

MARCH 2024 | Southern Iowa Rural Water Association

# QUENCH

news by the glassful

*In this Issue...*

## **AN UNEXPECTED GEM** *– West Lake Okoboji*

SOURCE WATER PROTECTION:  
Q&A with Wapello Rural  
Water Association



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## on the cover

This classic, unique corncrib has withstood many winters in northern Iowa. Seeing this beautiful snow field reminds us that due to current Iowa drought conditions, snow might be a welcome sight.



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**Publisher** Iowa Rural Water Association

**Editor** Cathy Law

**Project Coordinator** Deb Kurovski

**Graphic Design** Bailey Vasquez

QUENCH Magazine is published 2 times per year by the Iowa Rural Water Association (IRWA). The magazine is distributed by mail to IRWA members' consumers.

**The IRWA Mission:** To provide the highest leadership in the support of Iowa's water and wastewater industries through the provision of technical assistance, training and education, legislative, regulatory and public affairs, and financing activities.

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Magazine design and printing provided by:

**Sutherland Printing**  
P O Box 550  
525 North Front Street  
Montezuma, Iowa 50171

# Southern Iowa Rural Water Association

Serving Adair, Adams, Cass, Clarke, Decatur, Madison, Montgomery, Page, Ringgold. Taylor & Union Counties

## Annual Meeting of the Membership

Wednesday, April 17, 2024

1:30 p.m.

Suptertel Inn & Conference Center

800 Laurel St., Creston, IA 50801



Join us for Coffee and Cookies.

### BOARD MEMBER ELECTION

The Agenda will include election of directors for a 3-year term for the following Counties:

Adair, Cass, Madison - Marlin Marckmann\*

Taylor, Page - John Walston\*

\*Denotes incumbent

### ANNUAL MEETING AGENDA

#### Call to order and welcome

John Walston, Board Chair

#### Introduction of Management Team & Board Members

Brenda Standley, Co-GM

#### Minutes of 2023 Annual Meeting

Amy Skogerson, Legal Counsel

#### 2022 Financial Audit

Forge Financial & Management Consulting

#### Management Team Report

Brenda Standley, Co-GM

Jeff Rice, Co-GM

Aby Bauer, Office Manager

Chad Mahan, Operations & Construction

Roger Adkins, Water Treatment Plant

#### Election of Board Members

Amy Skogerson, Legal Counsel

#### Comments from Public

#### Adjournment

- A remote access link for meeting viewing only, will be available on our website
- –[www.sirwa.org](http://www.sirwa.org)—the day of the meeting. The direct link will be listed as an alert.
- If you choose to attend remotely you will NOT be able to vote for your district.

**\*\*If you feel you have received this invite in error and no longer own property with a SIRWA service connection, please notify the office.**

# WHEN IN DROUGHT... EVERY DROP COUNTS

Managing water is a growing concern with the persisting drought conditions across the country. Iowa is several inches below normal rainfall which is impacting water available for treatment and supply. Neighboring water systems are currently experiencing water shortages and are struggling to keep up with the drought-driven demand. Water conservation has quickly become the hot topic of discussion for most water utilities.

SIRWA is currently producing water at the newly constructed water treatment plant for supply to roughly 85% of our distribution system. Water is also purchased from four other water suppliers; Corning, Greenfield, Leon and Osceola, for the remaining percentage. For the majority of the SIRWA distribution system, water shortage has not yet reached the severe level, however, a close eye is being kept on day-to-day conditions.

SIRWA has several customers in Clarke County supplied by Osceola Water Works and these services have reason for concern. West Lake, Osceola's only water source, is dangerously low. In mid-2023, the request from SIRWA went out to those customers in Clarke County, along with all other SIRWA customers, to voluntarily conserve water wherever possible. We are working closely with Osceola's Water Superintendent to discuss potential infrastructure upgrades and ways in which our two water utilities can better work together for such shortages in the future. Unfortunately, there are no quick fixes for Osceola's current supply issues and any potential short-term or long-term solutions will come at enormous cost.

We continue to ask all of our customers to conserve water wherever possible. Consider these tips to save water at your home.

## • CHECK FOR LEAKS:

Make sure your faucets, toilets and showerheads are not leaking. If you find a leak, fix it. Leaking fixtures can waste nearly 1,000 gallons of water each month.

## • TAKE A WATERING BREAK:

You can cut back on watering to reduce stress on your local water supplies. It is natural for your landscape to go dormant and look a little brown in summer's hottest months.

## • CONSIDER AN UPGRADE:

Replace water wasting toilets, showerheads and faucets with high-performing models which are certified to use a minimum of 20 percent less water.

## • TAKE A SHOWER:

Switching from baths to showers is an easy way to save water. If you are already a shower person, reduce the amount of time you spend in the shower. If you must use the tub, close the drain before turning on the water and fill the tub only half full.

## • TURN OFF THE TAP:

Turn off the tap when shaving or brushing your teeth. Try filling a bowl of water to rinse fruits and vegetables. Running taps can waste as much as 1.5 gallons a minute.

## • FILL UP A WASHING BOWL:

Use a dishpan for washing and rinsing dishes. Washing the cleanest items first means you are unlikely to need to change the water. You will save a huge amount of water when compared to washing everything under the tap.

## • KEEP A JUG OF WATER IN THE REFRIGERATOR:

Running the tap for cold water is a habit easy to change. Keeping a jug of water in the fridge provides a supply of cold water at the ready without running the tap.

## • RUN APPLIANCES WHEN FULL:

Only run the dishwasher and washing machine when full. Scrape rather than rinse dishes before loading in the dishwasher.

## • GET CREATIVE:

Capture water from dish washing or other uses, such as cooking and re-use to water plants and flowers. Never pour water down the drain if there may be another use for it.

SIRWA truly appreciates everyone's continued efforts to conserve. But remember, when the rains return, your water conserving ways don't have to go away. By avoiding water-wasting habits, you will save water and help the SIRWA community if or when drought returns. Every drop counts.

For more information on the Iowa drought as well as additional conservation tips see "Water Matters" on the back panel of QUENCH.

# Water Gives Life

## Across

4. Things that go down storm sewers end up in a \_\_\_\_\_.

6. What word is used to describe how much water vapor is in the air?

7. What makes water "hard"?

8. What uses the most water in households?

10. An area of land that water flows across or under on it's way to a stream, river, or lake.

11. Where is the rainiest spot on earth?

## Down

1. What is the scientific term for rain, snow or sleet?

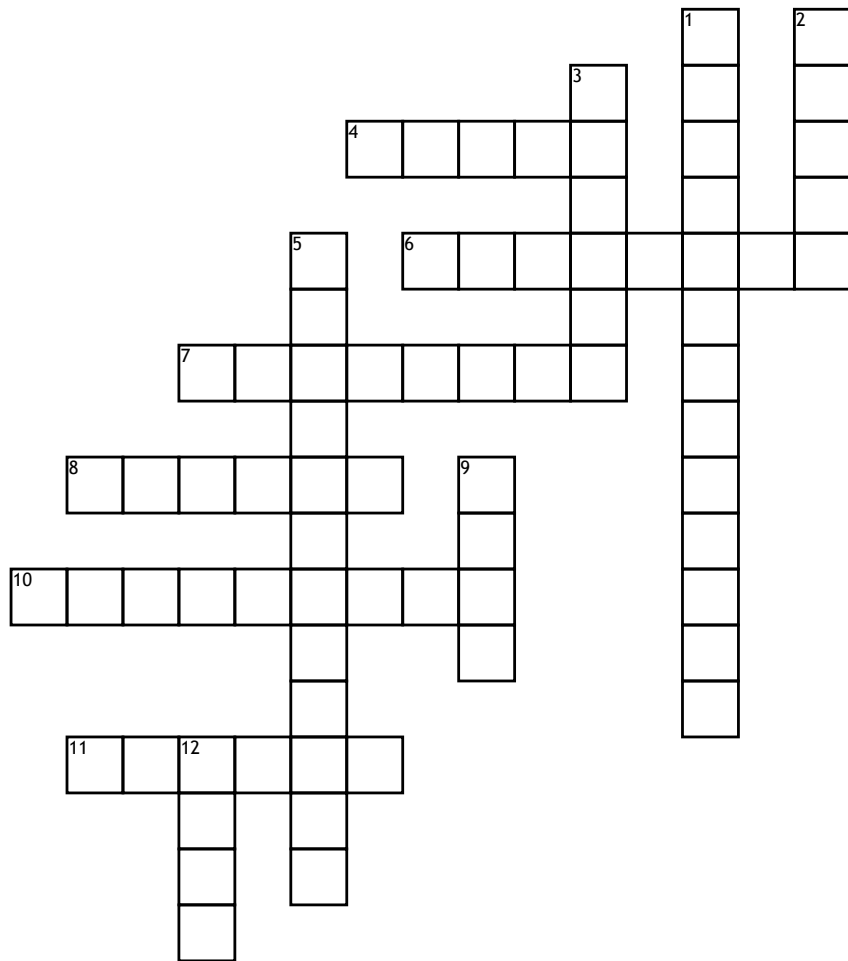
2. When in the water, a group of swans is called a \_\_\_\_\_.

3. Besides from drinking, where else can our bodies get the water they need?

5. What is the process of water vapor cooling into droplets called?

9. 65% of the human \_\_\_\_\_ is made of water.

12. A deep hole drilled into the ground so that groundwater can be pumped out is called a \_\_\_\_\_.



**ANSWERS ON PAGE 7**

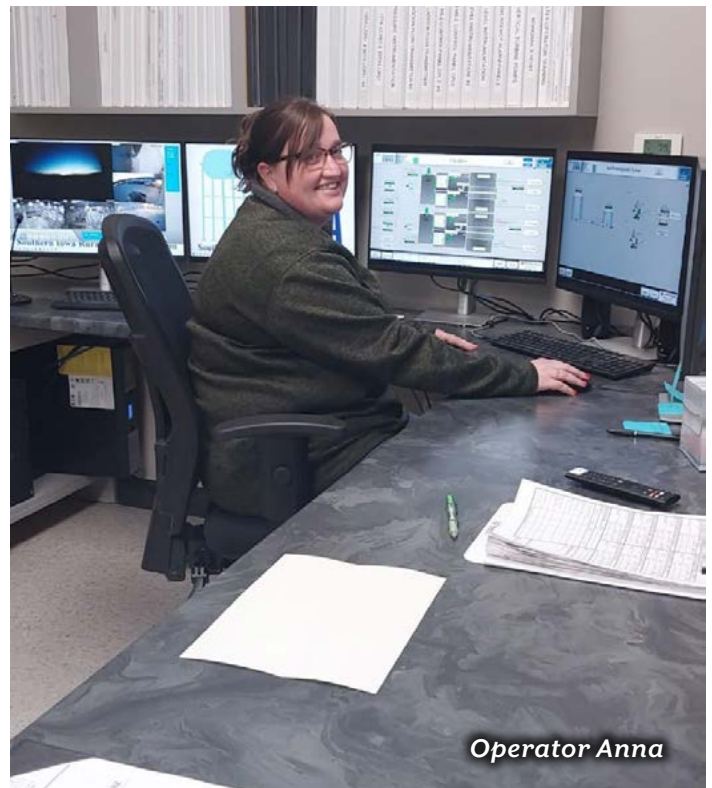


# Water Treatment Plant

After 2 years of construction, we are proud and excited to report that SIRWA is producing water at our new, 6million gallon a day, water treatment plant. The plant started water production on Nov 29, 2023. We first had to complete a 172-hour demonstration period. This gave all the vendors an opportunity to dial in the equipment that they supplied for the project and work out any issues before turning the plant over to SIRWA. Roughly 80 million gallons of water were produced during the demonstration period, along with many tests for water quality, all before any water could be supplied to our customers. At the end of December, the first water produced by SIRWA made its way into our distribution mains. The new plant will serve water to roughly 85% of our customers and will operate 24/7.

A new treatment plant calls for staff to operate it. Roger Adkins, Treatment Plant Manager, has put together an outstanding group of individuals to take on the task. The group includes Jon Steffen, Lead Operator, Operators Nash English, Anna Parrott, Mike Tate, and Matt Waigand. Herman Gracey will be filling in as a part-time operator. Roger and Jon come to SIRWA with a combined experience in the water industry of 40 years. They are a huge asset to SIRWA and more than capable of handling any situation that may arise at the new plant.

Owning our own water treatment plant has been a long time coming. We look forward to the future as we continue to supply quality, potable water to the rural areas of southwest Iowa.





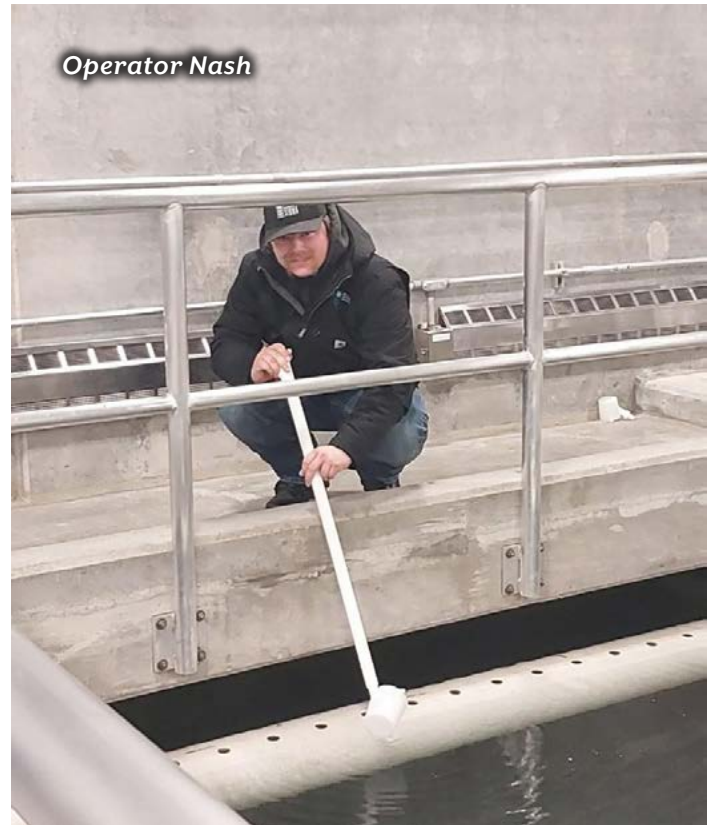
Lead Operator Jon



Operator Matt



Operator Mike



Operator Nash

**DOWN:**  
 1.Precipitation | 2.Bevvy | 3.Fruits | 5.Condensation | 9.Body | 12.Well

**ACROSS:**  
 4.River | 6.Humidity | 7.Minerals | 8.Toilet | 10.Watershed | 11.Hawaii

Water Gives Life Answer Key



# AN UNEXPECTED GEM

*West Lake Okoboji*

An unexpected gem among a sea of farm fields, West Lake Okoboji is a glacial spring fed lake in Northwest Iowa. It's deep, clean and cool waters that often glisten with a blue hue attract millions of visitors each year. The waters of West Lake Okoboji are also enjoyed in the form of a beverage from West O Beer, crafted with water from the lakes spring fed sources. Keeping this water clean and protected requires the efforts of many.

Iowa Lakeside Laboratory was established in 1909 by Thomas Macbride and his colleagues. Their goal was to offer summer courses that would enable students to learn about nature in the field. Lakeside has grown into a year-round residential environmental educational facility on a 147-acre campus. Students come from around the world to take classes at Lakeside, including the renowned diatom course. Diatoms are a special type of algae that use silica in their cells and are an important tool in assessing the health of aquatic ecosystems. The Lakeside Diatom course has been offered here for more than 60 years. This fall it will host the North American Diatom Association. Most people in the world who have studied diatoms are in some way connected to Iowa Lakeside Lab.

Now home to environmental education programs for all ages, as well as host to many environmental groups, Lakeside is helping to increase awareness and care for protecting the health of this precious resource. Researchers, writers and artists now work and study here, and all appreciate the West Lake Okoboji waters, whether they are studying it, kayaking through it, or painting it. Perhaps most important are the researchers and volunteers who are testing and protecting it.

Dr. Mary Skopec, Director of Iowa Lakeside Laboratory says, "Water monitoring and laboratory testing is an integral piece of Lakeside Lab's mission. Our partnership with the State Hygienic Laboratory, which is co-located on the Lakeside property, provides testing services to drinking and wastewater utilities, lake associations, state and county partners and interested citizens."





Iowa Lakeside Laboratory is home to one of the longest running citizen volunteer water quality monitoring programs, The Cooperative Lakes Area Monitoring Program.

“The Cooperative Lakes Area Monitoring Program (CLAMP) is a citizen science program that has monitored the health of the Iowa Great Lakes for the past twenty-five years and has documented significant improvements in the lakes during this time, which helps to underscore the value of watershed management programs aimed at improving water quality,” says Skopec.

Due to these efforts and programs that support them, the lake has exceptional water quality and clarity. The glacial waters of West Lake Okoboji are so clear, that the term, “Blue Water Lake,” has often been associated with it. While not a scientific term, it has been associated with areas that enjoy exceptional water quality. When sunlight penetrates these pure waters, other wavelengths are absorbed more strongly than blue. Most natural waters contain dissolved organic matter that selectively absorbs blue wavelengths. Scientific term or not, many residents will take pride in the idea that it is one of three blue water lakes in the world, along with Lake Louise in Canada and Lake Geneva in Switzerland.

Pride in our water also creates opportunities for the Lakeside Lab to partner with area businesses on clean water efforts—including West O Beer. Owners Matt and Michaela Matthieson made cleaning water the brewery’s mission from day one, and now, thru their Taproots “On Us” initiative, West O donates a portion of their profits to the Lab. This year they also volunteered their time (and some crisp West O beverages) to Lakeside’s Science on the Menu event and spoke about the science of brewing beer with West Lake Okoboji water. The program brings citizens together for a fun learning experience and dinner. They are helping to raise awareness and support initiatives that help to protect these waters, and not just for the purpose of brewing beer.

DNR Fisheries Biologist Mike Hawkins says, “Iowa’s natural lakes face tremendous biological, physical, and social pressures. Threats from invasive species, sediment and nutrient runoff, and increasing recreational use and development all create incredible challenges for agencies, lake associations, and local communities working to manage and protect these complex natural resources and their watersheds.”

The DNR works in partnership with Lakeside Lab to monitor and protect the area. “Iowa Lakeside Lab stands on the shores of West Okoboji Lake creating a hub that connects educators, students, professionals, and the local community with the science of natural resources. Combining this connection with class projects, graduate programs, and volunteer groups, Lakeside has provided more than an educational opportunity. Iowa Lakeside Laboratory provides monitoring, research, and data that helps natural resource agencies and the community make critical decisions for managing lakes and water quality.”

The Friends of Iowa Lakeside Laboratory and those that support their efforts will continue their dedication to keeping West Lake Okoboji clean and blue for all to continue to enjoy. This is made possible when so many organizations and individuals work together for a common goal.

If you are interested in learning more, or supporting their cause, visit [friendsoflakesidelab.org](http://friendsoflakesidelab.org)



Wapello Rural Water Association's treatment facility near their wellfield south of Delta, IA.



# SOURCE WATER PROTECTION

## Q & A WITH Wapello Rural Water Association

By: Aaron Schroeder *Source Water Specialist* – Iowa Rural Water Association

Source water protection planning is the act of protecting drinking water sources by developing and implementing strategies, partnerships, and activities to mitigate future and existing threats to source water quality and quantity. Common potential threats in Iowa include point sources (e.g., a wastewater discharge), nonpoint sources (e.g., fertilizer runoff), and others such as abandoned wells, which can act as a conduit for a pollutant to reach groundwater. In Iowa, source water protection planning is a voluntary process—public water supplies are never required to complete a source water protection plan, but completing a source water protection plan is often recommended by the Iowa Department of

Natural Resources during routine inspections; and is good practice for the long-term health of a water utility.

As Source Water Specialist at the Iowa Rural Water Association, my primary job duty is facilitating the development and implementation of source water protection plans for public water supplies in Iowa. Working with public water supplies ranging from municipal systems and rural water systems; to small systems such as rural campgrounds and churches has afforded me the opportunity to further learn about different types of water sources and the effort that goes into producing quality water throughout the state of Iowa. Over the

past year and a half, I've had the pleasure of assisting Wapello Rural Water Association (WRWA) in southeast Iowa in developing and implementing a source water protection plan. WRWA provides water to 15,601 customers in southeast Iowa, comprising many small towns and rural users. Their water treatment plant and wellfield are located four miles south of Delta, IA. WRWA sources its water from seven wells in the South Skunk River Alluvial Aquifer. Dan Westgard, WRWA Treatment Plant Superintendent initiated their source water protection planning efforts. I took the time to ask Dan a few questions regarding the source water protection planning process and how it's benefitted them as a utility.

**AARON:** What sparked WRWA's interest in developing a source water protection plan?

**DAN:** The Iowa DNR provided an initial contaminant source inventory via a phase I source water assessment. This helped us identify two inactive wells in our groundwater capture zone that we were able to plug with the assistance from the property owners and Keokuk County Environmental Health. This project sparked our interest and led us to contacting the Iowa Rural Water Association to work on putting together a formal source water protection plan document. Our first step was organizing a planning team to guide the development and implementation of the plan.

**AARON:** What specific challenges does WRWA face regarding source water protection?

**DAN:** WRWA's wells are classified as "highly susceptible" due to their shallow nature and lack of overlying confining material (such as clay or shale). This magnifies the importance of proper source water protection measures.

**AARON:** Do you have any upcoming projects related to the results of the source water protection plan?

**DAN:** Currently we are in the process of locating and plugging abandoned wells in our 2-year time of travel capture zone. Additionally, we plan to install physical barriers immediately around each of our active water supply wells.

**AARON:** What are some things you learned throughout the source water protection planning process?

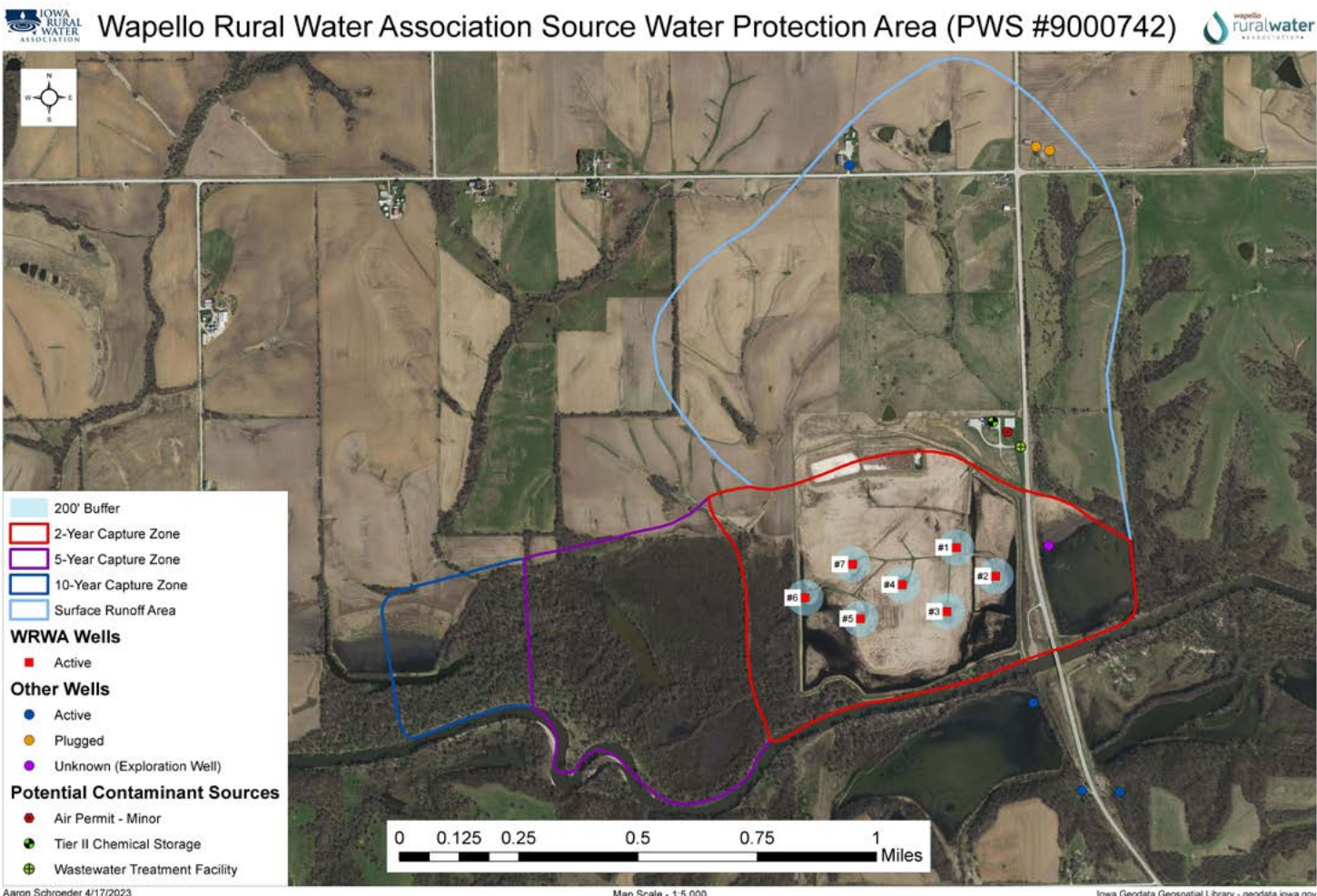
**DAN:** The source water protection planning process has allowed us to familiarize ourselves with neighbors and organizations who share an interest in partnering to ensure safe drinking water.

**AARON:** Any advice for utilities interested in source water protection, or other things you'd like to add?

**DAN:** We recommend any utility go through this process. It will help find vulnerabilities

and give the tools to strengthen those areas. Aaron Schroeder and the Iowa Rural Water Association were instrumental in the entire process. Our source water planning team and utility understand the importance of this plan and know it is always evolving. We learned a lot through the entire planning process and are in a better position thanks to the planning process.

Working with WRWA on a source water protection plan was a learning experience for me as well. Before initiating the formal planning process, WRWA was already engaging in source water protection. As mentioned, they have been addressing abandoned private wells in the area. Additionally, WRWA has done an excellent job of managing land use in their capture zones. Their nitrate levels have a 10-year average near 0 parts per million (ppm) (the MCL is 10 ppm). WRWA's efforts show the positive effect proper source water protection strategies can have on a water system.



**Aerial Imagery of Wapello Rural Water Association's wellfield and source water protection area. Best management practices in the 2-year capture zone are the highest priority.**



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# WATER MATTERS:

## *Iowa Enters 4<sup>th</sup> Year of Drought*

### FACTS:

- In Iowa, as the state enters its fourth year of drought, the longest stretch in two decades, many utilities are taking steps to compensate for the precipitation shortages. – Tim Hall, Iowa Department of Natural Resources hydrologist.
- Two eastern Iowa counties, Tama and Benton, had the lowest recorded amount of rain in June, July and August in 120 years. That’s drier than any three years during the 1930s Dust Bowl. – Tim Hall, IDNR
- Iowa was about 9.5 inches below normal rainfall through September 2023 and about 16 inches below normal for the three-year duration of the drought. – Tim Hall, IDNR
- Already typically among Iowa’s driest months, November brought an average of one-hundredth of an inch of rain across the state. – Tim Hall, IDNR

### HOUSEHOLD WATER CONSERVATION TIPS:

- Limit any lawn and garden watering to the hours of 8:00 PM to 8:00 AM
- Look into getting a rain barrel collection system to use for watering plants
- Do not “sweep” your garage and driveways with the water hose
- Do only full loads of dishes in the dishwasher
- Do only full loads of clothing in the laundry
- Check your system for leaks (toilets, outdoor faucets, sprinklers)
- Turn off the water faucet while brushing teeth or shaving
- Keep a pitcher of drinking water in the refrigerator instead of letting the faucet run until the water is cool

