

JULY 2023 | Rathbun Regional Water Association

QUENCH

news by the glassful



HALF A CENTURY OF
Rural Water Service in Iowa

CONTENT

The 46th Annual Membership meeting /
2022 Financial Summary for RRWA 3

Do You Have a Lead Water Service Line? 4

RRWA Employee Spotlight 5

Stepping Up to Protect Rathbun Lake /
Protect Your Drinking Water Supply 6

2022 CCR / Smart Meters /
RRWA Customer Reminders 7

Half a Century of
Rural Water Service in Iowa 8

What Do I Need to Know About PFAS 10

Water Matters: Trash it, Don't Flush it 12

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Association

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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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ON THE COVER

Hand-operated water pump and water well in rural America.

Magazine design and printing provided by:

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

2022 Financial Summary for RRWA

Part of the program at the annual meeting of the membership was a financial recap of the year 2022. RRWA was able to meet all of their financial goals throughout the year, even with the current inflationary environment. Virtually all aspects of our operations have experienced significant cost increases and while the water we provide continues to be a tremendous value, the costs of producing and buying that water is unfortunately rising. Because of these continuing increases in costs as well as meeting ever changing regulatory requirements and the never-ending maintenance and rehabilitation of aging infrastructure, RRWA will be implementing a rate increase of roughly five percent later this summer. A summary of the 2022 financial presentation is included below:

The number of water meters that RRWA members had in service increased by 250 throughout the year and totalled 21,400 by the end of 2022. Water usage during the year from these meters increased by 235 million gallons or roughly 8% from 2021 numbers and totalled just under 3.3 billion gallons in 2022. This increase in water usage was primarily the result of the additional connections and wholesale bulk water sales to Unionville, Missouri and the rural water districts of Putnam County and Wapello Rural Water Association.

The 3.3 billion gallons in water sales generated revenues of \$18.7 million for the Association and accounted for over 85% of the total cash received during 2022. Another \$770,000 in excise tax associated with water sales was collected for the State. Construction income and hookup fees charged for new additions to the distribution system brought in over \$1 million while additional construction services and material sales provided to members, customers and other entities added \$350,000. Income from RRWA's cash investments generated just over \$300,000 in interest income throughout the year and all other cash received from miscellaneous sources during 2022 totalled \$490,000.

Daily operating expenses of the company during 2022 required \$8 million in cash throughout the year. These operating expenses increased almost 20% or \$1.25 million from the prior year due almost exclusively from inflation related impacts. Another \$5.4 million was spent on salaries, fringe benefits, and payroll taxes for the company's 67 full-time employees. The next segment of cash expenditures was loan payments which required \$3.7 million of cash. Interest payments totalled \$1.3 million on an average loan balance of roughly \$36.5 million throughout the year with principal payments making up the remaining \$2.4 million. Construction projects and improvements required almost \$2.2 million throughout the year for the funding of costs associated with new individual customer hookups and the infrastructure needed to complete the connection to serve the City of Unionville and Putnam County in Missouri. New capital purchases required another \$700,000; payments made to the State for excise tax totalled \$742,500; and all other uses of cash totalled \$12,250.

Total cash expenditures for the year added up to \$20,831,500, which when compared with total cash receipts of \$21,812,750, resulted in a positive cash flow during the year of \$981,250 (not including contributed capital payments from Unionville and Putnam County for the reimbursement of constructing a new distribution main to Missouri). The company's balance sheet, cash reserves and financial ratios continued to remain strong in 2022 with the company's net worth or members equity increasing by over \$8.5 million when compared to numbers reported the previous year while long term debt and liabilities decreased by \$2.35 million.



THE 46TH ANNUAL MEMBERSHIP MEETING

The 46th Annual Membership meeting was held at the RRWA Treatment Plant, 16166 Hwy J29, Centerville, Iowa on February 23, 2023, at 7:00P.M.

Three directors were re-elected to serve a three-year term on the RRWA Board:

DISTRICT 2

Denny Amoss
6040 170th Street, Albia, IA 52531

DISTRICT 3

Doug Goben
1643 100th Street, Corydon, IA 50060

DISTRICT 7

Curt Frank
3591 250th Street, Oakville, IA 52646

RRWA would like to thank members of the nominating committee for their willingness to serve. Members of the nominating committee appointed by the Board of Directors were: Dan Furlin, Jr-Numa, Gary Dustin-Albia, Richard Breckenridge-Keosauqua, Leroy Perkins-Corydon, Darrell Krehbiel-Donnellson, Susan Knapp-Bloomfield, and Bill Hillyard-Burlington.

Other items discussed at the meeting were:

- The 2022 Financial Report of RRWA
- Necessity for a rate increase in 2023
- Tours of the Original and New RRWA Treatment Plants

RRWA BOARD OF DIRECTORS

Randy Eddy, *Chairperson*
Denny Amoss, *Vice Chairperson*
Doug Goben, *Secretary & Treasurer*
Curt Frank
Garry Schiller
Charla Warner
Kenneth Wuthrich

Do You Have a Lead Water Service Line? *RRWA Needs to Know!*

We need your help! RRWA is required to identify water lines that serve our customers which are made of lead. RRWA is conducting an inventory of all of the service lines in our system. This inventory will help RRWA identify the location of any lead water lines. RRWA customers can be the best source of information about the type of water line that serves their homes, businesses, or other structures. RRWA looks forward to working with customers to identify lead water service lines in our system. Here are answers to common questions about lead in drinking water and the lead service line inventory.

Why is lead in drinking water a concern?

Exposure to lead in drinking water can cause serious health effects for people of all ages. Lead exposure can lead to developmental, learning, and behavioral problems in young children, infants, and fetuses. Adults can have increased risks of heart disease, high blood pressure, decreased kidney function, and nervous system problems.

How does lead get into drinking water?

Lead can get into drinking water when plumbing materials that contain lead corrode. The most common sources of lead in drinking water are lead pipes, faucets, and fixtures. Water service lines that are made of lead can be the most significant source of lead in drinking water.

What is a water service line?

The water service line is the pipe connection that supplies drinking water to the plumbing of a house, business, or other structure from RRWA's water main.

Why is RRWA required to identify lead water service lines?

Water systems like RRWA are required to complete a lead service line inventory to comply with the Lead and Copper Rule Revisions established in 2021 by the US Environmental Protection Agency. These revisions to the Lead and Copper Rule were made to better protect children and communities from the health risks of lead exposure in drinking water. RRWA must complete our initial lead service line inventory by October 2024.

Doesn't RRWA own the water service line?

In most cases, RRWA owns the water service line from the water main to the customer's meter pit. The customer owns the water service line from the meter pit to the house, business, or other structure.

Are any of RRWA's water lines made of lead?

None of the water mains and service lines installed by RRWA are made of lead. Most of RRWA's water mains and service lines are made of PVC. The customer-owned portion of water service lines are usually made of plastic, copper, galvanized steel, or at times lead.

How will RRWA identify lead water service lines in its system?

One of the best ways to identify lead water service lines is to ask RRWA customers. RRWA meter readers and customer service representatives will ask our customers to answer questions about their service lines. RRWA also created an online service line survey that our customers can complete at <https://www.rrwa.net/lead-service-line-survey.aspx>. In addition, RRWA is using assessor records and construction reports to help complete the water service line inventory.

How can I tell if my water service line is made of lead?

Customers can usually determine their water service line material by examining the pipe where it enters the house, business, or other structure. In Iowa, services lines installed for buildings constructed after 1988 are likely not lead due to a state ban on its use. For information on how to identify service line material, customers can read <https://www.islr-collaborative.org/identifying-service-line-material.html>.

What should I do if my water service line is made of lead?

Customers who have lead water service lines can take several steps to reduce the risk of lead exposure in their drinking water. These steps include: (1) replace the lead service line; (2) make sure plumbing fixtures are certified as lead free; (3) use cold water for drinking and cooking; (4) flush out pipes when water hasn't been used for several hours; (5) regularly clean faucet aerators; and (6) install a home filter certified to remove lead.

How can I help RRWA identify lead water service lines?

Customers can help RRWA identify lead water service lines by answering questions about their service lines when asked by RRWA meter readers and customer service representatives. Customers can also complete the service line survey on RRWA's website at <https://www.rrwa.net/lead-service-line-survey.aspx>. In addition, customers can call RRWA at 1-800-233-8849 to answer questions about their water service lines with a customer service representative.



RRWA EMPLOYEE SPOTLIGHT



What will RRWA do with this information about water service lines?

The identification of lead water service lines will better enable RRWA to help our customers take steps to reduce the health risks of lead in drinking water. This information will also be used to improve the ability of RRWA to monitor for lead in drinking water.

Is RRWA doing anything else to protect customers from lead in drinking water?

Yes, RRWA continually monitors and adjusts the chemistry of drinking water supplied to our customers to ensure that it is not corrosive to any lead water pipes or fixtures. RRWA also uses an approved phosphate additive in the water treatment process which creates a coating on the inside of water pipes for corrosion control.

Where can I get more information about lead in drinking water?

Customers interested in more information about lead in drinking water can visit <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water> and <https://drinktap.org/Water-Info/Whats-in-My-Water/Lead-In-Water>. In addition, customers can always contact RRWA's water treatment plant superintendent, Jeremy Buckingham, at 1-800-233-8849.

DAVE AESCHLIMAN

Special Projects Coordinator

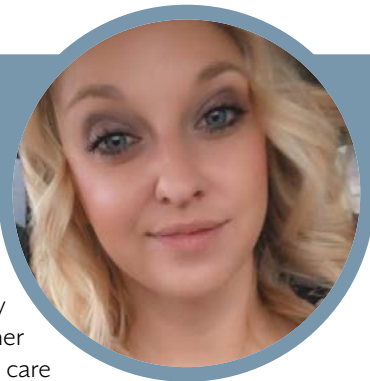


Dave has worked at Rathbun Regional Water Association (RRWA) for 22 years, starting out in 2001 as part of RRWA's wireless internet company, Southern Iowa Regional Internet Services (SIRIS). After the sale of SIRIS, Dave began undertaking small construction projects for RRWA, as well as inspecting larger projects such as the new lake intake, new water treatment plant, and the rehab of the original water treatment plant. Since 2016, Dave and his team have designed and built 18 pump stations throughout the RRWA distribution system. Dave is eternally grateful to RRWA management for the time, resources, and freedom he was given to design and develop items to meet the ever-changing needs of the Association and its members.

Dave and his wife of 40 years, Jody, have two children, Sarah and Wes. Sarah Aeschliman Grim recently passed away from cancer and Dave and Jody are helping to raise Sarah's sons, Jackson (15) and Corbin (10) to become the kind of adults Sarah would be proud of. Wes and his wife, Randell, live in Albia, Iowa and have three sons, Toby and Ollie, 10-year-old twins, and Rory (8). Wes is the State Farm Insurance Agent in Albia and Randell is a partner in the Benton Avenue Boutique. Family is very important to Dave and Jody. When not attending their grandsons' ball games, they try to squeeze in some golf. Most people may not know that Dave farmed for 17 years and, at age 35, he attended Indian Hills Community College and obtained his degree in Computer Systems & Networking.

TESA HINTON

Assistant Administrative Manager



Tesa has been with Rathbun Regional Water Association's (RRWA) customer service team for two years. She thoroughly enjoys working at RRWA and one of her favorite aspects of the job is the genuine care the employees have and present to all. The whole team proudly works toward the same goal of providing RRWA customers with effective customer service while supplying safe, quality drinking water. Hearing compliments from happy customers makes everyday a good day. Chances are you have spoken with Tesa if you have called RRWA as she is the first point of contact. Tesa's wide range of duties include transferring service for new and current customers, assisting with customer concerns, initiating work orders, as well as providing accounting support. She looks forward to many more years serving the customers of RRWA.

Tesa grew up in Mystic, Iowa with her parents and one sister. She has two wonderful sons, Mason (11) and Silas (4). In her spare time, Tesa enjoys spending time with her family, specifically outdoors in the warm weather. During spring and summer, she loves watching her boys' baseball games and taking them to waterparks and pools throughout Iowa. Tesa also enjoys crafting, cake decorating, gardening, river floating, and Laffy Taffy jokes.



Stepping Up to PROTECT RATHBUN LAKE

Rathbun Lake – RRWA’s Source Water

Residents, farms, businesses, and communities across southern Iowa depend on Rathbun Lake for their drinking water. Rathbun Lake is the only source of water for Rathbun Regional Water Association’s (RRWA) two water treatment plants. RRWA treats water from Rathbun Lake to produce the highest quality drinking water for a population of 70,000 in the Association’s service territory.

Rathbun Lake Needs Protection

Rathbun Lake’s use as the source of drinking water for the population served by RRWA needs to be protected. Water quality in Rathbun Lake is impaired by high levels of turbidity from suspended solids and algae. This turbidity is caused by sediment and phosphorus carried in runoff from land in the lake’s watershed. Soil erosion on this land is the source of the sediment and phosphorus that impairs water quality in Rathbun Lake.

Landowners and Partners Step Up to Protect Rathbun Lake

During the past 20 years, close to 600 landowners have installed conservation practices on their land to protect Rathbun Lake. These actions by landowners have been supported by many local, state, federal, and private partners. As a result of these efforts, monitoring indicates that water quality in Rathbun Lake has been stable to improving over time. Specific accomplishments include:

- Landowners have invested \$6.5 million in more than 1,200 conservation practices to benefit nearly 40,000 acres in the Rathbun Lake watershed; and
- Annual sediment and phosphorus delivery to Rathbun Lake from the watershed has been reduced by an estimated 72,300 tons and 290,100 pounds respectively.

Public and private partners have provided an additional \$30 million in technical and financial assistance to help support the efforts of landowners to protect Rathbun Lake. These partners include the Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, Iowa State University, Southern Iowa Development and Conservation Authority, State Hygienic Laboratory, US Army Corps of Engineers, US Environmental Protection Agency, USDA Natural Resources Conservation Service, CoBank, Farm Bureau, and the Rathbun Land and Water Alliance whose members are counties and soil and water conservation districts in the watershed and RRWA.



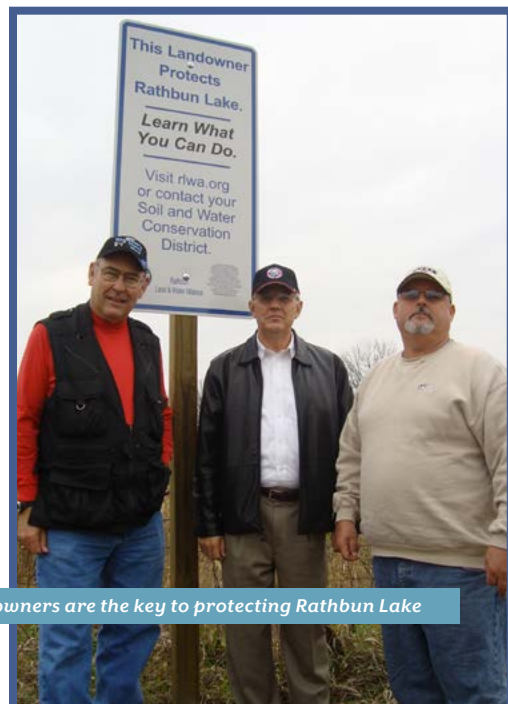
Landowners and partner staff work together to protect Rathbun Land

PROTECT RATHBUN LAKE

Your Drinking Water Supply

Almost all of the residences, farms, and businesses in the Rathbun Lake watershed rely on Rathbun Lake for drinking water. People who live, farm, and work in the watershed are the key to protecting Rathbun Lake – their drinking water supply. Hundreds of landowners in the watershed have already installed conservation practices on their land to protect Rathbun Lake. These practices reduce the amounts of sediment and phosphorus

carried in runoff to the lake. Commonly installed practices are terraces, ponds, cover crops, and seeding cropland to hay and pasture. Assistance to install these practices is available to landowners in the Rathbun Lake watershed. To find out if your land is eligible for this assistance, please contact the Soil and Water Conservation District offices in Wayne County (641-872-1350) or Lucas County (641-774-2512).



Landowners are the key to protecting Rathbun Lake

2022 CONSUMER CONFIDENCE REPORTS

The Rathbun Regional Water Association, Inc. 2022 Water Quality Reports (CCR) are coming soon. Starting July 1st, 2023, you will be able to view your RRWA System 2022 Annual Water Quality Report (also known as a Consumer Confidence Report or CCR) online.

If your account number begins with 01 – 30 log on to:

<https://www.rrwa.net/CMDocs/RRWA/WaterQuality/Rathbun.pdf>

If your account number begins with 33 – 34, 42, 70 – 72 log on to:

<https://www.rrwa.net/CMDocs/RRWA/WaterQuality/Ft-Madison.pdf>

If your account number begins with 35 – 38, 40 – 41, 74 log on to:

<https://www.rrwa.net/CMDocs/RRWA/WaterQuality/Burlington.pdf>

If your account number begins with 39 log on to:

<https://www.rrwa.net/CMDocs/RRWA/WaterQuality/Mt-Pleasant.pdf>

Your 2022 Consumer Confidence Report contains important information about the source and quality of your drinking water. If you would like a paper copy of the CCR mailed to your home or sent as an attachment to an email, please call 641.647.2416 or email jbuckingham@rrwa.net.

Speaking of SMART METERS...

Knock, knock

Who's there?

Free.

Free who?

Free Smart Meter!!



I don't get it.

It's Not a Joke!

Call RRWA Now to Request Your
FREE SMART METER
1-800-233-8849

RRWA Customer Reminders

- **Protect your remote or smart meter antenna** from preventable damages to avoid unnecessary charges for recurring damages to RRWA equipment.
 - **Help keep the meter pit area clean** and free of debris so RRWA can perform routine maintenance checks.
 - For traditional self-read meters, please **read the meter in the pit periodically** and compare it to the remote reading. Insects or environmental conditions can affect the accuracy of the remote.
 - **Always report to RRWA** anytime you believe the meter or remote are not working correctly.
 - **Want to know how to determine if water is going through the meter?** Traditional self-read meters have a red dial that turns, and smart meters display the word "FORWARD".
 - **Be a responsible member;** always report accurate meter readings the first of each month for traditional self-read meters. **Payment should be received by the 15th** of each month to avoid late fees.
 - Please **write the account number on your check** if mailing payment.
 - **Services are subject to disconnection** for non-payment by the first day of the following month after a payment is past due.
 - A **\$250 tampering fee** plus material and labor can be assessed for any fraudulent tampering to RRWA property such as water meters or meter pits.
 - Sign-in to your smart meter account at www.waterscope.us (Metron/WaterScope) or www.beaconama.net (Beacon/EyeOnWater) to make sure your smart meter is registered to **receive leak notifications**.
 - **RRWA's bill payment website: www.rrwa.net**
 - **For AutoPay or Epay payments:** PayPal may appear or be included in the description on your bank or credit card statement next to your payment amount. RRWA uses Braintree, a division of PayPal, Inc., to securely process automatic or online payments.
 - **Please call RRWA or visit www.rrwa.net** to fill out the Lead Service Line Survey for a chance to win a \$50 gift card, drawn monthly.
 - Report a verifiable leak or an exposed pipe in a ditch or stream on a RRWA waterline and receive a **\$25 leak report reward**.
- **RRWA Staff can be reached at 1-800-233-8849 from 8:00A.M. to 4:30P.M. Monday – Friday and 24/7 for emergencies at 1-800-233-8849.**

HALF A CENTURY

By Gregory Huff

OF RURAL WATER SERVICE IN IOWA

1968 was a historic year. Some of the year's events were tragic, such as the assassinations of Martin Luther King, Jr. and Robert F. Kennedy, as the war in Vietnam raged on. There were also historical highlights: the Olympic Games were held in Mexico City, Led Zeppelin first performed live, and on Christmas Eve Apollo 8 carried humans around the moon for the first time.

While all of that was going on, a small group of farmers in Sioux County, Iowa began forming the first rural water system in Iowa, which to this day is known as Rural Water System #1 (RWS#1). The founders of RWS#1 saw a need and began a door-to-door grassroots campaign to convince their neighbors that building a rural water system in the area would solve their water quality and quantity issues.

This concept soon spread to other northwestern counties in Iowa, and throughout the southern counties as well. For the most part, these areas were dealing with shallow alluvial aquifers that were highly susceptible to dry spells, and/or the quality of the water from existing supplies was not desirable. Rural (sometimes also referred to as regional) systems had already been formed in other midwestern states, and the Iowa rural water pioneers had a vision that this "long-pipe" type of system could be the solution for them.

As more local groups began to form, they followed the same process, going door to door visiting with their neighbors, asking them to fill out an interest survey and pay a \$25 fee to help fund the initial system expenses. They also reached out to the USDA Farmers Home Administration (FmHA) for funding. A decade earlier, in 1961, federal legislation had been passed authorizing the establishment of the Water and Waste Disposal Program. In order to receive funding, 80 percent of eligible households within the planned service area had to sign up. The start-up rural water systems also had to hire an engineering firm to develop a Preliminary Engineering Report (PER) to determine the potential feasibility of the project and estimated costs.

FILLING A NEED

In 1970 Paul and Karla Gunzenhauser were newlyweds who built a home and began farming north of the City of Garden Grove in Decatur County. This area in south central Iowa had a history of difficult water issues. They drilled a shallow alluvial well 30 feet deep on the property. Unfortunately, they soon discovered that the well would run dry after pumping around 300 gallons. They would then have to wait for the well to recharge (fill with water again). To expedite the process, especially during dry weather, Paul would have to drive to the nearby City of Humeston and buy 300 gallons of water once or twice a week and refill the well to speed up the recharging process. It became more difficult with the arrival of two children, and Paul said it was hard for them to have guests overnight due to the shortage of water. Additionally, the natural water from the well was mineralized, which made it unpleasant to use.

Paul heard about an effort to form a regional water system in nearby Appanoose, Monroe, Lucas and Wayne Counties to the east. In 1974 he approached the Rathbun Regional Water Association (RRWA) to see if they would be willing to add Garden Grove Township in eastern Decatur County to the project. He was told that if he could get his neighbors to sign up, they would be added. Paul recalls that it wasn't hard to get sign-ups as his neighbors were in the same predicament he was. A couple of years later Rathbun water started flowing to his farm, first from the Humeston reservoir, and eventually from Lake Rathbun when the treatment plant was completed. Paul fondly remembers that one of the first things he did was wash his new truck with Rathbun water.

A year or so later, he began watering his approximately 100 beef cows with Rathbun water. They had previously used a farm pond for the cows. Paul now lives in Humeston and owns The Old Print Shop mini mall in the same building where his grandparents printed the local newspaper when he was young. For Paul and his family, getting Rathbun water was lifechanging.

A RELIABLE SOURCE

In 1974, Ron Dieleman and his wife Carolyn purchased his father's farm where Ron grew up. They grew row crops and farrowed around 20 sows every month. Located a mile-and-a-half from the South Skunk River in northern Mahaska County, the farm had a 120-foot well that produced hard water. Prior to 1947, they had to hand-pump the water from the well. In 1947 the REA from Pella began providing electricity to the farm. Unfortunately, their farm was near the end of the service area, so they were susceptible to any power outage that occurred along the line.

Luckily for them, the same year they purchased the farm, the Mahaska Rural Water System (MRWS) was formed in Oskaloosa, the Mahaska County Seat. They signed up when they heard about rural water, and several years later when the MRWS treatment plant was completed north of Oskaloosa, the piped water began flowing to their farm. They used the water for their household and for mixing herbicides. Ron recalls the herbicides were much more effective without the iron from the well, and MRWS's water was also easier on the equipment.

Ron also mentioned that their water supply became much more reliable—even if the power was out, the water was still available from the Mahaska Rural Water System. Ron now lives in Pella, but remembers MRWS with great appreciation for the service it provided to his home and farm.

WE WERE SICK ALL OF THE TIME

In 1975, the Southern Iowa Rural Water System (SIRWA) was formed in Creston, Iowa. Over the years, they have received numerous letters from their customers thanking them for providing a safe, reliable source of water to families throughout south central and southwestern Iowa. One such letter was written by Nick Lacina in the late 1990s. Nick recounted that prior to hooking on to SIRWA, his family often were sick with flu-like symptoms. They had their well tested and discovered that it was unsafe to drink the water. The well also did not have the capacity to reliably supply the family with enough water for washing and toilet flushing, so at the most inconvenient times he would have to haul water to the well to recharge it. They also raised pigs. Nick recalled that when the piglets would get cuts or sores on them, they would get infected and not heal quickly when they were using water from the well. After their connection to SIRWA, he said the pigs started doing better, and these issues were no longer a problem.

RURAL (REGIONAL) WATER IN 2023

Today there are 19 Rural (Regional) Water Systems in Iowa covering all or parts of 72 counties. Hundreds of thousands of households, businesses, farms and other facilities rely on these systems to provide them with clean, safe water around the clock. These systems also partner with over two hundred communities in Iowa, either supplying water to communities or—in some cases—purchasing water from communities to supply water throughout the region. These systems continue to grow each year as more houses are being built, and farms and rural businesses start up or expand. Nowadays, many of us take our water systems for granted, but for those who remember what their lives were like before they had rural water, they still count their blessings that they signed up when rural water was just getting started in their area.

Fun fact: Ron Dieleman's daughter Cathy Law has worked for the Iowa Rural Water Association for over 20 years, and serves as Member Services and Events Coordinator for IRWA. She is also the Editor of Quench magazine!



Iowa's Rural/Regional Water Systems

Year Founded/Incorporated

Cherokee County Rural Water District	1972
Iowa Lakes Regional Water	1977
Iowa Regional Utilities Association	1977
Lyon & Sioux Rural Water System	1970
Mahaska Rural Water System	1974
Marion County Rural Water District	1979
Osceola County Rural Water System	1978
Poweshiek Water Association	1977
Rathbun Regional Water Association	1972
Regional Water	1972
Rock Valley Rural Water District	1982
Rural Water System #1	1969
Southern Iowa Rural Water Association	1975
Southern Sioux County Rural Water System	1977
Southwest Regional Water District	1980
Wapello Rural Water Association	1976
Warren Water District	1978
West Central Iowa Rural Water Association	1970
Xenia Rural Water District	1978

What Do I Need to Know About PFAS?

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

As an ever-increasing hot topic, you might've heard mention of "PFAS" contamination in drinking water in the past few years. High-profile PFAS contamination events continue to occur, and as a result, there have been many films and documentaries about the subject recently. Unsurprisingly, PFAS has also been a subject of discussion at numerous water industry events and trainings. But in the last couple of years, "PFAS" is a term that more and more members of the public have at least heard. But for those who don't know — what exactly is PFAS?

SO, WHAT IS PFAS?

"PFAS" is an acronym for Per- and Polyfluoroalkyl Substances. These Per- and Polyfluoroalkyl Substances are a group of chemicals that are used in, or a by-product of the manufacturing of a multitude of products — many that are used every day. PFAS containing products range from water resistant clothing and non-stick cookware to fire-fighting foams and pesticides. PFAS has been used in the manufacturing of

consumer products since the 1940's, so as you might imagine, completely avoiding PFAS containing products would be difficult. PFAS molecules are held together by a bond of carbon and fluorine atoms, which does not break down easily. As a result, PFAS chemicals tend to "bioaccumulate" — meaning they accumulate in living organisms at a rate faster than they are excreted. For these reasons, you might have heard the term "Forever Chemical" used to describe PFAS.

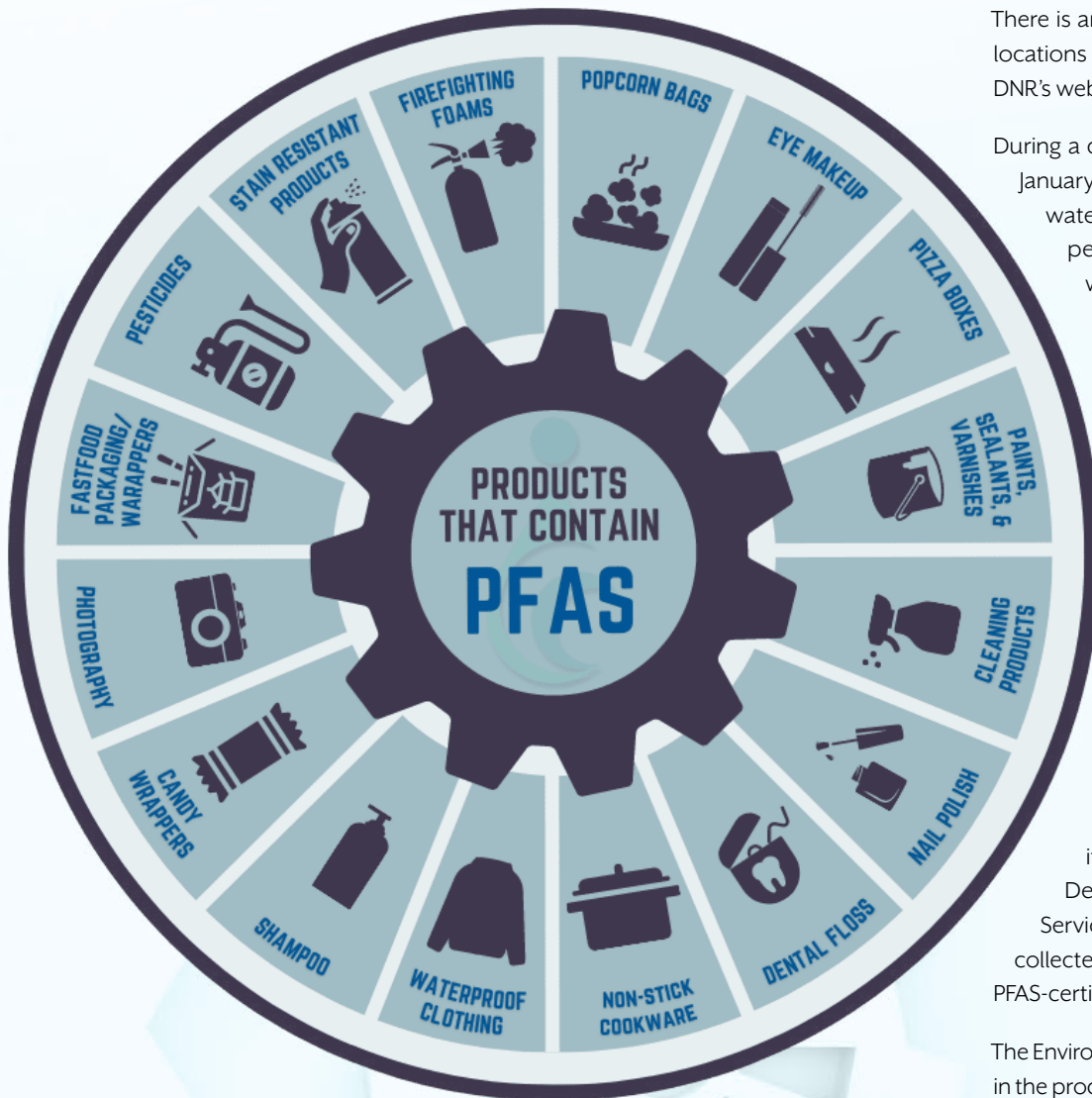
WHY SHOULD I BE CONCERNED?

High levels of PFAS have been found to have adverse health effects in humans including increased cholesterol levels, increased risk of cancers such as kidney and testicular cancer, changes in liver enzymes, and issues for pregnant women including high blood pressure and low birth weight. Further research into the health effects of PFAS is ongoing.

As mentioned, PFAS chemicals don't break down easily and can originate from a variety of everyday products and sources. According to the Centers for Disease Control and Prevention (CDC), there are currently over 9,000 (and growing) known PFAS chemicals.

Screenshot of the Iowa DNR's Interactive PFAS Sampling Map





A 2015 report by the CDC concluded that PFAS can be found in the blood of 97% of Americans. As regulations and lawsuits take hold, specific chemicals are taken out of use, and often are simply replaced by a new PFAS chemical.

WHAT IS CURRENTLY BEING DONE?

Research dating back to the 1960's correlates PFAS exposure to negative health effects on humans. The known health effects are typically related to high levels of exposure,

however, PFAS exposure for most individuals is relatively low. Currently, research is being done into the health effects of low-level exposure over long periods of time.

From October 2021 to December 2022, the Iowa Department of Natural Resources (DNR) tested 116 public water supplies statewide, accounting for around 46% of Iowa's population. Both raw and finished water were tested for twenty-five PFAS chemicals, four of which currently have established health advisory levels. Twelve percent of the finished water samples reported concentrations above the health advisory levels.

There is an interactive map showing testing locations and results available on the Iowa DNR's website.

During a designated 12-month period from January 2023 to December 2025, all public water supplies serving 3,300 or more people will monitor their drinking water for 29 of the most common PFAS chemicals. Additionally, 18 randomly selected small systems in Iowa will perform the same PFAS monitoring by the end of 2025. In Addition to EPA's PFAS sampling efforts, the Iowa DNR will continue to sample for PFAS at small alluvial systems in Iowa over the next two years.

Private wells in Iowa are eligible for funding for PFAS testing through the Grants-to-Counties program. Funding requests must be submitted by the county sanitarian and approved by the Iowa Department of Health and Human Services. Private well samples must be collected by trained staff and analyzed by PFAS-certified laboratories.

The Environmental Protection Agency (EPA) is in the process of establishing legally enforceable Maximum Contaminant Levels (MCLs) for six PFAS compounds nationwide. This would require monitoring, public notification, and reduction of these compounds by the public water supply should they exceed the established MCLs. The regulations are expected to be finalized by the end of 2023.

As mentioned, the water industry and water utilities in Iowa are at the forefront of detection and notification of PFAS chemical presence. It is important to reiterate that PFAS can be traced to many different sources, and water is only one of the ways PFAS can enter the human body.

THE FOLLOWING IOWA DNR AND EPA RESOURCES WERE USED IN DEVELOPING THIS ARTICLE

- <https://www.iowadnr.gov/About-DNR/DNR-News-Releases/ArticleID/4446/Iowa-Department-of-Natural-Resources-releases-summary-of-PFAS-sampling>
- <https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas>
- <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>
- https://www.iowadnr.gov/Portals/idnr/uploads/water/pfas-files/PFAS%20Summary%20March2023_New.pdf



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WATER MATTERS: Trash It, *Don't Flush It*

When inappropriate items are flushed down the toilet or poured down the drain, it damages your community wastewater treatment facility. Our facilities are not designed to remove items other than human wastes. Flushing certain household products, instead of tossing them in the trash, can clog drainpipes, contaminate the water system, or even cause environmental damage. Please flush wisely by only putting toilet paper, water, number one and number two in your toilet for disposal.

Here is a Top Five list of "What NOT to Flush":

1. "Flushable" Wipes

Although the package might state otherwise, flushable wipes are NOT flushable. Just because they can go down the toilet does not mean they should go down the toilet. Wipes are not made of materials that break down quickly, they can easily get stuck in drains and cause clogs. They also wreak havoc on treatment plant filtration systems. If you wish to use wipes, keep a lined trash can in your bathroom and dispose of wipes there instead.

2. Paper Towels and Tissues

If you've run out of toilet paper, paper towels and facial tissues are not a suitable substitute. These paper products were designed to absorb water, not dissolve in it like toilet paper, so they're more likely to block up your pipes. Always dispose of paper towels and tissues in the garbage, not the toilet.

3. Medications and Other Hazardous Materials

To help prevent water pollution, never flush medications or potentially hazardous household materials (such as paint and some cleaning products, including cleaners for ovens, windows, and tile) down the toilet. According to the Food and Drug Administration, the best way to dispose of unused or expired medicine is to drop it off at a drug take-back site. For household hazardous waste, the Environmental Protection Agency suggests locating a collection program in your community that can help you recycle or dispose of the materials safely.

4. Fingernail Clippings and Nail Polish

Just because fingernails are an organic matter, doesn't mean it won't hurt the environment. Unfortunately, it does. Similar to dental floss, nail clippings can form with other things and create a giant ball of blockage in the sewage network trapping unwanted odors in your plumbing or clogging up a filtration system. Nail polish is another substance that does not dissolve in water but hardens causing serious blockage potential. In addition, it is a hazardous material that contaminates the environment.

5. Kitty Litter

Unlike human variety, feline waste should never go in the toilet. Flushing cat litter or waste down the toilet can introduce potentially harmful parasites into the water supply, while the litter can absorb water and clog pipes. Always bag and dispose of cat litter and waste in the trash.

It's important to remember that a toilet is not a replacement for your garbage can. Protect your plumbing and your wastewater treatment plants by following these guidelines.