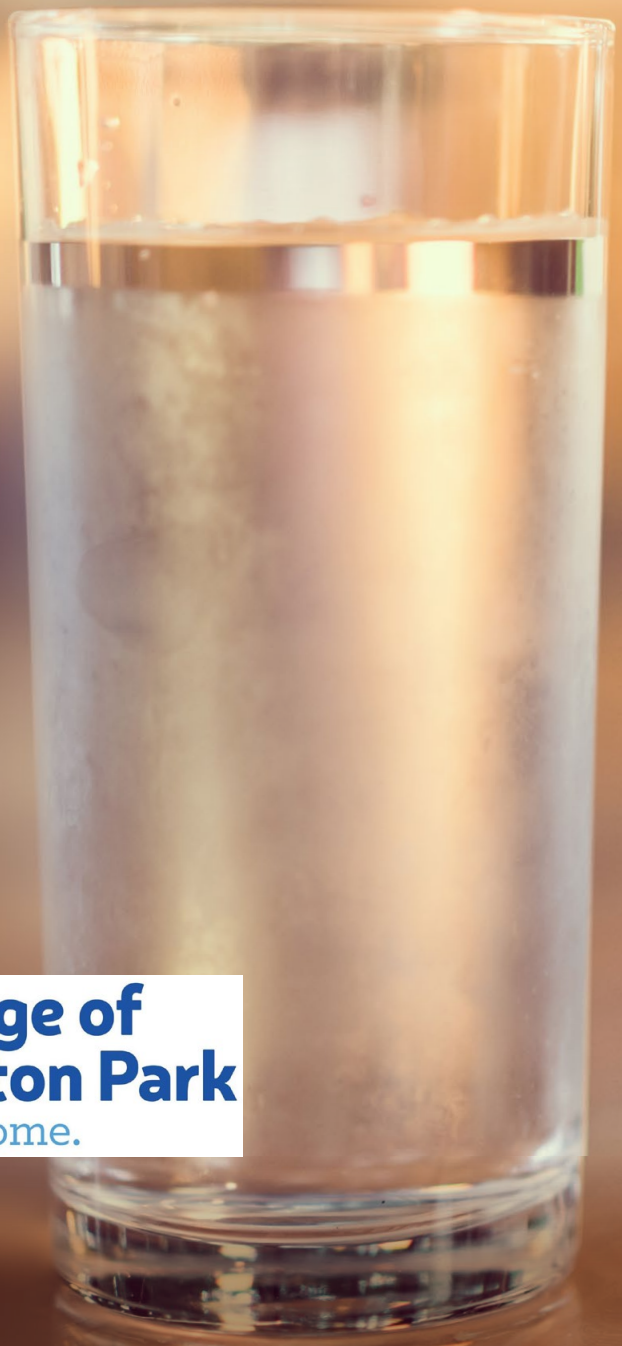
Appendix B: Glossary of Acronyms and Abbreviations

BGS ----------Below Ground Surface
CCR ----------Consumer Confidence Report
CWS----------Community Water System
IEPA----------Illinois Environmental Protection Agency
IDNR ----------Illinois Department of Natural Resources
ISWS ----------Illinois State Water Survey
PFAS----------per- and polyfluoroalkyl substances
PCS----------Potential Contamination Source
SWPP----------Source Water Protection Program
SWP----------Source Water Protection
USEPA----------United States Environmental Protection Agency

Appendix C: Consumer Confidence Report

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By

Village of Richton Park
Your home.

PWS ID#: IL0312550

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Source Water Assessment

We want our valued customers to be informed about their water quality. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Village Hall or call our water operator at (708) 481-8950. To view a summary version of the completed source water assessments, including information on the importance of source water, susceptibility to contamination determination, and documentation and recommendation of source water protection efforts, you may access the Illinois EPA website at http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl.

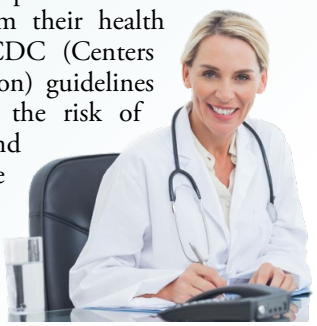
> "When the well is dry, we know the worth of water."
>
> —*Benjamin Franklin*

Public Meetings

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled board meetings. The village also provides a quarterly newsletter as well as information you can obtain at the community center, library, and Village Hall.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.



Where Does My Water Come From?

The water production system currently pulls from groundwater and utilizes ion exchange and aeration treatment facilities. Our total maximum daily pumping capacity is 3,400 gallons per minute (4.9 million gallons per day). We have one million gallons of storage. In 2010 we delivered a total of 390,693,000 gallons, for an average of 1.07 million gallons per day. In 2020 we delivered 366,441,000 gallons, which is an average of 1.014 million gallons per day.

Water Treatment Process

The village water system consists of three wells, each with its own treatment and elevated tank for water storage. Our water treatment plants are located in Richton Hills subdivision, with a capacity of 250,000 gallons of storage; Lakewood subdivision, with a capacity of 250,000 gallons of storage; and the Lincoln Crossings subdivision, which has a capacity of 500,000 gallons of storage.

The water distribution system consists of approximately 42 miles of pipe ranging from 6 to 16 inches in diameter. There are also 650 fire hydrants, 600 water main line valves, and approximately 3,500 water meters ranging in size from 3/4 to 3 inches.

Chlorine is added as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Fluoride (to prevent tooth decay) and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to sanitized water towers and into your home or business.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Michael Wegrzyn, Director of Public Works, at (708) 481-8950, ext. 147.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

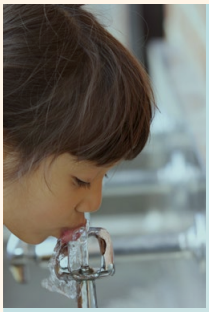
Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.



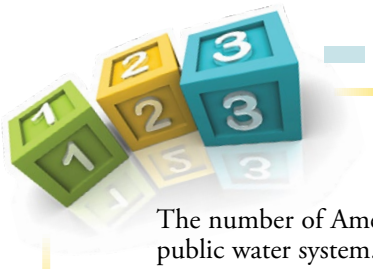
Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.



BY THE NUMBERS

The number of Americans who receive water from a public water system. **300 MILLION**

1 MILLION The number of miles of drinking water distribution mains in the U.S.

The number of gallons of water produced daily by public water systems in the U.S. **34 BILLION**

135 BILLION The amount of money spent annually on maintaining the public water infrastructure in the U.S.

The number of active public water systems in the U.S. **151 THOUSAND**

199 THOUSAND The number of highly trained and licensed water professionals serving in the U.S.

The age in years of the world's oldest water, found in a mine at a depth of nearly two miles. **2 BILLION**

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action Level): The concentration of a contaminant that triggers treatment or other required actions by the water supply.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

The percentage of total organic carbon (TOC) removal was measured each month, and the system met all TOC removal requirements set by Illinois EPA.

During lead and copper sampling in 2019, we failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations. The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency). There were no violations relating to water quality, only the public notification requirement. This violation is required to be posted for three years.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2018	10	0	2.8	1.5–2.8	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2018	2	2	0.0019	0.0019–0.0019	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	0.9	0.5–1.0	No	Water additive used to control microbes
Combined Radium (pCi/L)	2020	5	0	0.659	0.659–0.659	No	Erosion of natural deposits
Fluoride (ppm)	2018	4	4	0.562	0.562–0.562	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2021	60	NA	2	2.29–2.42	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	0.04	ND–0.04	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2021	80	NA	11	10.27–10.52	No	By-product of drinking water disinfection

STATE REGULATED SUBSTANCES [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Iron (ppb)	2019	1,000	NA	170	170–170	No	Erosion from naturally occurring deposits
Manganese (ppb)	2019	150	NA	1.5	1.5–1.5	No	Erosion of naturally occurring deposits
Sodium (ppm)	2018	NA	NA	270	220–270	No	Erosion of naturally occurring deposits; Water softener regeneration
Zinc (ppb)	2018	5,000	NA	0.015	0.015–0.015	No	Naturally occurring; Discharge from metal factories

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2021	1.3	1.3	0.127	0/120	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2021	15	0	9.5	0/120	No	Corrosion of household plumbing systems; Erosion of natural deposits

[1] These substances are not currently regulated by the U.S. EPA. However, the state has set MCLs for supplies serving a population of 1,000 or more.

Appendix D: IL SWP Planning Contact Information

Illinois Environmental Protection Agency
Bureau of Water, Groundwater Section
Post Office Box 19276
1021 North Grand Avenue East
Springfield, Illinois 62794-9276
Telephone: 217/785-4787 FAX: 217/557-3182
http://www.epa.state.il.us/water/groundwater/index.html

Illinois Rural Water Association
P.O. Box 6049
3305 Kennedy Road
Taylorville, Illinois 62568
Telephone: 217/287-1190 or 217/287-2115 FAX: 217/824-8368
http://www.ilrwa.org/

Questions pertaining to public non-community water supplies should be directed to local health departments and the **Illinois Department of Public Health**:

Illinois Department of Public Health
535 West Jefferson Street
Springfield, Illinois 62761
Telephone: 800/547-0466 or 217/782-5830 FAX: 217/557-1188
http://www.idph.state.il.us/envhealth/ehhome.htm

Cook County Department of Health Department
7556 Jackson Boulevard
Forest Park, IL 60130
Phone :708-836-8600

Appendix E: Action Plan Matrix

Village of Richton Park SWP Action Plan

Goals/Objectives	Project/Program/Activity Description	Start Date	Necessary Resources to Implement				Potential Problems/Obstacles/Challenges with Implementation
			Budgetary Cost	Staffing (hours)	Funds	Other	
#1 Deliver Quality Water							
Identify and understand risks to our source water	Maintain and update the Risk and Resilience Assessment every 5 years	As needed	$12,000	40 hours every 5 years	Public Works	Consultant fee	If USEPA recertification requirments are not substantiall, updating the RRA should not be a significant use of resources.
	Maintain an inventory of potential sources of contamination within the well setback areas and monitoring sites annually for new potenital threats.	July 2023	$500	10 staff hours per year	Public Works	Staff cost only	Use of the IEPA SWA Mapping Tool should expidite the process. Staff can mark up PCS maps from the 2023 SWPP and upate the maps at the next SWPP update.
	Work with the Village Fire Department to obtain records of the Emergency and Hazardous Chemical Inventory for major industries and manufacturing facilities within the Village. Request for Fire Department to notify the Village water department of spills or leaks.	As needed	$500	10 staff hours per year	Public Works	Staff cost only	This action will be dependent upon the ability of the Fire Department to share information.
	Maintain an inventory of Underground Storage Tank sites within the Village. Flag active sites with a history of reported leaks. Collaborate with IEPA.	Annually	$500	10 staff hours per year	Public Works	Staff cost only	Staff can monitor USEPA's Platform 'UST Finder'. Leaking UST are available on IEPA's SWA Mapping Tool. Information may not be updated regularly.
	Communicate with Planning & Zoning regularly to understand if any new development within a well setback, or future well setback area, poses a potential risk.	Ongoing	$0	As needed	Public Works	Staff cost only	Ensuring communication between Departments occurs on a regular basis.
	Remain active in understanding the presence of PFAS in area aquifers. Continue to participate in groundwater studies as they arise, such as the IEPA PFAS studies, Illinois State Water Survey studies, etc.	As needed	$500	< 5 hours per year / pending no significant PFAS hits	Public Works	Staff cost only	Should there be a PFAS concern, the level of effort for this action could be significantly higher.
Monitor for potential contaminant impacts	Visit each well site daily and inspect the well heads for spills, tampering, and damage.	Ongoing	$0	Assume 1 hour per well per day	Public Works	Part of daily work schedule	No challenges anticipated as this task is part of a daily routine.
	Conduct routine monitoring and testing as required by IEPA.	Ongoing	$10,000	As needed	Public Works	Staff and Labrotory costs	Knowing when and what to test for unless there is an obvious cause
	Implement online water quality monitoring instruments at key locations, such as WTPs. Potential parameters to monitor include ammonia, alkalinity, DO, DOC, TOC, hydrocarbons, nitrate/nitrite, pH, turbidity, etc.	Ongoing	>$10,000	5 Hrs per day	Public Works	Staff, Engineer, SCADA Tech	Determining which parameters to monitor that are not a constant
	Monitor and address residential complaints about water quality. Establish a protocol to investigate and isolate the source of the water quality issue.	Ongoing	$1,500	20 hours per year	Public Works	Staff cost only	Training needs may be required.
	Monitor the USEPA "Cleanups in My Community Map" (https://www.epa.gov/cleanups/cleanups-my-community) and work with property owners to minimize the likelihood of well contamination.	As needed	$0	Regular duty	Public Works	Staff cost only	Part of a regular routinue to perform outreach. Challenge is a limited portion of the public may actually review outreach provided by the Village.
Prepare for and respond to events	Update the 2022 Emergency Response Plan on a regular basis.	Every 5 years	$5,000	40 hours per year of update	Public Works	Consultant fee	The amount of effort is unknown pending USEPA requirements for ERP updates in the future.
	Develop a written procedure for responding to suspected well contamination or spills within the well protection areas. The procedure should include isolating the contaminant from the water system, notifying key staff of the incident, notifying regulatory agencies, public notification, media outreach, laboratry testing, etc.	2024	$1,500	20 hours	Public Works	Consultant fee	The Village may have to integrate the written procedure into current training and operation procedures. Training may be needed.
	Maintain emergency spill kits for chemical and fuel spills near the well setback zones.	Ongoing	$500	10 hours per year	Public Works	Staff cost only	Regular duty to ensure equipment is ready and compliant.
	Maintain up-to-date contact information for emergency alternate drinking water supplies, such as bulk water delivery vendors, bottled water vendors, emergency interconnections, etc.	Ongoing	$500	10 hours per year	Public Works	Staff cost only	Reguar duty, not challenges anticipated.
	Considering joining the Illinois Water/Wastewater Agency Response Network (ILWARN), which may be able to provide trained personnel, emergency equipment, and technical assistance in case of emergencies.	2024	$0	4 hours per year	Public Works	Daily work schedule	Vertifying that all staff is informated abou the Village's ILWARN membership and that they know who to contact durning emergencies could be a challenge, overcome with trianing.
#2 Public Outreach							
Promote public awareness and education on need to protect the aquifer from contamanints	Conduct public outreach on Source Water Protection (SWP) using the quarterly magazine emphasizing water conservation, safe disposal of household wastes, lawn care, pollution prevention, etc.	Ongoing	$0	2 hours per year	Public Works	Maintenance of website	Ensuring the website, Facebook page, and other similar media outlets are updated regularly with new and fresh information.
	Continue to post the annual Consumer Confidence Report (CCR) for residents.	Ongoing	$0	10 hours per year	Public Works	Annual event	Ensuring the website is updated regularly with the latest CCR.
	Encourage water conservation through the use of low-flow showers, checking toilets for leaks, watering lawns only when needed, installing drought-resistant trees and plants, etc.	Ongoing	$0	4 hours per year	Public Works	Staff cost only	None.
	Introduce educational material on groundwater protection to existing materials used for public education on the Village's media outlets (e.g. household hazardous waste dropff, etc.)	Ongoing	$0	40 hours per year	Public Works	Maintenance of website, Facebook, etc.	Ensuring media is updated regularly
Engage stakeholders in source water protection	Encourage residents to report pollution and groundwater contamination concerns using the 'Submit A Request' feature on the website.	Ongoing	$0	10 hours per year	Public Works	Staff cost only	Residents may not be aware of the types of issues to report or the service on the website.
	Maintain and update the SWPP Steering Committee. At least annually, include an agenda item to discuss considerations that may warrant an update to the SWPP.	2023	$0	2 hours per year	Public Works / Planning	Assumed to occur annyally at a regularly scheduled meeting	Ensuring a general discussion makes a meeting, once a year.
#3 Collaborative Management							
Partner and collaborate with other local, state, and federal partners	Collaborate with emergency responders to discsuss the SWPP	Ongoing	$2,000	30 hours per year	Public Works / Fire Dept.	Regular training occuring	The Village may have to integrate the written procedure into current training and operation procedures. Training may be needed.
Collaborate to share ideas and practices with other agencies and the public	Continue to collaborate with neighboring communities, counities, and others participating in regional efforts to protect drinking water. Attend conferences focused on water.	Ongoing	$2,000	30 Hrs per year	Public Works	Could be part of ongoing efforts.	Dependent on event availablity
	Continue participatioin in the Illinois American Water Works Association.	Ongoing	$500	50 hours per year	Public Works		
#4 Resource Sustainability							
Maintain excellent regulatory compliance record	Designate a water staff member to maintain regulatory compliance records and to remain informed about upcoming regulatory compliance requirements.	Ongoing	$0	Hours vary	Public Works	Part of regular work schedlue.	No challenges anticipated as this task is part of a daily routine.
Support programs and activities relating to environmental protection	Continue to coordinate with Cook County to ensure electronic waste and household hazardous waste dropoff sites are available for residents.	Ongoing	$500	20 hours per year	Cook County	Ongoign effort	Multi-jurisdictional coordination
	Maintain the cross connection protection ordinance and program	Ongoing	$2,000	N/A	Public Works	Backflow Solutions Inc	When our vendor sends notices out to the wrong places
	Train staff annually on pollution prevention and best practices for roadway salt application, fertilizers, pesticides, hazardous waste handling, etc.	Annually	$0	4-6 hours per year	Public Works	Regular work schedule	Village attends annual training events for pollution prevention for water operation certification. No challenges anticipated.
Develop and implement cost-effective solutions to operate the system	When equipment requires replacement (such as pumps and motors), consider replacing with high energy efficiency equipment alternatives.	As needed	Case-by-case	40 hours per year	Public Works	Part of daily work schedule	Prioritization of preventative maintence vs. CIP implementation
	Continue to maintain a Capital Improvement Program and maximize sytem redundancy in case of equipment failure.	Ongoing	Case-by-case	80 + hours	Public Works	Annual update of CIP	Project prioritization, balancing improvements/maintainence to current system while understanding the regional system is on the horizon.
	Continue to enhance security at well sites to reduce likelihood of equipment tampering, damage, and intentional contamination.	Ongoing	Case-by-case	40 hours per year	Public Works	Part of daily work schedule	Village proactively budgets for equipment replacement.