

JULY 2026 | Rathbun Regional Water Association

QUENCH

news by the glassful



Iowa's Water and Wastewater Workforce

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THE 49TH ANNUAL MEMBERSHIP MEETING

The 49th Annual Membership meeting for Rathbun Regional Water Association (RRWA) was held at the RRWA Treatment Plant, 16166 Hwy J29, Centerville, Iowa on February 26, 2026, at 7:00 p.m.

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

DISTRICT 2

Denny Amoss – Albia, Iowa

DISTRICT 3

Doug Goben – Corydon, Iowa

DISTRICT 7

Curt Frank – Oakville, Iowa

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, Douglas Schock-Bloomfield, and Bill Hillyard-Burlington.

Other items discussed at the meeting were:

- The 2025 Financial Report of RRWA
- Updates on activities and projects during 2025 and for 2026

RRWA BOARD OF DIRECTORS

Randy Eddy, *Chairperson*

Denny Amoss, *Vice Chairperson*

Doug Goben, *Secretary & Treasurer*

Rob Caviness

Curt Frank

Garry Schiller

Ken Wuthrich

2025 Financial Summary for RRWA

At the annual membership meeting, RRWA provided a financial summary for the year 2025, highlighting continued growth, responsible financial management, and a strong outlook for the future. A summary of this financial presentation is included below:

Water System Growth and Usage Trends

The number of water meters in service increased by 230 over the year, bringing the total to 22,200 by the end of 2025. Additionally, water usage increased by approximately 30 million gallons or 1% growth over 2024 numbers - resulting in 3.3 billion gallons used during the year. Average usage per customer per month throughout the year was 7,450 gallons and within 15 gallons of 10-year historic averages.

Revenue Highlights

Water sales generated \$20.2 million in revenue, while wastewater service for 750 customers brought in an additional \$265,000. Together, these services accounted for almost 85% of RRWA's total cash receipts for the year. Other key revenue sources included:

- \$1.5 million from construction income and hookup fees charged for new connections to the distribution system
- \$1.1 million in investment income
- \$450,000 from additional construction services and material sales.

Operating Expenses and Investments

Daily operating costs totaled \$9.1 million, covering everything from water treatment chemicals to fuel and office supplies (increasing 2% or \$185,000). Payroll, benefits, and related taxes added another \$6.4 million in expenses. Loan payments totaled \$2.5 million and RRWA paid \$845,000 in collected excise taxes to the State.

Capital improvements, new asset acquisitions, and construction projects required:

- \$1.5 million for capital purchases and depreciated asset replacements
- \$4.7 million for new hookups and continued service expansion into Mercer County, Missouri.

Year-End Financial Position

Total cash expenditures for 2025 reached \$25.1 million, while total receipts amounted to \$24.7 million, resulting in a negative cash flow of \$417,750. This cash shortfall had been anticipated for the year and was largely due to unusual construction activity and capital infrastructure improvements. Even with this negative cash flow, adequate cash reserves were in place and the company's balance sheet and financial ratios continued to remain strong in 2025 with the company's net worth or members' equity increasing by over \$1.9 million while long term debt and liabilities decreased by \$1.1 million.

FOLLOW US ON FACEBOOK

TO "LIKE" AND "FOLLOW" OUR PAGE SEARCH :

"Rathbun Regional Water Association – RRWA"



RRWA CUSTOMER REMINDERS

- **Always report to RRWA** anytime you believe the meter or remote are not working correctly.
- **Report a verifiable leak or an exposed pipe** in a ditch or stream on a RRWA waterline and receive a \$25 leak report reward.
- 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".
- **Services are subject to disconnection for non-payment** by the first day of the following month after a payment is past due.
- To **avoid a \$250.00 fee** for recurring preventable damage to RRWA equipment, please ensure your remote or smart meter antenna is protected.
- 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.
- **Help keep the meter pit area clean and free of debris** so RRWA can perform routine maintenance checks.
- Customers must have their own water main shut-off valve, as the meter on/off valve is intended for **RRWA/emergency use only.**
- **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.
- **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.
- **RRWA staff can be reached at** 1-800-233-8849 from 8:00 a.m. to 4:30 p.m. Monday-Friday and 24/7 for emergencies at 1-800-233-8849.

SMART METER AND AUTOPAY... **EASY AS 1, 2, 3!**



- 1. REQUEST YOUR SMART METER**
RRWA field staff will install your new Metron smart meter for free.
- 2. SIGN UP FOR AUTOPAY**
RRWA customer service representatives will help you sign up for autopay.
- 3. RELAX**
No more reading your meter, mailing checks, or worrying about water leaks.

Still have questions? Call RRWA at 800-233-8849 to learn how you can benefit from requesting a smart meter and signing up for autopay!

RRWA's 2025 CONSUMER CONFIDENCE REPORTS

Rathbun Regional Water Association's (RRWA) 2025 Water Quality Reports (also known as Consumer Confidence Reports or CCRs) will be available soon! Starting July 1, 2026, you will be able to view your RRWA System's 2025 Water Quality Report online at RRWA's website <https://www.rrwa.net/water-quality-report.aspx> or by clicking on the links below:



Community tour in RRWA's west treatment plant.

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 - 35, 42, 70 - 72 log on to:

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

If your account number begins with 36 - 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 2025 Water Quality 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 Jeremy Buckingham, RRWA's Water Treatment Plant Superintendent, at 800-233-8849 or send an email to Jeremy at jbuckingham@rrwa.net.

EMPLOYEE SPOTLIGHT

JASON RASKIE

Water Treatment Specialist

Jason started his career at Rathbun Regional Water Association (RRWA) in May 2013 in water treatment and holds a Grade II Water Treatment Operator Certification. In addition to Jason's 13 years at RRWA, he previously worked for the City of Centerville for 15 years in the City's treatment plant as well as in distribution. Jason's typical workday consists of operating RRWA's two treatment plants which includes monitoring water quality, processing and recording laboratory tests, chemical management, and addressing related customer inquiries. Jason is a valuable member of the treatment staff and enjoys being able to produce some of the best tasting water in Iowa for RRWA customers.

Jason and his wife, Sunny, live in Centerville and have two sons, Brayden and Colton. Outside of work, Jason enjoys hunting, fishing, spending time with family and friends, and can be found watching Iowa Hawkeyes, Kansas City Chiefs, and NASCAR. Many people may not know that Jason is an avid gardener who enjoys growing plants from seeds and watching them thrive.



JON FOSTER

Information Management Specialist

Jon has been a valued member of Rathbun Regional Water Association (RRWA) for seven years, serving as the Information Management Specialist. His role spans a wide range of responsibilities, including GIS mapping, database management, IT support, network design and management, and programming. One of Jon's favorite aspects of his job is working alongside the entire RRWA team. He takes pride in helping coworkers troubleshoot issues and in streamlining processes that improve efficiency and enhance security across the organization. Jon also played a key role in developing RRWA's online work order system.

Originally from Cincinnati, Iowa, Jon now lives in Centerville with his wife, Renee. Together they have three children—Ashley, Mike, and Jamey—and three grandchildren, Gia, Leo, and Jaxx. Family is a central part of Jon's life, and he enjoys spending his free time helping friends and relatives, as well as playing with his grandkids, nieces, and nephews. His hobbies include working out, watching movies, and playing pickleball. Jon also enjoys motorcycle rides with his wife and can often be found singing along to his favorite music.

Interestingly, before returning to college, Jon spent seven years working in a factory. He later graduated from Buena Vista University and became a grandfather in his late thirties.



DON'T TOUCH THOSE FLAGS...PLEASE!

Help protect underground utilities. Please do not move or remove utility marking flags on your property.



RRWA

*Delivers Safe, Reliable,
and Affordable*

DRINKING WATER

RRWA is the largest rural water system in Iowa, providing drinking water to more than 100,000 customers across 18 counties and 56 communities in Iowa and Missouri. RRWA's board of directors and staff are committed to delivering the highest quality drinking water and service possible. Fulfilling this commitment requires continuous, expert attention to each of the following steps of water treatment and distribution process at RRWA.

RAW WATER SOURCE

Rathbun Lake is the source of raw water for RRWA's two treatment plants. RRWA constructed a caisson-style intake located at Rathbun Lake that pumps water to the treatment plants. Chemicals can be added at the caisson to begin the water treatment process. In addition, RRWA and partners work with landowners in the Rathbun Lake watershed to install conservation practices that help protect lake water quality.



ADDITION OF FLUORIDE AND PHOSPHATE

RRWA adds fluoride to drinking water to promote dental health in children, consistent with recommendations from state and federal public health agencies and leading dental and medical organizations. RRWA also adds phosphate to drinking water to help reduce the likelihood that lead may leach from plumbing in older homes and buildings.

SEDIMENTATION

As raw water from Rathbun Lake arrives at RRWA's treatment plants it enters basins called pulsators. Chemicals added to the raw water just prior to the pulsators cause particles in the water to attach to one another (coagulate) and form clumps (floc) that settle to the bottom of the basins. This floc is then discharged to large lagoons near the water treatment plants.



DISTRIBUTION

Once the water treatment process is completed, RRWA pumps the finished drinking water from plants into the distribution system. RRWA's distribution system includes close to 7,000 miles of pipelines. RRWA pumps an average of eight million gallons of drinking water per day into the distribution system.



STORAGE AND PUMP STATIONS

RRWA's distribution system includes close to 40 water towers and pump stations. These towers and pump stations help provide the storage and pressure required to deliver an adequate supply of quality drinking water throughout the distribution system.



FILTRATION

Clarified water from the pulsators flows into filter basins in RRWA's treatment plants. In the filters, the water passes through 24 inches of granular activated carbon and then 12 inches of sand. The filters remove any remaining particles, natural and synthetic organic contaminants, and taste and odor-causing compounds from the water.



DISINFECTION

RRWA uses a combination of chlorine and ammonia to form chloramines as a disinfectant in the filtered drinking water. Disinfection with chloramines helps ensure that the drinking water is free of any harmful microorganisms. Chloramines are highly effective at maintaining persistent disinfection residual throughout the water distribution system.



Importantly, RRWA continuously monitors water quality during the treatment process and in the distribution system to ensure it meets all safe drinking water standards. RRWA routinely reports this monitoring data to state and federal regulatory agencies. In addition, RRWA responds quickly to incidents such as main breaks and has built redundancy into both its treatment and distribution systems to maintain reliable service. RRWA's board of directors and staff take great pride in providing a safe, reliable supply of drinking water while keeping this essential service as affordable as possible for our customers.



LEARN ABOUT Rathbun Lake Water Quality Monitoring

Strong Partnership Monitors Water Quality in Rathbun Lake

Since 1997, RRWA and partners including the US Army Corps of Engineers, Iowa DNR, Iowa State University, and State Hygienic Laboratory at the University of Iowa have collaborated to monitor water quality in Rathbun Lake and the lake's tributaries. Monitoring is currently conducted monthly from April through October at four permanent sites in Rathbun Lake and on four main tributaries to the lake. Parameters routinely measured include total phosphorus, total nitrogen, total suspended solids, Secchi

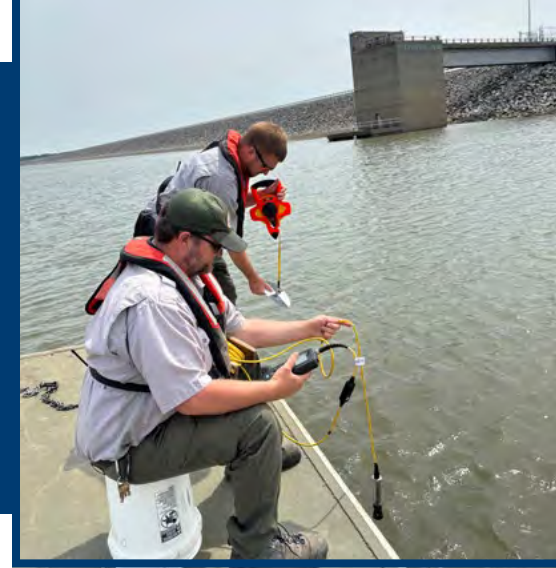
depth, temperature, pH, dissolved oxygen, ammonia, chlorophyll-a, and cyanobacteria. In addition, monitoring is conducted to detect selected inorganic and organic substances such as metals and herbicides.

Importance of Water Quality Monitoring in Rathbun Lake

Water quality monitoring provides essential data for identifying impairments affecting Rathbun Lake. Monitoring results also help guide and assess conservation efforts carried out by landowners in the lake's watershed to safeguard water quality. Partners have used monitoring data to determine that turbidity, or poor water clarity, caused by suspended sediment and algae is the primary water quality concern in Rathbun Lake. High turbidity adversely affects the lake's use as a drinking water source, limits recreational opportunities, and degrades aquatic habitat. These impacts can include reduced disinfection efficiency; formation of disinfection by-products; objectionable taste, odor, and color; cyanotoxin production associated with harmful algal blooms; and episodes of low dissolved oxygen. In response, watershed conservation efforts primarily focus on reducing sediment and phosphorus loading to lower turbidity levels in Rathbun Lake.

Recent Trend in Rathbun Lake Water Quality

The Iowa DNR develops the state's impaired waters list by reviewing water quality monitoring data to determine whether rivers, lakes, and streams meet standards for uses such as drinking water, recreation, and aquatic life. Rathbun Lake's main basin was first listed as impaired in 2012 due to high turbidity caused by suspended sediment and algae.



Improvements in water quality documented through monitoring data compiled by partners have resulted in the lake's main basin no longer being included on Iowa's 2024 and 2026 impaired waters lists for turbidity. The Chariton, South Fork, and Honey Creek arms of the lake remain listed as impaired due to elevated turbidity; however, trends in suspended solids indicate a gradual decline over the past decade. Water quality monitoring also indicates that parameters of particular interest including nitrate, cyanobacteria, and atrazine, as well as PFAS monitored in RRWA's raw water, are below levels of concern for public health, and other parameters such as ammonia and dissolved oxygen may require continued investigation.

RRWA and our partners have gained an in-depth understanding of water quality in Rathbun Lake through this long-term collaborative monitoring program. The information generated by this monitoring has been critical to the effective implementation of conservation efforts that will protect and improve Rathbun Lake water quality for future generations.

IOWA'S Water and Wastewater WORKFORCE

By Cathy Law, Member Services and Events Coordinator; Iowa Rural Water Association

For decades, the invisible backbone of Iowa's communities has been the local water and wastewater operator. These professionals provide a life-sustaining product through a career that offers variety, competitive wages, and the satisfaction of public service. However, a quiet crisis is brewing at the treatment plant.

The Retirement Wave – A "Silver Tsunami"

Industry experts have dubbed the crisis as the "Silver Tsunami." As a generation of veteran operators prepare to retire, they take with them more than just years of service — they take "institutional knowledge" that can't be found in a manual. While a SCADA system can monitor levels and flows, it cannot replace the "gut feeling" an experienced operator develops over thirty years. In Iowa, the loss of these Grade 4 certified mentors is no longer a distant threat; it is a current reality. National and state-level data indicate that over **one-third of current water operations professionals** are at or nearing retirement age. **Research shows that fewer than 1% of operators work beyond age 66.**

To combat this decline, Iowa is moving beyond awareness into active recruitment. "Training and mentorship is becoming our biggest challenge," says Anthony Tonarelli, Lead Instructor at Des Moines Area Community College's (DMACC) Water Environmental Technology (WET) Program. "Utilities that invest in internships tend to benefit the most because they are building a pool of qualified applicants before the positions even open."

"In many ways it becomes a chicken or the egg situation, utilities need experienced operators, but it's difficult for students to gain that experience if they aren't given opportunities to learn alongside veteran operators before they retire."

One option for smaller Iowa towns is called Contract Operations. Many small towns in Iowa cannot find full-time staff and therefore are turning to "Operator-in-Charge" (ORC) contracts. This is where a community "rents" a certified operator from a private firm or neighboring municipality. This option, while economical for Iowa's small communities, is perhaps less desirable when it comes to wanting a confident level of knowledge in an individual plant.

The Struggle to Attract Young Operators

Unfortunately, the backfill of new talent is currently insufficient to match the rate of departures when it comes to water and wastewater professionals. Nationally, only 1% of water and wastewater operators are 24 years old or younger. Iowa reflects this trend, as awareness of the trade has dwindled among high school and college students. **Industry experts point out that because water services are often taken for granted, the career remains "invisible"** compared to more visible trades like electrical or plumbing. Mr. Tonarelli also stated that "Water and wastewater infrastructure is largely out of sight, out of mind, so unless someone already has a family member or connection in the industry, it rarely shows up on a young person's radar."

As of December 2025, Iowa's general job separation rate was approximately 3.9%, with quits averaging around 34,000 per month across all sectors. To combat turnover, wages have remained competitive in the water trade. In early 2026, the average annual pay for a Water and/or Wastewater Operator in Iowa is approximately \$61,227 (\$29.44/hour).

Iowa can turn this trend around via partnerships with high schools, community colleges and utilities. "The 24/7 nature of the work can



be a concern once students learn about the field, but it's usually not the primary barrier. When students actually visit facilities or talk to operators, they often realize the work is hands-on, technical, and stable, with strong wages and benefits." says Ms. Fensterman, of Kirkwood Community College in Cedar Rapids.

Mr. Tonarelli said that the WET Program graduates are in strong demand. Career stability is appealing to Iowa's youth, but many utilities, especially smaller communities, don't typically offer relocation incentives or aggressive recruitment packages. This is a huge roadblock for Millennials who have come to expect certain benefits that promote a good work/life balance.

Iowa's Proactive Solutions (Legislative & Educational)

While the state of Iowa faces a "silver tsunami" of retirements, innovative legislative and educational efforts are emerging to fill the gap. **Many Iowa water agencies are working on ways to get the word out to younger generations about the opportunity of a water industry career path via job fairs and various other public outreach channels.**

In conjunction with this initiative, these water agencies have organized a program called Water in Progress. This program gives young adults the opportunity to intern for water systems, giving them a taste of what the water industry has to offer. Water in Progress has provided financial assistance to participating systems for intern wages for the last half dozen years now. This program has shown success for interns by both directing interns into water related studies and full-time employment with the participating water system.

From Kirkwood's perspective, Ms. Fensterman says that utilities across Iowa recognize that they need to develop the next generation quickly. Because of that, many facilities are very willing to work with Kirkwood's two-year degree students through internships, job shadowing, and part-time roles while they're still in school. In many cases, those students are learning directly from experienced operators who are intentionally passing on knowledge before they retire. So while the number of veteran mentors is shrinking, the interest from utilities in training Kirkwood students is actually increasing, because they see these students as the future of their workforce.

The DMACC WET program frequently sees students hired before they even finish the program. If a student has already been working part-time or completed an internship with a utility, often a city will move quickly to bring them on board. A city will gain firsthand knowledge of a candidate's intelligence, willingness and passion for the work and realize the need to hire them before they move on to another career opportunity.

IDNR Plan for Action

According to Laurie Sharp, Senior Environmental Specialist with the Iowa Department of Natural Resources (IDNR), There is a prevailing cultural perception that an insufficient number of new operators are entering the workforce to meet current and future demand. Compounding this issue is the ongoing loss of experienced operators to private industry, retirement, or general attrition. Additionally, facility upgrades; new and emerging contaminant regulations (predominately PFAs and LCRI implementation); waning populations in small communities; and technological improvements are increasing the demand for operators with higher levels of skill and certification. These factors combined often leave facilities without a properly certified Operator-in-Charge, creating potential risks to compliance, public health, and operational continuity.

In fact, in 2024, the Iowa Department of Natural Resources (DNR) conducted a facilitated strategic planning workshop consisting of stakeholders representing various operator certification grades and industry organizations, IRWA included, aimed at identifying priorities for the state's Drinking Water and Wastewater Operator Certification Program over the next five years. The purpose of this process was to identify the top three to five strategic issues for the program to address; operator recruitment and retention fell out as the second highest priority to stakeholders.

The following Goal and Action Plan resulted:

Goal: Develop and implement comprehensive strategies to recruit and retain certified operators in the drinking water and wastewater industry, focusing on increasing the visibility of the profession, attracting new talent, and ensuring long-term workforce sustainability through the promotion of a livable wage and sustainable income.

Action Plan: Establish a workgroup to identify key barriers to entry and retention in the water and wastewater operator profession. Based on these findings, the workgroup will develop strategies, guidance and template materials to support operators, utilities, and city administrators in promoting the profession and raising public awareness.

These strategies may include, but are not limited to:

- Targeted recruitment initiatives;
- Succession planning;
- Cross-training programs;
- Promotion of the value and essential role of certified operators; and
- Development of clear and consistent guidelines for exam eligibility and career advancement.

Iowa Isn't Waiting for the Crisis to Get Worse

The good news: Iowa is fighting back. As you can see, innovative legislative and educational efforts are emerging to fill the gap. Water agencies, community colleges, and the Iowa Rural Water Association are launching outreach campaigns, job fairs, and many other recruiting efforts.

From Kirkwood and DMACC's perspective, utilities across Iowa recognize that they need to develop the next generation quickly. Because of that, many facilities are very willing to work with students through internships, job shadowing, and part-time roles while they're still in school. So while the number of veteran mentors is shrinking, the interest from utilities in training students and interns is actually increasing, because they see promising young adults as the future of their workforce.

Iowa Community College Program Information

DMACC/WET Program

Anthony Tonarelli,

Lead Instructor/Program Chair

atonarelli@dmacc.edu

www.dmacc.edu/pathways/aanr/wet.html

Kirkwood Community College

Kim Fensterman,

Senior Manager — Environmental, Fire,

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www.kirkwood.edu/water

Is Iowa's Public Water Supply **SAFE?**



By Cathy Law, Member Services and Events Coordinator; Iowa Rural Water Association

Did you know?

Seventy-five percent of Iowans rely on groundwater aquifers as a drinking water source. Aquifer water is filtered via nature passing through plant life, dirt, sand, and rock. Many wellheads and public water systems are protected via directed efforts such as agricultural land use best management practices and mandatory setbacks for potential point source pollutants. There are buffers, wetlands, prairie grass preservations and other intentional land use practices in place near many of Iowa's source water locations. A few utilities in Iowa rely on surface water for their water supply. Surface water utilities face tougher contamination challenges and need additional treatment solutions to meet Iowa's water quality standards. These utilities have come a long way since the 1974 Safe Water Drinking Act was implemented.

Public water systems in Iowa conduct mandatory monitoring for dozens of chemical constituents on a weekly, monthly and annual basis. A common contaminant in Iowa, nitrate-nitrogen has a maximum contaminant level of 10 parts per million (mg/L) in drinking water. If a public water supply has an exceedance of nitrate, or any contaminant, it can lead to public notices, fines, increased monitoring frequency, or even stopping well production until limits can be met. Iowa's Water and Wastewater Professionals are required to hold a state issued license in Water Treatment, Water Distribution and/or Wastewater Treatment with a renewal every two years of the odd numbered year. This means they not only are tested to become licensed by the state, but they are required to attend so many hours of training each year (based on their license level) in order to renew. Iowa's operators are well educated and committed to providing quality on tap to not only you but to their family and friends.

A History Lesson

Iowa's Gen X and Boomers grew up on farms with private wells. Rural Water Systems in Iowa were not introduced until 1973 or later. The first Iowa Rural Water System (RWS) was financed by the USDA Farmers Home Administration in 1970. The water system was constructed in three phases with plans to serve 450 farms and rural residences in the heavy livestock area of central Sioux County. Water service began in 1973 and Rural Water System #1 of Hospers, Iowa now serves 99 percent of the rural population in their service area. With that, the battle for water quality has only been going on for a little over fifty years in the state of Iowa. There has been much to learn and develop during that time to provide a quality life sustaining product.

The forming of a Rural Water System or a Rural Water District was not easy. Volunteers donated countless hours and non-paid travel miles to determine if there was interest in a water project by educating friends and neighbors. Volunteers attempt to gain a signature on an "Water User Agreement" faced challenging questions regarding feasibility and cost of service for the house and livestock. The rural water organization had to show that 80 percent of the potential users in a determined service area had signed the user agreement to gain loan approval. Many farmers were easily sold on the idea due to dingy colored laundered clothing or visible issues of poor quality and quantity water available at the farm home. But there were a few farm communities that did not sign up for rural water due to concerns of costs. And thus, infrastructure was not put in place. To this day there are many private wells in Iowa with very little regulation.

Quality On Tap

There are now 19 Iowa Rural Water Systems (RWS) serving over 109,600 farms and rural residents: 167 franchised and 178 purchasing communities. Service is provided in all or portions of 68 counties and sold to seven RWS in Missouri and Minnesota. There are approximately 37,000 miles of distribution systems that provide adequate and quality water to all their members. A number of these RWS are also furnishing franchised waste disposal service to 92 communities.

Peace of Mind

If you get your drinking water from a public water supply and are interested in your drinking water quality, your utility will have a Consumer Confidence Report (CCR) available to the public. You can easily look on your city website and/or contact the utility for a copy of the CCR. Some utilities use the www.iowaCCR.org website to upload a copy of their CCR for public review. If you get your drinking water from a private well and would like to have your water quality sampled, it is free in many Iowa counties via the Private Well Grants program. Contact your county public health department for more information regarding private well testing.



How can you help eliminate contamination in Iowa's rivers and streams?

PICK UP LITTER AND DISPOSE OF IT PROPERLY.

A large percentage of contamination in rivers and streams can be attributed to litter.

DISPOSE OF CHEMICALS AND FUEL PROPERLY.

It's important to know that you should never pour used motor oil or antifreeze down a storm drain, onto the soil, into a waterway, or into the sanitary sewer. All of these drains flow into rivers, meaning this harmful substance will certainly make its way to your waterway.

MINIMIZE YOUR USE OF PESTICIDES, HERBICIDES, AND FERTILIZERS.

You can do your part by minimizing your use of fertilizers and pesticides on your lawn and gardens. You can also select plants that are native to the area and can thrive in your landscape's natural conditions. In turn, you will have to fertilize them less and use less water in the long run.

If you must use fertilizers, make sure to blow or sweep it back onto your grass if it gets onto paved areas, and avoid applying fertilizer on the grass right before it rains, so it doesn't wash into storm drains and waterways.

DO NOT USE YOUR WATER HOSE AS A BROOM.

Many contaminants find their way on to your driveways and sidewalks. It's best to use an actual broom and/or leaf blower to clean up your driveway rather than letting those contaminants flow into the storm sewer during a rain or when using your water hose. Just remember to sweep/blow things off into the grass and not to the paved street.

CLEAN UP YOUR DEAD TREE LIMBS, LEAVES AND GRASS CLIPPINGS.

Obviously leaves and grass are important parts of the natural environment. Left on land, leaves decompose, feeding your plants and enriching your soil. However, these same leaves and yard waste can lead to problematic water pollution. When large amounts of leaves are washed off our lawns, down our driveways, and into storm drains, they make their way into our water bodies. Leaves and dead tree limbs that fall from the trees also flank nearly every stream and river that feed our rivers and streams contaminating the buffer strips. They then release phosphorus and nitrogen into our water, contributing to water pollution.

DON'T POUR FAT AND GREASE DOWN THE DRAIN.

Most of the dishes we cook leave some sort of fat, oil, or grease residue behind. These substances should never be disposed of down the drain in your kitchen. When poured down the drain, fat and grease can build up over time and clog your pipes. This will lead to sewer pipes clogging and even backing up into your yard and basement. It can also lead to water pollution by carrying contaminants to local bodies of water. Instead, grease, fat, and used cooking oil should be disposed of in the trash or kept in a glass jar for disposal with other solid waste. Best practice is to tear off a piece of aluminum foil and place in the sink drain forming a "cup". Pour grease into the foil cup, let it cool, then fold the foil and place it in the garbage bin.

DISPOSE OF MEDICAL WASTE PROPERLY.

Never flush pills, powders, or liquid medicines down the toilet or dump them outside, whether on land or water. These drugs can accumulate in the water and be consumed by fish and other wildlife. Many communities now offer free safe disposal of expired pills and product via a "Community Disposal Day" and/or by having a disposal bin stationed at the water utility building, in the city office or police station.



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WATER MATTERS

Watersheds

What is a Watershed?

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. A drop of rain that falls anywhere inside a watershed should eventually end up at the outlet.

How big are watersheds?

Watershed size depends on the water body that you are interested in. A puddle in a field may have a watershed of only a hundred square feet or less. By contrast, the watershed of the Mississippi River encompasses roughly 1,200,000 square miles!

Why are Watersheds Important?

First, all the water in a watershed eventually ends up at the same place. As such, anything that might move with the water (like pollution) will travel with it. Second, everybody lives in a watershed, and almost everybody lives downstream from somebody else. So, what we do on our land will have an impact on our neighbors.

John Wesley Powell, a 19th century geographer, put it best when he said that a watershed is:

“That area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community.”

Iowa Watersheds

Iowa's watersheds are defined by the National Watershed Boundary Dataset (WBD) and are organized into hydrologic units (HUCs) from HUC2 (major regions) down to HUC12 (local subbasins). The state contains 56 HUC8 subbasins with a combined drainage area of about 217,733 km² Mapscaping. Each HUC8 boundary represents the area of land that drains to a common outlet, making them the standard planning unit for water-resource management.

Key Watersheds in Iowa

Some of the largest HUC8 subbasins include:

- Lower Big Sioux** (HUC8 10170203)
– ~8,855 km², spans IA, MN, NE, SD
- Upper Grand** (HUC8 10280101)
– ~8,614 km², spans IA, MO
- Little Sioux** (HUC8 10230003)
– ~7,318 km², spans IA, MN
- North Raccoon** (HUC8 07100006)
– ~6,400 km², spans IA
- Lake Red Rock** (HUC8 07100008)
– ~6,326 km², spans IA Mapscaping

Many subbasins cross state lines, so total drainage area includes all contributing watersheds.

Iowa Watersheds

Hydrologic Unit Code (HUC) 8

