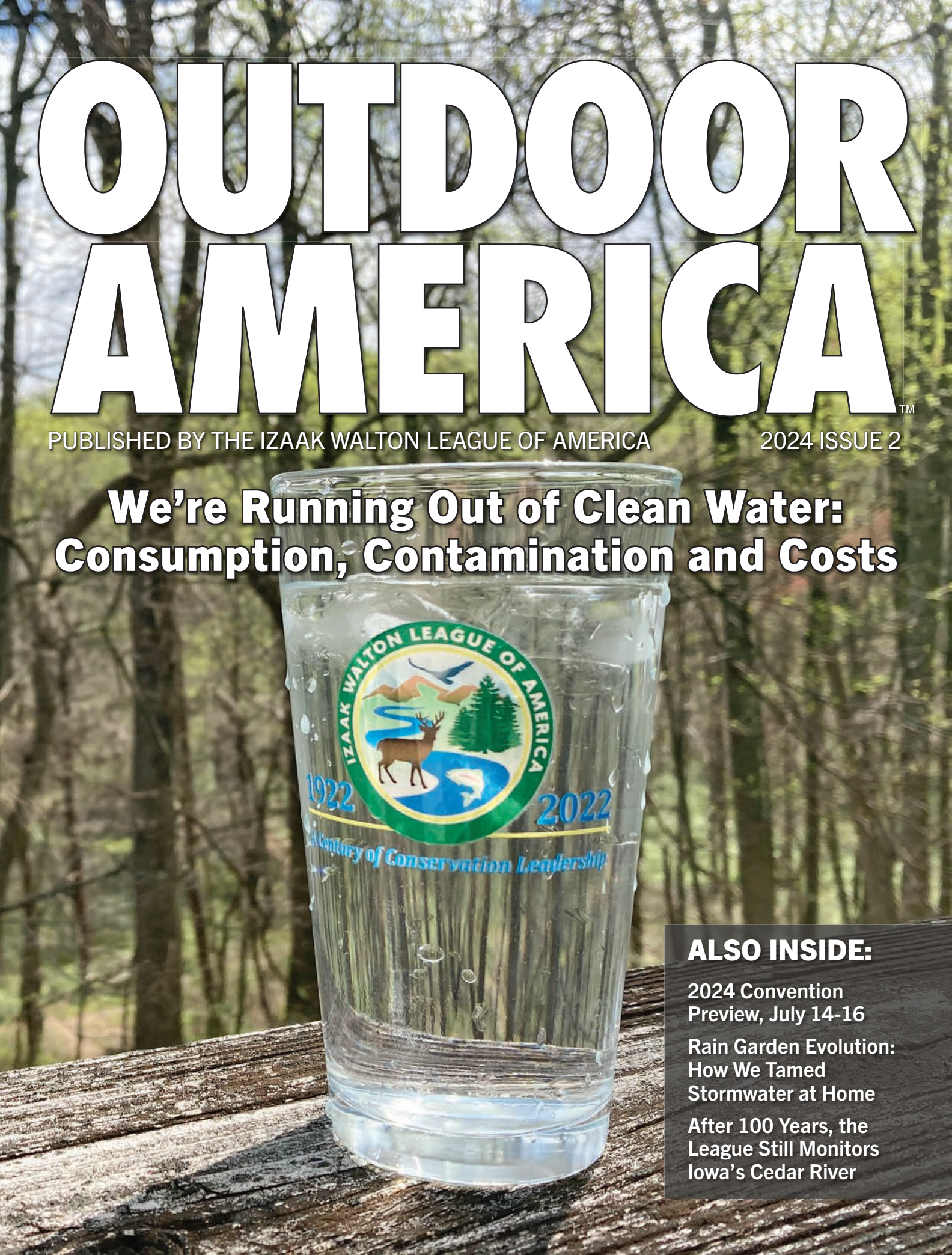
OUTDOOR AMERICA™

PUBLISHED BY THE IZAAK WALTON LEAGUE OF AMERICA 2024 ISSUE 2

We're Running Out of Clean Water: Consumption, Contamination and Costs



ALSO INSIDE:

2024 Convention Preview, July 14-16

Rain Garden Evolution: How We Tamed Stormwater at Home

After 100 Years, the League Still Monitors Iowa's Cedar River

Creation of the Upper Mississippi River Refuge in 1924 Kicked Off the Modern Conservation Movement

The Upper Mississippi River National Wildlife and Fish Refuge is an enduring example of how we can and must take action to save the nation's waterways and ensure a future with clean water. We will need bold steps and new generations of stewardship to address a range of problems—polluted runoff, habitat degradation and invasive species to name a few.

Visit iwla.org/upperMiss for details about the history and events celebrating the refuge centennial.

During 2024, Americans are celebrating the 100th anniversary of the creation of the Upper Mississippi refuge. In events, exhibits and publications during the year, the refuge will be recognized for its value as wildlife habitat and a resource for outdoor recreation while also acknowledging that the river faces a host of environmental challenges today.

Establishing the refuge in 1924 was a monumental achievement due almost wholly to the efforts of the Izaak Walton League of America. In response to plans to drain and fill wetland habitat from Lake Pepin, Minnesota south to Rock Island, Illinois, the League leveraged its 100,000 members to urge Congress, the White House and four states to protect these vital resources within a new national wildlife and fish refuge.

The campaign didn't just establish the largest wildlife refuge of its time, it created the template for the modern conservation movement that helped produce a wave of grassroots actions that would ultimately drive dozens of major conservation achievements in the decades that followed.

Describing the League's work to save the Upper Mississippi wetlands, historian Stephen Fox wrote, "It was a phenomenon—the first conservation group with a mass membership… It brought new pressures on Congress through its sheer size and because it spoke for a different area of the country."

In his book, *The Great River,* historian Phillip Scarpino called the League's grassroots effort to save the Upper Mississippi in the 1920s, "the first modern environmental campaign."

Today, this refuge protects 250,000 acres of the Mississippi floodplain and wetlands along 261 miles of the river. The refuge continues to provide essential habitat for fish and wildlife species in the region including 57 mammals, 260 fish, 37 freshwater mussels and 45 amphibians and reptiles. The Upper Mississippi is a globally important flyway for more than 300 bird species and 40 percent of all North American waterfowl.

The bluffs, vistas and trails found in the refuge host about 3.7 million visits each year for hiking, boating, wildlife observations, fishing, hunting and other recreation, which support $125 million in outdoor recreation and tourism.

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ON THE COVER▶ At our current rate of consumption, we may run out of clean water by 2040.
Credit: Michael Reinemer

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Credit: Pixabay

ABOUT THE IZAAK WALTON LEAGUE OF AMERICA▶
Founded in 1922, the Izaak Walton League of America is a national conservation organization headquartered in Gaithersburg, MD. Our more than 40,000 members protect and enjoy America's soil, air, woods, waters and wildlife. For membership information, call (800) IKE-LINE (453-5463) or visit our website at www.iwla.org.

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Reignite Your Passion

JODI LABS | NATIONAL PRESIDENT

Many of us joined the Izaak Walton League because of our passion for conservation. Others joined the League because of our love for the outdoors, whether it be fishing, camping, hunting or shooting sports. And some of us joined because of our passion for volunteering and believe the League's mission and vision align with our values.

Whatever the reason, the passion that led us to becoming a member gave us a sense of meaning and motivation.

As with any volunteer organization, a small portion of a chapter's membership does a substantial majority of the work that needs to be done. It is difficult for chapters to engage members—not only to attend chapter events but also to take on a leadership role. This leads to many of us assuming several roles within our chapter. While some of us may take on smaller projects such as volunteering for a stream cleanup day or youth fishing day, many take on large projects that extend over time, perhaps even years, such as spearheading a youth archery program or a community outreach program.

In addition to being active with our chapters, some of us have also taken on leadership roles within our state division and at the national level. And why do we do this? We do this because we are passionate about the League and its mission and the work being done by our chapters.

Despite our passion, we can get burned out and some of us start questioning why we do what we do, especially when it feels that we are in it alone or are not supported by our fellow members. These feelings are perfectly normal. If you feel that way, don't give up. Rather, find a way to reignite your passion.

Reconnect with your purpose and remind yourself why you started in the first place.

Find the spark

One way to reignite your passion is to reconnect with your purpose and remind yourself why you started in the first place. Another way is to reflect and reset—reflect on your goals, mission and impact. Think about the impact you have within your chapter. Recognizing that your

contributions have meaning, reflect on the difference you have made in others' lives, perhaps by ensuring cleaner water in your community or protecting a natural space that can be enjoyed by your community for generations to come. Perhaps it is teaching children how to fish or hunt.

Whatever makes you feel good about your impact can make a difference in how you feel about your volunteer work and contributions to your chapter or the League, thereby creating a spark.

Another way to reignite your passion is to revisit your sources of inspiration, sources that sparked your interest in the League's mission. Remind yourself why you joined the League—you loved something about the

League or your local chapter that drew you in. Remember the good days and get back in touch with what you love. Recapture your excitement.

As you reflect, you may find that you need to take on new projects or more challenges to reignite your passion. If that is the case, I encourage you to step out of your comfort zone and try something new. Volunteer to take on one of the projects that your chapter has been trying to get off the ground.

On the other side, you may find that you are doing too much, in which case you may need to step back a bit and encourage others to step up even if it means you need to mentor someone else to take on some of what you are currently doing. After all, we need more members to become engaged and offering to be a mentor may be exactly what one may need to get more involved.

As for me, I always find that the more I learn about the League's accomplishments, the spark is rekindled and I am able to find ways to reconnect with my purpose, which is to make this planet we live on a better place for future generations—a purpose that gives me a sense of meaning and motivation.

I recently took a trip to La Crosse, Wisconsin, to meet with fellow Ikes working on events centered around the 100th anniversary of the Upper Mississippi River National Wildlife and Fish Refuge. I attended Steve Marking's Will Dilg production wherein he eloquently told the story surrounding the establishment of the Refuge by drawing on Dilg's speeches and editorials in *Outdoor America.*

I always find that the more I learn about the League's accomplishments, the spark is rekindled.

My favorite part of the story was hearing how Dilg reached out to the General Federation of Women's Clubs for help in convincing Congress to protect the lowlands of the Upper Mississippi River from being drained, recognizing that Ikes may not be able to do it alone. With the help of the Federation's membership of two million women, Dilg's bill to create the Refuge made it all the way through Congress (with unanimous approval) to signing by President Coolidge in just 11 months!

As you give thought as to how you may reignite your passion for the League, I recommend that you consider attending this year's national convention in Maryland where you can meet other Ikes from across the country who are excited about the work they are doing at their chapters; such excitement can be contagious, thereby lighting a spark for you. You can also learn about League history and its accomplishments, including more about the Upper Mississippi Refuge. You can also be an active part of the process of developing League policy for the future.

I encourage each of you to identify the activities within the League that energize you and spark the passion that brought you on this journey as an Izaak Walton League member.

Join Us at the National Convention: Members Make the Difference—and the Decisions

SCOTT KOVAROVICS | EXECUTIVE DIRECTOR

In July, League members will gather for the national convention hosted by the Maryland Division. I encourage every Ike to attend at least one national convention. You'll not only have fun and connect with members who share your passion for conservation and outdoor recreation, you'll be part of the bottom-up decision-making that's been a hallmark of the League for more than 100 years.

The convention will be held in Cambridge, Maryland on the Eastern Shore of the Chesapeake Bay. Maryland's Eastern Shore has something for everyone: fishing, boating and water sports; 400 years of incredible history; and quiet towns along the Bay and rivers with unique shopping, dining and architecture. The convention site is also close to the nation's capital, historic Annapolis and awesome Atlantic coast beaches. Plan to stay a few extra days to enjoy all that the region has to offer.

We've got an action-packed agenda on July 14 and 16 (see more on pages 14 – 23). The schedule includes speakers and panel discussions on a range of topics, national officer and Executive Board elections, votes on policy resolutions, and national and membership awards. And we'll have some fun too with convention traditions like the Parade of States (think progressive dinner or potluck featuring regional food and drink in hotel rooms).

The most important decisions will be made by delegates—who are selected by their chapters to represent them at the convention. These delegates will elect national officers. They will also vote on resolutions that establish League policy on conservation, outdoor recreation and other issues.

The most important decisions will be made by delegates—who are selected by their chapters to represent them at the convention.

When the League, chapters and divisions advocate on public policy issues, the positions taken at any level are governed by League policy specifically approved by delegates at the national convention. Members, staff and elected leaders rely on member-adopted policies to guide

issue advocacy. This is one of the most tangible examples of the League's bottom-up structure.

For me personally, convention helps recharge my batteries for another year. The convention itself is hard work and we always have a lot to accomplish in only a few days. But it's also rejuvenating to spend time with members who are so committed to advancing the League's mission and to visit with folks who have become my friends and mentors over time. And I think every attendee—whether it's their third or thirty-third convention—feels the same way.

So, give it some thought. I look forward to seeing many of you soon at the national convention in Cambridge, Maryland.

OUTDOOR AMERICA

THE IZAAK WALTON LEAGUE OF AMERICA

MEMBERS WITH QUESTIONS OR CONCERNS ABOUT LEAGUE POLICIES CAN REACH OUT TO THEIR NATIONAL DIRECTOR. FOR CONTACT INFORMATION, CALL THE LEAGUE'S HEADQUARTERS AT (800) IKE-LINE.

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Address Changes:
Send new address (enclosing old label) four weeks in advance to IWLA Membership Dept., 707 Conservation Lane, Gaithersburg, MD 20878-2983.

IZAAK WALTON LEAGUE OF AMERICA MISSION STATEMENT

To conserve, restore and promote the sustainable use and enjoyment of our natural resources, including soil, air, woods, waters and wildlife.

WWW.IWLA.ORG

Izaak Walton League

ENJOYING & PROTECTING AMERICA'S OUTDOORS

Not a member? It's easy to join!

Visit www.iwla.org to locate a chapter near you or join as a national or corporate member. You can also call 800-IKE-LINE and ask for the membership department. Your membership supports our conservation and education efforts and links you with a nationwide network of people working on common-sense solutions to environmental issues.

We're Running Out of Clean Water: Consumption, Contamination, Costs

By MICHAEL REINEMER, Editor

The glass is half empty.

Once, clean fresh water was something we could take for granted. But that's no longer possible. Clean water, essential to our survival and a basic human right, is increasingly scarce. About one half of one percent of the water on Earth is clean and readily available.

At our current rate of consumption, the world may run out of water by 2040, says a 2023 report from the Bank of America Global Research. A March 2024 report from the University of Miami predicts dire shortages in the decades ahead in the U.S. We're accustomed to hearing about the dire shortages and water wars in the arid regions of the West, but they are now appearing in Eastern regions as well.

The good news is that we have water conservation technologies, policies and practices that could preserve supplies of clean water for generations to come—if we apply them broadly across industries and our individual households.

At what cost?

Keeping water clean and plentiful comes at a cost.

What we directly pay for water varies depending on where we live. It's not just the monthly bill from our water utility. The cost of clean water also shows up in what we pay in taxes for infrastructure, for food, energy, healthcare—and even computing power.

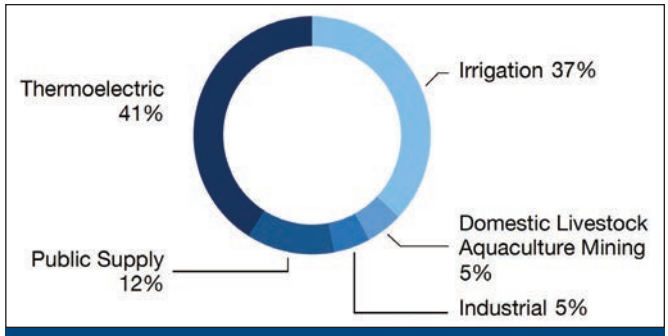
In some cases, what we pay may appear to be artificially low due to how it is priced, regulated and dispersed over many parts of our economy. Water prices "typically lag behind demand," notes Haim Israel, Head of Global Thematic Research for Bank of America.

So it's worth taking a look at how access to fresh water will be affected by consumption trends, climate, contamination and conservation.

Consumption

According to the most recent (2015) data from the U.S. Geological Survey (USGS), Americans use about 322 billion gallons of water per day in the U.S., and 87 percent of that is fresh water.

Agriculture consumes a vast amount of both ground and surface water in the United States. Irrigation accounts for 42 percent of the nation's total fresh water withdrawals. Globally, water for



Water use by category for 2015, the most recent data available from U.S. Geological Survey.

MICHAEL REINEMER, USGS, ISTOCK

agricultural irrigation accounts for 72 percent of withdrawals of fresh water.

Aquifers that supply 90 percent of water systems in the U.S. and irrigate "some of the world's most bountiful farmland" are now dwindling, threatening the ability to support industrial-scale agriculture, according to a series published in the *New York Times* in 2023. The newspaper quoted Don Cline, USGS associate director for water resources, who said there is no way to replenish that lost groundwater—or even explain what it means to the public. "There's almost no way to convey how important it is."

Thermoelectric power—creating steam by burning coal or oil, for instance—accounts for at least 133 billion gallons per day, representing 34 percent of total freshwater use in the U.S.

Data centers represent a relatively new but major source of water use. Huge arrays of large servers consume a vast and growing amount of electricity. The computers generate a lot of heat that requires water for cooling. Today, data centers are among the 10 largest consumers of water.

One large data center can consume as much as five million gallons per day—roughly as much as a town of 50,000 would consume daily. These data centers now appear in many parts of the U.S., including Iowa, where Microsoft has data centers that use a supercomputer designed to train its artificial intelligence (AI) models.

Kerri Johannsen, energy program director at the Iowa Environmental Council, said a data center in Altoona, Iowa, consumes about one-fifth of the water the city is using.

About half of Iowa was experiencing severe or extreme drought conditions in March 2024, and the state's groundwater levels are declining. So the

Data centers like this one in Silicon Valley, California are among the nation's top 10 consumers of water.

At our current rate of consumption, we may run out of clean water by 2040.

availability of water—not to mention the quality of water—is already a significant issue there.

Individual households in the U.S. use about 80 gallons of water per person per day. Water-saving habits, appliances and fixtures, such as washing machines, shower heads and faucets, could reduce that number substantially.

We have made progress in using water more efficiently, through greater awareness about how much water we use in the home or for lawns and landscaping. That's a sliver of good news. While the population continues to grow, per capita water use has remained fairly flat in many places in the U.S. and across the globe.

We use about 322 billion gallons of water per day in the U.S., and 87 percent of that is fresh water.

Wasted water

Our water infrastructure is old and leaky, which means we waste a vast volume of water. At utility scale, loss of water due to broken or leaking pipes is a huge and costly problem. A utility system loses revenue along with the lost water.

Households in the U.S. lose a trillion gallons of water per year due to leaks and easily fixable problems, says EPA. Ten percent of households have leaks of 90 gallons per day. Typically, the water is lost through minor problems—dripping faucets, leaky valves and worn flappers that regulate water in toilets.

Recent action by Congress, like the Bipartisan Infrastructure Law, aims to address waste by helping water managers conserve water and use it more efficiently.

See box on page 12, "How to Reduce Your Use" for tips about saving water at home.

Climate

The climate crisis contributes to the scarcity of fresh water in several ways. Warmer temperatures mean more evaporation and greater amounts of moisture in the atmosphere. That translates into extreme weather patterns that produce drought in some places and flooding in others: dry places are even drier, wet places are wetter.

Flooding means more erosion and nutrients washing off agricultural fields and into waterbodies

SCOTT KOVAROVICS

that serve as sources for drinking water. Nutrients like phosphorus and nitrogen flowing off farmlands can pollute water.

They also foster harmful blooms of "blue-green" algae in ponds and lakes. These blooms produce a toxin, microcystin, that poses dangers to people and pets. The departments of natural resources in several states published warnings last summer about the poisoning risk to dogs that microcystin poses. See box, "Costs of nutrient pollution that causes algal blooms."

Warmer temperatures globally also melt ice that raises sea levels. As seawater moves inland, it floods freshwater aquifers, making them useless as sources of drinking water. Along Delaware's coast, flooding seawater in tidal streams has killed crops as the salt water pushes farther inland.

Contamination costs

Water pollution is one of the problems that spurred conservationists to create the Izaak Walton League in 1922. While industrial wastes and sewage dumped directly into rivers and streams was blatant and obvious in the 1920s, the pollutants today—whether microplastics, nitrate or PFAS—are less visible but equally harmful.

Nitrate. In many places in the U.S., and particularly the Midwest, drinking water sources contain nitrate, which is linked to some cancers and other dangers to people. It forms in the water when nitrogen washes off agricultural lands, or when sewage systems leak into waterways. The limit set by the federal Safe Drinking Water Act is 10 milliliters per liter (or 10 parts per million) so water utilities must keep water below that level to be considered safe for human consumption. But recent studies have shown that prolonged exposure at levels below 10 mL per liter increases the risk of several forms of cancer.

At Des Moines Water Works in Iowa, removing nitrate from drinking water drawn from the Des Moines or Raccoon River costs up to $10,000 per day. A wet spring in 2022 washed a lot of nitrogen into local waterways, which required the utility to use its special treatment system to remove nitrate and keep water within the EPA limits. A recent spill that dumped concentrated nitrogen fertilizer into a ditch and then into rivers in Iowa and Missouri compounded the expected annual springtime "flush" of nitrogen washing off agricultural fields into streams and lakes.

The Izaak Walton League's water monitoring programs like Nitrate Watch (nitratewatch.org) and Salt Watch (saltwatch.org) allow volunteers to use free test strips to monitor local waterways. The volunteers can upload the test results to a public repository for water quality information called the Clean Water Hub (cleanwaterhub.org) which can display results from more than 56,000 water samples nationwide. Volunteers are also encouraged to report pollution to local officials.

For ratepayers who pay the higher water bills and for consumers who drink the water, it's obviously cheaper and safer to keep carcinogens and other pollutants out of the water in the first place. A host of conservation practices help. Planting cover crops and reducing tilling so less soil erodes helps keep chemical nitrogen on the field instead of washing into streams and groundwater that supply our drinking water.

In Nebraska, small towns had to make big investments to remove nitrate from their drinking water.

In January 2021, the Union of Concerned Scientists released a study predicting that "Iowans will be on the hook for up to $333 million over the next five years to remove nitrates polluting the state's drinking water supplies and threatening public health."

In 2020, the University of Nebraska-Lincoln (UNL) reported that a group of towns—Creighton, Brunswick, Orchard, Osmond and Plainview, with a combined population of fewer than 4,000 residents—were forced to pay nearly $9 million to ensure drinking water does not exceed the limit for nitrate. That cost works out to more than $2,200 per person in those towns.

The American Water Works Association says the cost of removing forever chemicals like PFOS and PFOA will cost billions of dollars per year. This plant treats water in northern Virginia.

MICHAEL REINEMER

The UNL report cited five other examples in Nebraska where small towns had to make big investments to remove nitrate from their drinking water. "When a public water supply well gets contaminated with nitrates above safe levels, the state requires the community to come up with a solution, such as purchasing new land where they can drill a new well, installing a treatment system or laying pipe to connect to another community's water system."

The pollution culprit in Nebraska was excess nitrogen washing off irrigated corn fields. Yet, efforts to renew and improve the popular Farm Bill incentives to reduce nitrogen use—without reduced crop yields—are floundering in Congress.

"As nitrate pollution increases, more and more communities throughout the U.S. will have to invest heavily in building treatment plants to remove nitrates from source waters," concluded a 2018 study by the Northeast-Midwest Institute. "[M]any smaller communities are simply incapable of financing the necessary treatment plants without additional support…. By weakening regulations that protect source waters from pollution, Congress and the Executive Branch risk compounding the growing costs associated with providing clean drinking water."

For ratepayers and consumers, it's obviously cheaper and safer to keep carcinogens and other pollutants out of the water in the first place.

Salt. Excess salt applied to roads, sidewalks and parking lots is toxic to aquatic life in high concentrations and can add unhealthy levels of salt to drinking water. Salt is also corrosive to infrastructure and cars, which is expensive for taxpayers and car owners.

Worse, untreated water with high levels of salt can leach lead from water pipes into residential drinking

water. There is no safe exposure level for lead, which can cause neural damage to children. And there are roughly one million miles of lead water pipes in the U.S. The Biden Administration has announced plans to replace those pipes in the years ahead, but in the meantime, millions of consumers face potential harm from tap water.

PFAS. Another type of chemical making its way into U.S. waterways, fish and drinking water is per- and polyfluoroalkyl substances, or PFAS. Sometimes called "forever chemicals" because they persist and don't occur naturally, these compounds are linked to a variety of health problems including cancer, decreased fertility and developmental delays in children.

Existing technologies, practices and policies could go far to solve the water scarcity crisis.

Scientists from the University of Notre Dame examined more than 100 sportfish from Lake Michigan and found PFAS in all of them, reports Irene Miles for Illinois-Indiana Sea Grant. The PFAS levels "were lower there than in most Great Lakes," she wrote. But the researchers reported widespread presence of a very toxic PFAS called PFOS (perfluorooctane sulfonate), particularly in trout and salmon. Production of PFOS ended more than two decades ago, but the compound continues to contaminate fish today.

The Minnesota Department of Health issued a warning in March 2024 that fish in the Upper Mississippi River from St. Paul to Wabasha should not be eaten because of a high concentration of PFAS found in fish from those waters.

In April, the Biden Administration issued a rule it described as the first-ever national, enforceable drinking water standard for PFAS. "Exposure to PFAS has been linked to deadly cancers, impacts to the liver and heart, and immune and developmental damage to infants and children," according to EPA's statement. The agency also announced funding through the Bipartisan Infrastructure Law to help states "implement PFAS testing and treatment at public water systems and to help owners of private wells address PFAS contamination."

EPA estimates that between about 6 and 10 percent of the 66,000 public drinking water systems subject to the rule may need to reduce PFAS to meet the new standards. All public water systems have three years to complete their initial monitoring. They must inform the public of the level of PFAS measured in their drinking water.

For two common chemicals, PFOS and PFOA (perfluorooctanoic acid), EPA set a Maximum Contaminant Level Goal (a non-enforceable health-based goal) at zero. With that, the agency underscores that "there is no level of exposure to these contaminants without risk of health impacts, including certain cancers." EPA also set enforceable Maximum Contaminant Levels at 4.0 parts per trillion for PFOA and PFOS, to reduce exposure in drinking water to the lowest levels that are feasible for implementation.

Conservation

One enormous source of available fresh water is the water that we can stop wasting. Conservation comes in many dimensions—some require advanced technology and others simply require common sense.

Household strategies can combat the loss of about a trillion gallons of water per year due to leaks, says EPA. One household can leak as much as 10,000 gallons per year, and 10 percent of households have leaks of 90 gallons per day. Typically, the water is lost through problems that are easy to fix, like dripping faucets.

To address water scarcity, the International Code Council convened a meeting of water experts in Washington in March 2024 to examine conservation solutions that focus on building standards and codes for homes.

In partnership with the University of Miami, the Code Council issued a report, "Water Conservation and Codes: Leveraging Global Water-Efficient Building Standards to Avert Shortfalls," which examines the critical need for the rapid adoption of the updated water conservation standards contained in the 2024 International Water Conservation Code Provisions (IWCCP).

The Code Council believes that in addition to utility-scale solutions, individual buildings, including homes, can have an equally powerful effect on conservation.

The report estimated potential water savings for dwellings in Phoenix, Las Vegas, Houston and Des Moines, and established baseline numbers for average use of potable water (for drinking, bathing, etc.) and non-potable use (e.g., toilet flushing), and it estimated water savings that could be derived from four strategies:

- Adoption of more efficient plumbing fixtures
- Rainwater harvesting, treatment, storage and reuse
- Gray water treatment, storage and reuse and
- HVAC condensate capture, treatment, storage and reuse.

The study projected the water savings if existing 2021 IWCCP standards were applied to lavatory faucets, shower heads, sink faucets, toilets, clothes washers and dishwashers.

Households in the U.S. lose a trillion gallons of water per year due to leaks and easily fixable problems.

For the average single-family house in Des Moines, for example, applying the 2021 IWCCP standards would reduce annual use of water from 60,907 gallons to 47,925 gallons.

See box, "Reduce Your Use," for tips about saving water at home.

The report also proposes installation of systems in single-family homes and multifamily dwellings to harvest gray water (from bath, shower, laundry, lavatory and HVAC equipment). That water could be used for flushing toilets, which would reduce the use of potable water from municipal systems for that function. The report found the potential gray water harvesting in Des Moines from "on-site non-potable water reuse systems would reduce the need for municipal water for non-potable uses by an average of 72 percent."

For utility-scale conservation there's an immense need to reduce wasted water. The nation's water infrastructure is old and leaky, and loss of water due to broken or leaking pipes is a huge and costly problem.

Recent actions by Congress, like the Bipartisan Infrastructure Law, aim to address waste by helping water managers conserve water and use it more efficiently. Bank of America Research argues that every dollar spent on solutions to the water crisis yields seven dollars in return, through cost savings, health and other benefits. Fixing the problem would require an investment of about one percent of gross domestic product, they assert.

Most analysts agree that existing technologies, practices and policies could go far to solve the water scarcity crisis. That means smarter meters to help detect leaks and problems. Smarter irrigation on farms. Smarter home fixtures and practices. Smarter investments and policy for the nation's water infrastructure.

HOW TO REDUCE YOUR USE

- **By preventing leaks in pipes and fixtures, the average family can save about 180 gallons of water per week, or 9,400 gallons per year, estimates EPA. That's equivalent to the amount needed to wash more than 300 loads of laundry.**
- **Running the dishwasher only when it's full can eliminate one load of dishes per week and save the average family nearly 320 gallons of water annually.**
- **Turning off the tap while brushing your teeth can save eight gallons of water per day, assuming you brush your teeth twice daily.**
- **Less water for irrigation. Outdoor water use accounts for 30 percent of total household water use and as much as 60 percent of total household water use in arid regions.**

Source: EPA

COSTS OF NUTRIENT POLLUTION THAT CAUSES ALGAL BLOOMS

Loading waterbodies with large amounts of nutrients, like nitrogen and phosphorus, can lead to excessive plant and algal growth, resulting in a range of adverse economic effects as well as dangers to health. EPA lists those economic costs:

Tourism and recreation. Reduced restaurant sales, lakeside business closures and decreased tourism-associated spending. For example, a persistent algal bloom in one Ohio lake caused $37 million to $47 million in lost local tourism revenue over two years.

Commercial fishing. Harms to commercial fisheries include reduced harvests, fishery closures and increased processing costs associated with elevated shellfish poisoning risks.

Property values. Elevated nutrient levels, low dissolved oxygen levels and decreased water clarity can depress the property values of waterfront and nearby homes.

Human health. Algal blooms can cause a variety of adverse health effects through direct contact with skin, drinking contaminated water or eating contaminated shellfish.

Drinking water treatment costs. Excess nutrients in source water for drinking water treatment plants can increase costs to treat foul taste and odor as well as health risks.

Restoration. There are substantial costs for restoring impaired waterbodies such as developing total maximum daily loads, watershed improvement plans and nutrient trading and offset programs.

[EPA Report, "A Compilation of Cost Data Associated with the Impacts and Control of Nutrient Pollution," May 2015]

To put costs in perspective, fear of public water supplies is part of what drove American consumers to buy roughly $31 billion worth of bottled water in 2018. That's more than the $24 billion estimated cost to fix the nation's public water supply for the next 20 years, according to EPA.

MICHAEL REINEMER

Join us at the 2024

Izaak Walton League of America National Convention

RESTORING OUR GREAT WATERS:

Taking Action Today to Secure a Better Future

At the Hyatt Regency Chesapeake Bay Golf Resort, Spa and Marina

2024 National Convention

July 14-16 Cambridge, Md.

Get details and register online at iwla.org/convention2024

The League's 2024 convention will highlight America's great waterways, including our meeting location by the Chesapeake Bay. Please join us for conversations, events and exploration focused on taking action today to secure clean water for the future.

Everyone is invited. We will discuss conservation priorities and how to make the most out of League activities. The scenic Choptank River on Chesapeake Bay and Maryland's Eastern Shore offer many places to visit and opportunities for recreation.

The convention will also feature a special event to celebrate the 100th anniversary of the League's first major conservation victory—establishing the Upper Mississippi River National Wildlife and Fish Refuge. That successful effort during the League's first two years not only created a refuge of unprecedented size, it also created the template for the modern conservation movement and a century of progress.

The Early Bird Welcome Party and Auction is Sunday evening, July 14. Wednesday July 17 is an optional day for field trips and group activities.

TRAVEL AND LODGING

Convention Site and Lodging

The Izaak Walton League 2024 National Convention will be at **the Hyatt Regency Chesapeake Bay Golf Resort, Spa and Marina in Cambridge, Maryland.**

Room Rate: $175.00++ single/double ($198 per night with taxes and fees). The League's **room block expires on June 17, 2024.** Hotel check-in 4 p.m., checkout 11 a.m. PLEASE NOTE: **early check-in cannot be guaranteed.** As part of the League's arrangements, the hotel resort fee has been waived.

Hotel Reservations: To reserve your room online at the League's rate, **visit iwla.org/convention2024** and follow the direct link to the reservation portal. You can also make a reservation by calling the hotel at (410) 901-1234. Inform the reservationist you wish to make a reservation for the "Izaak Walton League national convention," and to receive the discounted room rate, provide our Group Code: G-IZWL.

The hotel has a limited number of wheelchair-accessible rooms. If you need such a room, make your reservation as soon as possible.

The League rate is good for three days before and three days after the convention if rooms are available. Room reservations may be cancelled 24 hours prior to your scheduled arrival. Departure date may be changed at check-in without penalty. Changes to departure after check-in will result in a fee.

Standard wireless internet and free self-parking are included for League convention attendees. Each room has a coffee pot and mini-fridge. The resort **golf course will be closed** during the convention.

Address: 100 Heron Boulevard
Cambridge, MD 21613
Phone: (410) 901-1234

Hotel Parking

The hotel has free parking. Preferred Parking (closer to the hotel entrance) is available for $10 per day. Add this incidental when you check in. Your room key will be used to access this parking area.

Transportation

Airport

Baltimore/Washington International Airport (BWI) is the major airport closest to the convention hotel. BWI is a hub for Southwest and is also serviced by American, Delta, United and Spirit airlines. Visit https://bwiairport.com for additional information about traveling through this airport.

Hotel Airport Shuttle

The hotel does *not* have shuttle service, but Bayrunner Shuttle is available daily from BWI to the front door of Hyatt Regency in Cambridge. The Bayrunner website is bayrunnershuttle.com.

PLEASE NOTE: **Return service (from the Hyatt to BWI) starts daily at 6 a.m.** You should plan your return flights accordingly.

Rental Cars

All national car rental companies are located at BWI's offsite facility. Free shuttle service is available between the terminal and rental car site. Check the BWI website to find one of three locations at the airport to catch the shuttle.

Travel Tips

To ensure smooth sailing in July, we have a few tips when driving to Cambridge, Maryland.

Plan around peak travel times: Maryland's Eastern Shore is a popular summer destination for people throughout the Washington, DC region, and traffic is especially busy on the weekends. Friday afternoon/evening and Saturday morning are peak travel times going east across the Bay Bridge and on Routes U.S. 50 and U.S. 301 toward the convention site in Cambridge.

If you plan to arrive at the convention hotel on Sunday, July 14, there will be much less traffic toward Cambridge on Sunday morning, although you'll still have company on the road from people with Sunday-to-Sunday beach rentals. If you plan to arrive at the hotel on Saturday, avoid traveling in the direction of Cambridge on Saturday morning.

Crossing the Bay Bridge: U.S. Route 50, which is the most commonly used major road toward the Eastern Shore, crosses the Chesapeake Bay Bridge.

TRAVEL AND LODGING

Traffic congestion approaching the bridge has been substantially reduced through "highway speed tolling" using E-Z Pass, Pay-By-Plate or Video Tolling. (Cash payment is NOT accepted.) The Maryland Transportation Authority Bay Bridge website baybridge.maryland.gov has useful travel tips, including notes about peak travel times and real-time traffic information.

Driver assistance crossing the Bay Bridge: The Bay Bridge offers a spectacular view of the bay and surrounding landscape. However, if you're nervous about driving the four-mile-long span, assistance is available. The Kent Island Express is a paid service that will drive your car (and you!) over the Bay Bridge. Visit kentislandexpress.com. Call (410) 604-0486 one hour before you expect to reach the bridge. The fee for this service is $40 cash / $50 credit card and additional fees apply for trips between 8 p.m. and 7 a.m. (which are by advance appointment only).

CONVENTION CONTACTS

Cherie Aker
(Maryland Division)
(240) 446-7532
president@marylandiwla.org

Cathy Berger (IWLA)
(540) 635-1259
meetings@iwla.org

Questions about Online Registration
Calvin Yowell
(410) 820-8935
calvinyowell@goeaston.net

CONVENTION HIGHLIGHTS

The two-day schedule includes national elections, and speakers addressing critical conservation and other topics.

Sunday, July 14

- Executive Board Meeting
- Endowment Board Meeting
- Early Bird Welcome Party and Auction
- Youth Convention Early Bird

Monday, July 15

- President's Breakfast with Division Presidents
- Delegate Orientation Workshop
- Convention Opening Ceremony
- League Awards Luncheon
- National Officer Elections
- Resource Committee Reports
- Parade of States

Tuesday, July 16

- Izaak Walton League Endowment Annual Meeting
- Izaak Walton League Board of Directors Meeting
- Executive Board Elections
- Midwinter 2025 Site Selection
- Conservation Luncheon
- Vote on Resolutions
- Convention Site Selection (2026 and 2027)
- Closing Banquet and Officer Inductions

SPEAKERS

Steven Marking

A "Visit from Will Dilg"

Will Dilg was the driving force behind and the first national president of the Izaak Walton League of America. In 1924, he led an unprecedented grassroots campaign to establish the Upper Mississippi River National Wildlife and Fish Refuge. One hundred years later, the refuge is an anchor for conservation and bastion for outdoor recreation along the river in Illinois, Iowa, Minnesota and Wisconsin.

Drawing on impassioned speeches and editorials in *Outdoor America* magazine, Marking brings Dilg to life describing the imperiled environment along the upper Mississippi River in the early 1920s and the extraordinary campaign to convince Congress to establish the Refuge. As importantly, Marking channels Dilg to talk with audiences today about the important work ahead to conserve natural resources, fish and wildlife, and special places for future generations.

Jeff Janvrin

Mississippi River Habitat Specialist, Wisconsin Department of Natural Resources

Throughout a career spanning nearly 35 years, Jeff Janvrin has coordinated Wisconsin's participation in the selection, design and monitoring of over 40 federally funded Upper Mississippi River Restoration Habitat Rehabilitation and Enhancement Projects. He does much of his work in the field along 231 miles of river in Wisconsin. Janvrin actively promotes awareness of Mississippi River history and management through presentations, publications and development of a Mississippi River activity guide for formal and non-formal educators.

Marcia Pradines Long

Chesapeake Marshlands National Wildlife Refuge Complex Project Leader, U.S. Fish and Wildlife Service

In this position since 2016, Marcia Pradines Long has focused on strengthening relationships with the community, helping new audiences get engaged with the outdoors through programs like mentored hunts and finding the connections between people and wildlife that make conservation successful. The Complex consists of the Blackwater, Eastern Neck, Martin and Susquehanna National Wildlife Refuges. In her spare time, Long is an avid hunter, angler and a mentor for other women learning to hunt.

Teresa Seidel

Director, Great Lakes National Program Office, U.S. Environmental Protection Agency

Teresa Seidel is the Director of the Great Lakes National Program Office at the U.S. Environmental Protection Agency in Chicago. The Great Lakes National Program Office brings together federal, state, tribal, local and industry partners under the strategic framework of the Great Lakes Restoration Initiative to improve water quality, remediate seriously polluted sites, combat invasive species and restore native species and their habitat. Before leading the Great Lakes Program, Seidel was the Director of the Water Resources Division at the Michigan Department of Environment, Great Lakes and Energy.

SPEAKERS

Millicent Sparks

"Harriet Tubman: Living History Experience"

Harriet Tubman's life and legacy are deeply rooted in Maryland from her early life as a slave on the Eastern Shore to her extraordinary bravery as a "conductor" on the Underground Railroad freeing more than 70 slaves from this region over a 10-year period. Millicent Sparks' portrayal of Harriet Tubman blends accounts of special events in Tubman's life with an acute sense of Tubman's personal qualities – her emotional depth, profound spirituality, immense intelligence, extraordinary dignity and astounding courage.

Peter Tango

Monitoring Coordinator, Chesapeake Bay Program

Since 2006, Peter Tango has served as a liaison between the U.S. Environmental Protection Agency and the U.S. Geological Survey as Chesapeake Bay Monitoring Coordinator. In this role, he leads a wide range of teams and workgroups for the Chesapeake Bay Program partnership addressing issues related to monitoring, management, science and policy focused on the health and restoration of the Bay watershed. Tango is at the forefront of engaging volunteer water quality monitors and ensuring the data they collect is used in combination with other data to assess the health of and inform management decisions related to the Bay watershed.

Millicent Sparks will portray Harriet Tubman, depicted in this mural, who helped enslaved people in Maryland to reach freedom.

MARYLAND.GOV

EVENTS

There are multiple options to register for convention, select your meals and sign up guests before the registration deadline on June 28.

Register online at iwla.org/convention2024 and pay with credit card or PayPal.

Complete a paper registration form included in the printed convention kit or download and print the form from iwla.org/convention2024. Mail the form to the Maryland Division with your payment (checks only for mail-in registrations).

Parents or grandparents can use the same methods to register youth for the youth convention.

PLEASE NOTE: The Convention is a two-day event (Monday and Tuesday). The Early Bird Welcome Party and Auction will be Sunday evening prior to the convention start.

Early Bird Welcome Party and Auction

Sunday, July 14. Tickets for non-registered guests: *Tickets $40*

The Early Bird is one of several "unique to the League" events, held each year before the start of the annual convention. This is an opportunity to catch up with old (and new) friends and bid on some exciting, unique Maryland items.

Awards Luncheon

Monday, July 15. *Tickets: $30*

This combined membership and national awards luncheon provides an opportunity to recognize and celebrate the hard work and achievements of League members, supporters, chapters and divisions. Join us as we pay tribute to those award winners for their lifelong accomplishments and longtime devotion to natural resources conservation and outdoor recreation.

A Visit from Will Dilg

Monday, July 15

Will Dilg was the driving force behind and the first national president of the Izaak Walton League of America. Drawing on impassioned speeches and editorials in *Outdoor America* magazine, Steven Marking brings Dilg to life describing the imperiled environment along the upper Mississippi in the early 1920s and the League's extraordinary campaign to convince Congress to establish the Upper Mississippi River National Wildlife and Fish Refuge.

Parade of States

Monday, July 15

An ageless tradition, Parade of States provides a taste of the various states that will be represented at the convention. Exciting news: the Maryland Division is bringing back its famous crab balls. You can meet members from participating states in hotel patio rooms located on the first floor where you can enjoy being on the Choptank River.

Conservation Luncheon

Tuesday, July 16. *Tickets: $30*

The Conservation Luncheon offers another opportunity to hear about and discuss pressing conservation issues. Marcia Pradines Long from the Blackwater National Wildlife Refuge on Maryland's Eastern Shore will share her perspective on managing wildlife, habitat and visitors on Blackwater and across the wildlife refuge system nationwide.

Banquet

Tuesday, July 16. *Tickets: $60*

You do not want to miss this year's banquet entertainment. Millicent Sparks portrays historic hero Harriet Tubman in The Harriet Tubman Experience. Dorchester County, the location of the convention, played a prominent role in the Underground Railroad. The banquet will conclude with the induction of national officers and members of the Executive Board.

YOUTH CONVENTION

The Maryland Ikes are arranging a Youth Convention that will allow the youth to experience many historical, scientific and natural wonders found locally in the Chesapeake Bay and on the Eastern Shore of Maryland. Take a peek at some of the events our convention hosts have planned. (Activities are subject to change.)

Sunday, July 14

- Check-In and Registration
- Early Bird Pizza Party

Monday, July 15

- Chesapeake Bay Maritime Museum Activities:
  - Bay Bounty "Chesapeake Bay" Tour
  - Explore Shipyard Building and Exhibits
- Belleview Ferry Trip to Highland Creamery
- Parade of States

Tuesday, July 16

- Youth Convention Presentation at Convention General Session
- Blackwater National Wildlife Refuge Tour
- Horn Point Laboratory – University of Maryland
  - Campus Tour of Oyster Hatchery
  - Chesapeake Bay Beach Seining for Fish and Shrimp
- Young Ikes Dinner

The Youth Convention includes a schedule of fun activities and learning experiences.

JAMIE TRAVER

Experience the Eastern Shore of Maryland

Wednesday Tours and Events

The Maryland Division has organized the following optional events for Wednesday, July 17, 2024. Extend your stay for an extra day (or two!) and experience the rich history, incredible natural resources and unique communities on Maryland's Eastern Shore.

View from the boardwalk of wetlands at the Blackwater National Wildlife Refuge.

Horn Point Laboratory Oyster Hatchery Tour, Cambridge, Maryland

10 a.m. to 12 noon, departs hotel at 9:30 a.m.
Cost: none

The Horn Point Laboratory Oyster Hatchery, which is part of the University of Maryland Center for Environmental Science, is a state-of-the-art facility dedicated to oyster production, research and education. Tour groups have the opportunity to see oysters spawn, view baby oyster larvae and get a glimpse of the inner workings of a facility that has produced billions of oysters for restoration efforts throughout the Chesapeake Bay watershed.

To help the Maryland Division and Horn Point staff prepare for this tour, please contact Jamie Pierson at jjpierson@gmail.com by **July 13** to express your interest.

Kayaker at Blackwater National Wildlife Refuge.

Recently removed from the endangered species list, the Delmarva fox squirrel lives in the peninsula comprised of portions of Delaware, Maryland and Virginia.

USFWS (3)

Experience the Eastern Shore of Maryland

Boat Cruise Around Historic St. Michaels

Boat departs dock at 2:30 p.m.
Cost: adults 18-64 $27.50, 65+ $25, children 17 & under $15

Discover history while soaking in the sights along the Miles River. Catch a glimpse of 200-year-old historic mansions and diverse wildlife on a 70-minute narrated boat cruise. On-board amenities include a beverage and snack bar, indoor air-conditioned spaces, an upper outdoor deck, and bathrooms.

Pre-registration and payment are required by June 28. For registration and payment details, contact Meo Curtis at recording.secretary@marylandiwla.org.

Please Note: Passengers under 18 must be accompanied by a parent or legal guardian.

Chesapeake Bay Fishing Charter

Departs marina at 7 a.m.
Cost: $100 per person

The Maryland Division is coordinating headboat fishing trips that depart from the River Marsh Marina (immediately adjacent to hotel property) and fish in the Chesapeake Bay. Anglers can expect to fish for a range of species, including bluefish, Spanish mackerel and cobia.

Pre-registration and payment are required by June 17. For registration and payment details, contact Rodger Moran at rodger.j.moran@gmail.com.

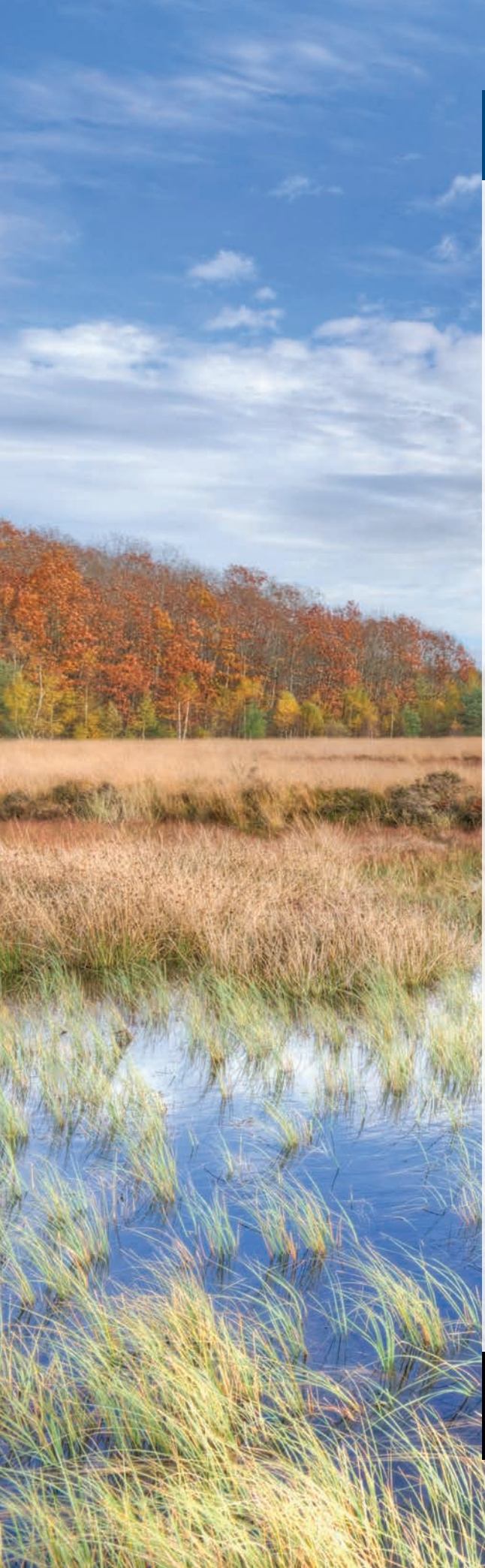
Please Note: Passengers under 18 must be accompanied by a parent or legal guardian.

WORKSHOPS

Workshops will be offered virtually before convention. Details are posted on the League's national convention website (iwla.org/convention2024) and have been distributed to members and chapter and division leaders via email.

Hooper Strait Lighthouse, St. Michaels, Maryland.

ISTOCK



Please Donate Today to Help Conserv

100 years ago, the newly formed Izaak Walton League of America rallied hunters, anglers and conservationists **to stop "the drainage crime of a century"**—a proposal to drain wetlands along 300 miles of the upper Mississippi River.

Today, we're experiencing the drainage crime of this century as the *Sackett* Supreme Court decision **erases protection for more than 60 million acres of wetlands nationwide and threatens the safety of drinking water for tens of millions of Americans.**

With your donation today of $50, $75 or more, you can help the League blunt the damage with our multi-year effort to boost funding for wetland conservation, mobilize volunteers on the ground and press Congress to explicitly protect wetlands and small streams.

You know what's most troubling? **The *Sackett* decision is making a bad situation even worse:** wetland drainage was accelerating before this unprecedented decision.

In the latest national assessment of wetlands, the U.S. Fish and Wildlife Service found that wetland losses between 2009 and 2019—caused mostly by wetland drainage and fill—**rose by 50 percent** compared to the prior study period. In that 10-year period, **670,000 acres of our most productive wetlands were lost.**

To donate online, please visit iwla.org/donate.

ve Wetlands and Protect Clean Water

The Fish and Wildlife Service warns that America is losing the wetlands that provide **the most benefits for people, communities, fish and wildlife and our climate.**

Ultimately, it will take an act of Congress to restore the safeguards canceled by the Supreme Court—and the League is committed to achieving this long-range goal. **But streams and wetlands are in peril right now**—making our multi-prong approach to protect these resources all the more crucial today!

With your support, the League will:

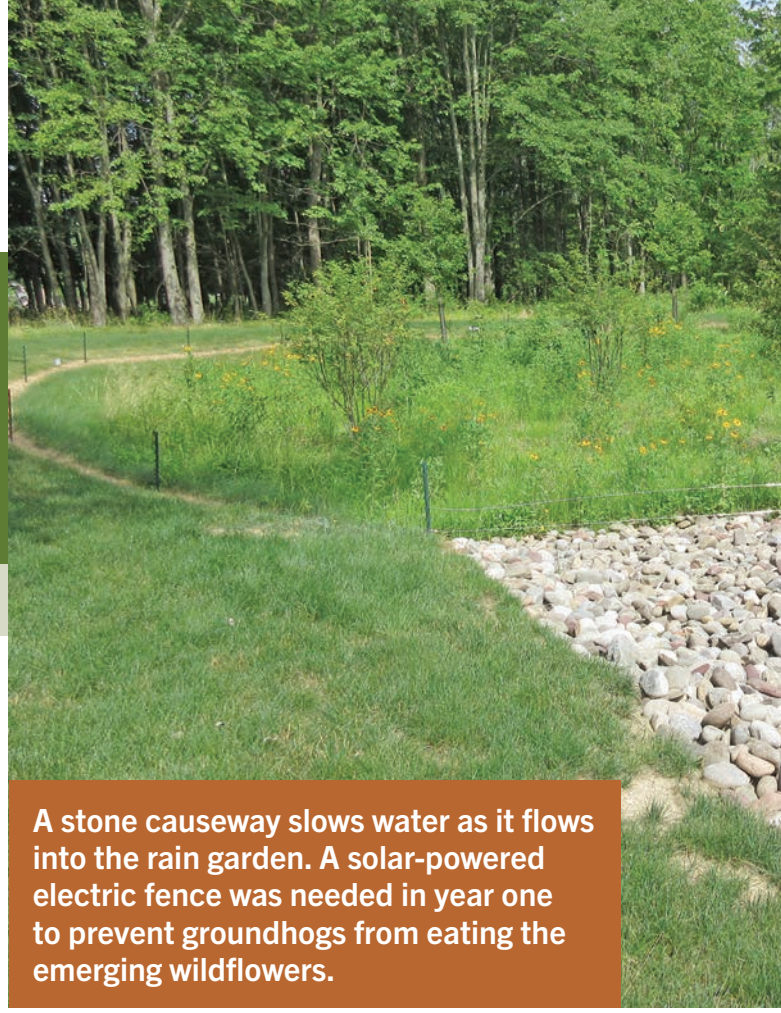
- Fight for increased funding for voluntary wetland conservation on private land, including through the Farm Bill.
- Work to reduce pollution before it enters our waters in the first place.
- Mobilize our growing volunteer network to detect and report sources of pollution.
- Build grassroots pressure on Congress to restore Clean Water Act protections for wetlands and small streams.

Please help us stop the drainage crime of this century with your generous gift of $50, $75 or more today! Thank you for your support.

Or mail a check payable to "IWLA" to Izaak Walton League of America, 707 Conservation Lane, Gaithersburg, MD 20878.

Evolution of a Rain Garden: How We Tamed Stormwater at Home

By TOM PERAZELLA



A stone causeway slows water as it flows into the rain garden. A solar-powered electric fence was needed in year one to prevent groundhogs from eating the emerging wildflowers.

TOM PERAZELLA

Stormwater running off a homeowner's property can cause a number of problems such as erosion, spread of excess nutrients into waterways, infrastructure damage and wildlife displacement. In some areas, governmental agencies are taking notice of this damage and as a result, new building codes are being enacted that require mitigating actions to minimize such damage.

Our garden plan included an extensive list of native flora that could thrive in the rain garden conditions and provide food and habitat for wildlife.

In 2018, my wife and I began plans for building a home on a five-acre plot in southeastern Pennsylvania that we had purchased about 13 years prior. Previously I had been involved with building other residences, but in the intervening years, much had changed with respect to many of the code requirements. Stormwater mitigation requirements were now a significant issue in that Pennsylvania county.

New codes to consider

To comply with stormwater codes, we contracted with an engineering firm to plan for a rain garden that would mitigate the effects of uncontrolled stormwater runoff and provide other benefits.

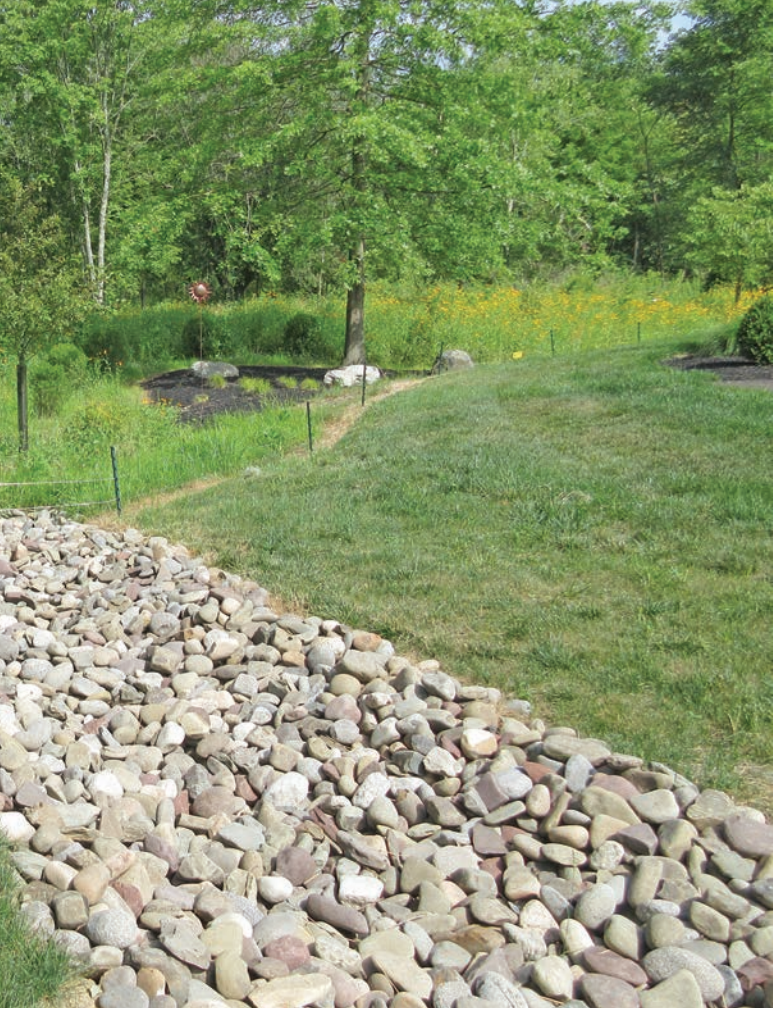
The plan took into account all the areas of disturbance including a long asphalt driveway needed because the lot was what is known as a "flag lot," which typically has a long narrow section for a driveway through adjacent lots (the flagpole) leading to a rectangular plot of land (the flag).

The front of our lot is approximately 300 feet from the road with another 50-foot setback to the house. As a result, the driveway with additional parking space was quite large. Primarily because of the impervious surface of the driveway and roof, a large rain garden was mandated by the county codes.

The garden begins on one side of the house, continues all the way around the back and then extends part of the way up the other side of the house. It includes an overflow pit where water exits into an area of riprap and an emergency overflow low spot in the rear of the berm in case of blockage of the overflow pit. The roof gutter drains and sump pump discharge also feed into the garden so that water will return to the water table.

Functions of a rain garden

Aside from the obvious control of fast-moving water to prevent erosion, the rain garden provides other benefits.



First, it returns as much water as possible to the water table through a construction method that includes amended soil in the bottom. The amended soil used in this project consists of approximately 80 percent sand mixed with 20 percent organic material. The garden enclosure retains the water runoff and the amended soil allows it to percolate into the water table.

The second benefit is delivered when the design features trees, shrubs, grasses and flowers that are attractive to birds and pollinators. Our garden plan included an extensive list of native flora that could thrive in the rain garden conditions and provide food and habitat for wildlife.

The ideal choice of flora for a rain garden is not as straightforward as it may seem. First, the plants should be species that are native to the local area and not invasive plants, like English ivy for instance. Locally native plants host native insects like caterpillars that provide birds with essential food when raising their young. When acquiring seeds or seedlings, be careful that all the species are in fact native plants.

Second, the plant species should be tolerant of or adapted to standing water and occasional submersion at the base while also able to withstand dry periods when the permeable soil does not retain as much moisture as conventional soils.

Third, the plants should be varied enough to provide a food supply, whether pollen or berries, that peaks at different times throughout most of the year.

Construction

Construction on the house started in October 2019, but the rain garden could not be started until April 2020 because the grass surrounding the garden had to be growing first. If the grass were not in a condition that could control runoff of rainwater, sediment would flow into the depression, covering the amended soil and impeding its ability to allow water to seep into the ground below.

In the beginning of the construction, the sides of the garden were configured, and the perforated drainpipe that feeds into the overflow pit was covered to prevent the amended soil from clogging the pipe. The soil on the edges of the depression was a traditional topsoil for preservation of grass during rainfall, while the soil in the bottom was the amended soil that would readily absorb water.

First year

In June of 2020, the garden got its first real test. We had a very heavy rain in a short period—and the garden did its job. All the water that would have washed into local waterways was captured in the rain garden where it remained and slowly percolated into the groundwater.

By August of that first year, the grasses had completely covered the bottom of the garden.

Second year

During the first summer, it became apparent that the original plan had a weakness. At the large end of the garden where most of the water entered, there was a steep slope and that—combined with the volume of water—created a fast-moving stream that was causing erosion. To solve that, a causeway of stone was created to slow the water across the underlying soil and prevent that erosion.

If you look at the entrance to the garden you can also see a solution to another problem that

became apparent early that summer. When the now-emerging young tender flowers appeared, the neighboring groundhogs thought they had found a salad bar. Before long they had eaten a large section of the new plants.

To solve the groundhog problem, I constructed a low solar-powered electric fence to ward them off. It was a good solution. One day I happened to be watching the garden and saw a groundhog approach the fence. When it touched the fence, it jumped into the air and scurried back into the woods behind the property to find another meal. The fence solved the problem and is only on through part of the year.

During this summer, a number of the original flowers bloomed. By far, the highest percentage was black-eyed susan *(Rudbeckia serotina),* but some purple coneflower *(Echinacea purpurea)* and coreopsis were also present. By this time, a significant number of pollinators were regularly visiting the garden. I was surprised to learn from Penn State that there are over 400 species of bees native to Pennsylvania—mostly solitary bees that don't pose any danger of stinging.

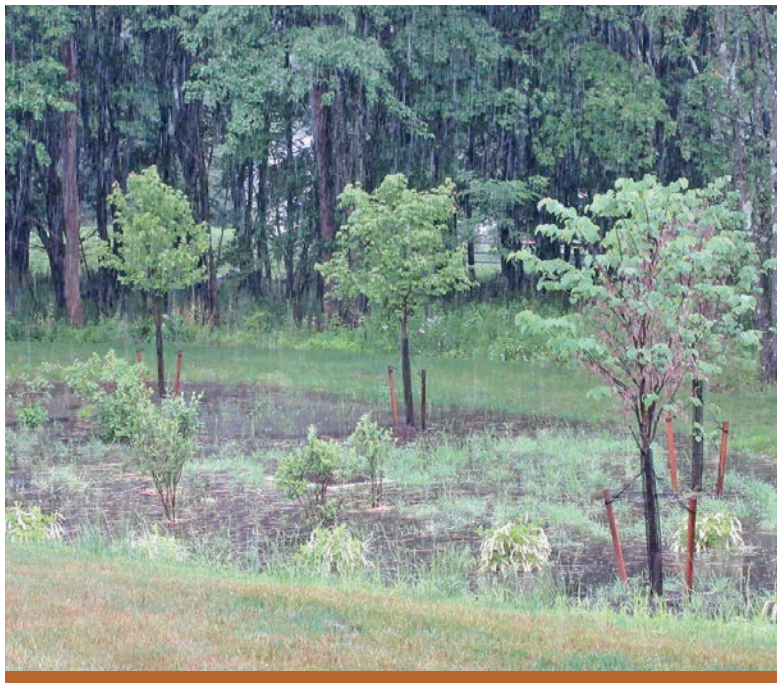
At the end of the summer, we purchased a seed mix designed for this region of Pennsylvania containing a number of perennials. They were mixed with sand and distributed in various parts of the garden in anticipation of even more flowers the following year.

Stormwater runoff on our property is now very well controlled and instead of causing erosion, it feeds precious fresh water back into the water table.

Third year

The summer of 2023 was the third year for the garden, and we were anticipating a more diverse group of flowers. We were not disappointed. It appears we now have a number of new flowers including bee balm *(Monarda didyma),* goldenrods *(Solidago),* swamp milkweed *(Asclepias incarnata),* dianthus, asters and many other natives including wild bergamot *(Monarda fistulosa)* and horseweed *(Erigeron canadensis).*

Locally native plants host insects like caterpillars that provide birds with essential food when raising their young.



During a heavy rainfall, all the water that would have washed into local waterways was captured in the rain garden where it will slowly percolate into the groundwater.

By the third summer, wildflowers were in full force—bee balm, wild bergamot and echinacea among others.

Many more pollinators were now visiting. In addition, later in the summer and fall as the plants matured, many small birds were flying in to feast on the seed pods. Those pods and the dropped seeds continued to attract birds after the plants themselves had gone dormant for the winter.

As with any garden, maintenance is necessary, especially if you want to give the new seedlings a head start in the spring. Just before the new seedlings appear, we go into the garden and remove the remaining dead material that would otherwise cover many of the seedlings. In the wild, that process does not occur, but doing so yields a higher number of flowers throughout the summer.

A rain garden of this size is no trivial undertaking. The initial cost in land preparation including delivery of many truckloads of amended soil is high. However, so are the benefits. Stormwater runoff on our property is now very well controlled and instead of causing erosion, it feeds precious fresh water back into the water table.

Pollinators benefit greatly from the variety of plants throughout the summer. The seeds and berries in the fall feed a lot of birds. And the beauty of all those flowers and birds in the summer adds to the enjoyment we receive when sitting on our patio. It will be interesting to see how the garden progresses in future years. As Martha Stewart would say, "It's a good thing."

Tom Perazella is past president of the Izaak Walton League's Rockville Chapter in Maryland and a member of the Florida Keys Chapter.

TOM PERAZELLA (3)

Ikes Prepare for Nitrate Spikes

By JANETTE ROSENBAUM, Strategic Communications Manager

As watershed coordinator for Iowa's Floyd County Soil and Water Conservation District, Doug Johnson is no stranger to nitrate pollution and other water quality issues. He came to his current position after spending three decades with the Natural Resources Conservation Service, which is part of U.S. Department of Agriculture.

He has encouraged practices like planting cover crops and no-till farming to reduce nitrogen runoff. Recently, he has helped install bioreactors that help remove nitrate from soil. Those are 50-foot-long tubes filled with wood chips where the anaerobic bacteria that live on the wood chips turn the nitrate into nitrogen gas that evaporates.

So it's not surprising that when Doug Johnson joined the **Floyd County Chapter** of the Izaak Walton League in 2015, it was because of their clean water projects. Johnson wanted his engagement with the League to be an extension of his career.

The Floyd County Chapter is located in Charles City, Iowa, which sits directly on the Cedar River, putting it squarely in the middle of the 35,000-acre watershed Johnson is responsible for. And when the League's Nitrate Watch launched in early 2023, offering an easy way for clean water advocates to monitor streams for nitrate pollution, Johnson quickly signed up. He pledged to take action on his findings by communicating the testing results to local organizations and media.

FLOYD COUNTY CHAPTER

Ikes who monitor for nitrate are, left to right, Blair Redenius, Doug Johnson, Ryan Smith, Stan Pyatt. Not present are Dave Nehls and Mike Kruckenberg.

Starting a Nitrate Watch team

Johnson made good on that promise right away. He raised the idea at a chapter meeting, inviting others to help monitor local waterways for nitrate, which is a carcinogen that forms in water when chemical nitrogen fertilizer and manure wash off agricultural fields.

As an experienced team leader, Johnson scoped out potential monitoring sites and verified that there was safe access to the water; the volunteers, most of whom were brand-new to water quality monitoring, just had to pick which sites they wanted. Johnson had also created a schedule for monitoring at the same time every month.

Soon, the team was gathering testing data, and Johnson entered each measurement into the League's Clean Water Hub on behalf of the Chapter.

Once the data is in the Hub, it's available to the public, researchers

and government agencies. But Johnson went one step further by actively bringing the findings back to the chapter. The data provided a window into local water quality and connected the chapter to a national effort to monitor and advocate for clean water.

Johnson's team hasn't yet found any alarming nitrate levels in their streams. That's good news, because all the streams they're monitoring contribute to the drinking water supplies for Cedar Rapids, a city of over 130,000 people. As a seasoned natural resources professional, though, Johnson is thinking about the reasons for the low nitrate levels and looking ahead to potential trouble.

Ready for action

When we talked in late February, Johnson knew that peaks of nitrate pollution tend to arrive in the spring, when farmers put down fresh fertilizer and rains wash all kinds of contaminants off the land. He also knew there was a lot of old fertilizer sitting on the soil, waiting to be washed away when Iowa's ongoing drought finally ends.

If heavy rains return this year, Johnson reasoned, a double dose of nitrogen will get flushed through tile lines and into streams, spiking nitrate in waterways to levels well above what's considered safe. If rainfall is about average, the much-needed precipitation will replenish moisture in the dry soil, and fertilizer will mostly stay put. And if the drought persists, nitrogen will continue to accumulate on fields, setting up an increasingly dangerous situation when the rain finally comes.

Johnson is ready for that too. When his team members start texting him test results with abnormally high nitrogen readings, he'll activate the other half of his original pledge: alerting local media about the problem. He knows how to contact the key newspapers and radio stations in his region.

Volunteers contribute to science

After 40 years working as a professional for the organizations officially tasked with monitoring and protecting water quality, why organize volunteers for a community science project? Because volunteers can do science just as well as professionals can, Johnson replied. And because when they do, they free up professionals' time for tasks that really require specialized resources and training. With those extra hours—and with the intel flowing in from volunteer monitors—agency staff can zero in on problems and resolve underlying causes.

Volunteers can do science just as well as professionals. They free up professionals' time for tasks that really require specialized resources and training.

"That local water monitoring…" Johnson said thoughtfully, "…can lead to focused technical and financial assistance to the smaller watersheds that show the greatest need."

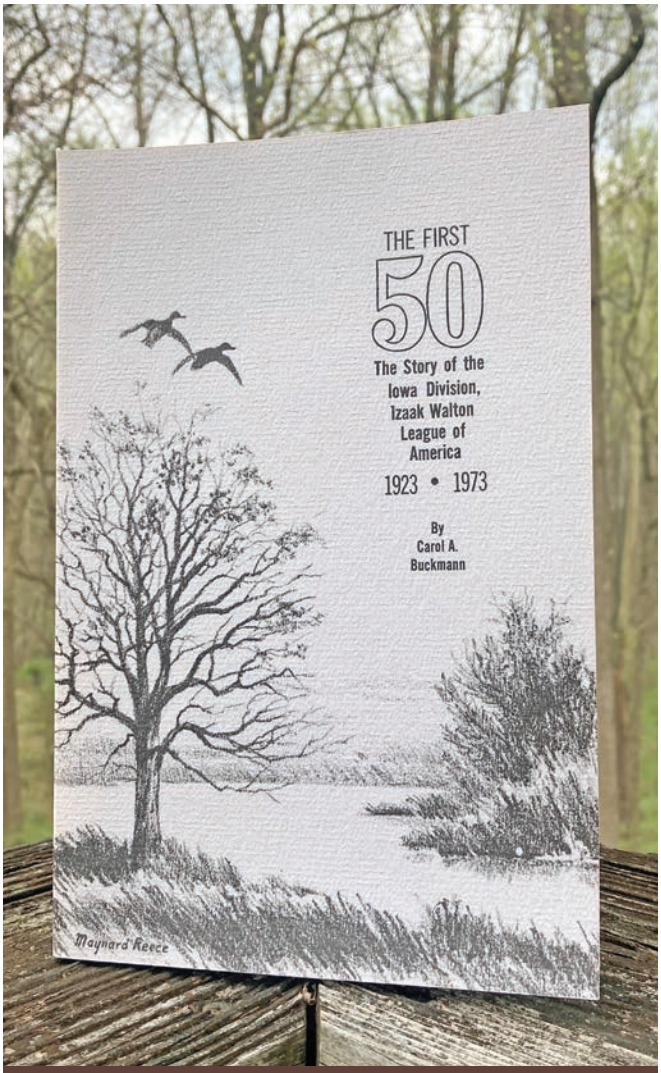
Johnson is well aware of the nitrogen pollution crisis in Des Moines, which sits west of Cedar Rapids in a different watershed. He didn't want his community to have to take on the same battle of addressing the source of the pollution when the drinking water was already so contaminated that ratepayers had to put up the money to install specialized filtration equipment. He wanted to get ahead of the problem.

Nitrate pollution is a nationwide problem, and League staff are prepared to assist volunteers anywhere with monitoring and advocacy. Get a free test kit and other resources at nitratewatch.org.

The Cedar River Showdown and Cleanup of 1924

By CAROL A. BUCKMANN

Editor's Note: In 1924, Will Dilg, the League's first president, urged chapters along Iowa's polluted Cedar River to collaborate and present the problem to the state's Board of Health. Chapters agreed. The Iowa Division presented a carefully researched case at a meeting with the Board of Health in Des Moines.



In her 1973 history of the Iowa Division, Carol A. Buckmann chronicled the League's successful, science-based effort in 1924 to block pollution of the Cedar River.

MICHAEL REINEMER; ISTOCK

The Board found the League's case compelling and issued stinging orders to six cities, five gas companies and a packing plant to begin work on "plans and specification for sewage treatment plants such that will be adequate to properly treat all sewage disposed of by each of the parties named."

The League's advocacy for a cleanup of the Cedar River was an early victory for the League and for the nation's nascent clean water movement. Below is the account written by Iowa journalist Carol A. Buckmann from her book, The First 50: The Story of the Iowa Division, Izaak Walton League of America, 1923-1973, published in 1973. - MR

The next project of the Iowa Division following the establishment of the Upper Mississippi River Refuge…was the Cedar River Cleanup in 1924, the first single-handed pollution fight the League took on. They won. The Cedar River project was a test case for the League in pollution and the national office was strongly behind the Iowa Division.

The polluters feared the outcome of the hearing and sent their heaviest artillery to overwhelm the League.

The Cedar River between Charles City and Vinton had become increasingly polluted until by the summer and fall of 1923 its fish were unfit to eat and its water unfit for use by domestic stock. The worst polluters were gas plants, garages, packing houses, sugar plants and canning companies along the river.

Dr. E.T. Alford, Judge J.C. Murtaugh and Cliff Hallowell were appointed by Iowa Division President George Wood to an anti-pollution

committee to take the necessary action to correct the situation. The committee arranged for a comprehensive water analysis by H.B. Pederson, chemical engineer from the State Board of Health, along the full length of the Cedar. Hundreds of samples were taken and pollution loads were proved to be present in unbelievably large quantities.

A hearing was called in Des Moines by the State Board of Health and all interested parties were asked to appear. Sixty were present, 57 representing municipalities and industrial interests along the river.

At this time, industries and municipalities looked upon their practice of using the running stream for the disposal of their refuse as an inalienable right. They had come to defend that right. The League's view was that such use was permissible only as long as it did not adversely affect the common good, abrogate the rights of others to use the water, or become detrimental to public health.

Opposing the 57 were three League members.

Little was known then about efficient sewage treatment. It was practically unheard of, and the League's proposals were regarded as wild, impractical dreams and prohibitively expensive. But the proposals had enough practical common sense and ring of need that the polluters feared the outcome of the hearing and sent their heaviest artillery to overwhelm the League.

After a long parade of witnesses and testimony by the opposition, League representatives were called to the stand. Cliff Hallowell was in the witness chair for most of the afternoon. So well had the League's case been prepared, so irrefutable were its facts, so dramatic its exhibits, that at the conclusion of the hearing, the League Committee was asked to meet in private with the Board of Health for further discussion.

So well had the League's case been prepared, so irrefutable were its facts, so dramatic its exhibits, that at the conclusion of the hearing, the League was asked to meet with the Board of Health for further discussion. The pollution was ordered discontinued.

The League won the day and pollution was ordered discontinued. The dumping was to be stopped.

Twenty years later, March, 1944, in a report by A.H. Wicters, sanitary engineer for the Board of Health, it was stated that the Cedar River had remained passingly pure.

The Cedar River Cleanup was an example of what could be done by a determined effort, even back in 1924.

The Izaak Walton League has been monitoring water quality along Iowa's Cedar River since 1923. Here it flows through Palisades-Kepler State Park.

CLEAN WATER CORNER

Nitrate Pollution, Fish Kills, Cancer: Connecting the Dots

By SAM PUCKETT, Clean Water Program Director and HEATHER WILSON, Save Our Streams Coordinator

KIM HAGEMANN

Nitrate Watcher Kim Hagemann tests tile drainage near Ankeny, Iowa that empties into the Rock Creek and eventually the Des Moines River. She is a member of Iowa Citizens for Community Improvement.

This spring, we have seen many mentions of nitrate in the news media, and unfortunately it is not good news. From a major fertilizer spill to increasing cancer rates, it is clear that there is a connection between our land use, our water quality and ultimately the health and safety of our communities.

Applied to fields, nitrogen fertilizer helps improve yields. But when preventative measures to reduce pollution are not taken, excess nitrogen often flows off fields and into waterways where it forms nitrate, which some studies have linked to cancer in humans.

We need more water quality first responders—volunteers armed with test kits to help locate and document hotspots of nitrate pollution.

Preventable disasters

One newsworthy event was a massive fertilizer spill in southwest Iowa in late March. Approximately 265,000 gallons of liquid nitrogen fertilizer was inadvertently dumped by a farmers' cooperative into a drainage ditch near the East Nishnabotna River.

This massive influx of fertilizer killed roughly 789,000 fish including minnows, bass, catfish and sturgeon along roughly 60 miles of rivers in Iowa and Missouri, according to natural resource officials in the two states. Our very own Iowa Division President Dale Braun had an op-ed about

this disaster published in both the *Des Moines Register* and Cedar Rapids' *The Gazette.*

That same week, an article in *The Gazette* highlighted studies that demonstrate a correlation between agricultural practices and increased cancer rates. The article highlighted how Iowans could be at increased risk of cancers, since "nitrate is found at potentially harmful levels in 1-in-20 Iowa public drinking water systems and in more than 12,000 private wells in Iowa." The article also noted that in 2022 (the most recent data available), agricultural operations in Iowa applied more fertilizer on fields compared to surrounding states.

Addressing this pollution problem depends not only on testing in more places, but also on sharing results with the American people—and that makes the Clean Water Hub a game changer.

Another report, from KCCI TV in Des Moines, discussed how heavy spring rains after a prolonged period of drought have caused an influx of nitrate in the water. As a result, Des Moines Water Works, the drinking water utility for the Des Moines metro area, has had to switch to a secondary source of raw water to limit the amount of nitrate they are taking in.

A national problem

Nitrate pollution is found in many parts of the U.S.—not just the Midwest and agricultural regions. Antiquated sewage treatment facilities, leaks from septic systems and excessive use of chemical fertilizer on commercial and residential properties all contribute to this serious pollution problem.

While this news is unpleasant, it is promising in some regards; it illustrates that people are indeed paying attention to nitrate pollution.

But this begs the question, how do we pinpoint, measure and track nitrate pollution? How can we help?

Get involved with Nitrate Watch

This recent nitrate news shows why we need more water quality first responders—volunteers armed with Nitrate Watch test kits to help locate and document hotspots. Armed with data, League staff and volunteers can advocate for solutions aimed at stopping pollution at the source.

Nitrate Watch test kits are distributed by mail and include 25 test strips and all the information needed to sample water (from rivers to the kitchen sink) and submit that data to the Clean Water Hub website (cleanwaterhub.org).

Addressing this pollution problem depends not only on testing in more places, but also on sharing results with the American people—and that makes the Clean Water Hub a game changer. The League and our partners built this website to make volunteer-collected information about water quality readily available and understandable to the public. Today, the Hub provides this information for thousands of streams and other sites across the country.

And we can't emphasize that point enough: the Clean Water Hub is a resource for everyone, not just volunteer scientists. Everyone can highlight this resource for friends and family—and for local governments, which often have limited means to monitor the health of streams, rivers and lakes.

To find more information about Nitrate Watch and get involved, please visit nitratewatch.org.

MICHAEL REINEMER

POLICY PULSE

New Report Highlights Wetlands Losses

By JARED MOTT, Conservation Director

A new report on wetlands from the U.S. Fish and Wildlife Service (FWS) paints a grim picture of loss for these important areas that provide wildlife habitat and serve as nature's very own water filters. Moreover, it measures the accelerating wetland drainage even before the Supreme Court's *Sackett v. EPA* decision, which gutted the protections wetlands had enjoyed for decades under the Clean Water Act.

The Wetlands Status and Trends Report from FWS is a comprehensive assessment that provides insights into the current condition and changes in wetlands. It typically covers various aspects such as wetland extent, types, functions, threats and conservation efforts. The report synthesizes data from field surveys, remote sensing and other sources to offer policymakers, researchers and the public a clear understanding of the state of wetlands and their significance in the ecosystem.

MICHAEL REINEMER

Wetlands are nature's own water filter providing clean water, reducing flood damage and providing wildlife habitat.

The latest report, covering the period from 2009 to 2019, was released in March and its findings serve as a clear warning. Between 2009 and 2019, there was a significant loss of marshes and swamps. In total, more than 670,000 acres of these ecologically vital vegetated wetlands were drained or filled—an area larger than the state of Rhode Island.

Over the last decade, the pace of vegetated wetland loss accelerated by more than 50 percent. The FWS report notes that these losses threaten the health, safety and prosperity of all Americans because the loss of wetlands

means a loss of important benefits—like purifying drinking water, protection against flooding and other natural disasters, capacity for carbon sequestration and habitat for fish, wildlife and plant populations.

The report also shows that despite legislative efforts and executive actions and policies aimed at protecting wetlands, losses have only continued to accelerate. More critically, this report only examines wetlands losses up to 2019, before the disastrous 2023 ruling in *Sackett v. EPA* took effect. It's likely that wetland losses may be even more dramatic in the years ahead.

In the face of continued wetland losses, the *Sackett* decision and climate change-induced challenges like intensified storms, floods and droughts, this means the need for action is even more urgent now.

Obviously, current protections are insufficient. The Izaak Walton League has called for stronger congressional legislation that specifically protects wetlands and greater collaborative efforts among federal agencies, states, tribes, local governments and landowners to voluntarily conserve wetlands. Immediate action is required to reverse the trend of wetland loss and ensure a positive outcome in future Status and Trends Reports.

To learn more, visit iwla.org/cleanwateract.

Legislation to conserve wetlands

The Izaak Walton League, alongside numerous conservation partners, enthusiastically welcomes the introduction of legislation by Senators Martin Heinrich (D-N.M.) and John Kennedy (R-La.) reauthorizing the North American Wetlands Conservation Act (NAWCA) for a five-year period.

More than 670,000 acres of these ecologically vital vegetated wetlands were drained or filled—an area larger than the state of Rhode Island.

This bipartisan legislation, S. 4048, seeks to boost the funding available for wetlands conservation grants from $60 million to $65 million per year. Yet, the significance of this legislation has only grown in light of the Supreme Court's decision in *Sackett v. EPA,* which largely removed wetlands from Clean Water Act jurisdiction. In the absence of such protections, fortifying all available means of safeguarding and preserving wetlands has become an absolute imperative.

The need for action to protect our wetlands is urgent.

In addition to purifying drinking water, replenishing aquifers and mitigating soil erosion and flooding, wetlands serve as habitat for waterfowl, migratory birds, fish and other wildlife. That in turn supports outdoor recreational pursuits such as hunting, fishing and photography, which generate several billion dollars in economic activity.

Funding for NAWCA has proven essential for acquiring, restoring and enhancing wetlands across all 50 states, as well as in Canada and Mexico. More than 3,300 NAWCA projects have successfully conserved and restored over 32 million acres of wetlands throughout North America.

Also NAWCA has delivered a significant return on investment over its more than 30-year history, generating an average of $2 in economic activity for every federal dollar invested. Throughout its history, federal grants exceeding $2.1 billion have catalyzed $4.3 billion in funding for NAWCA projects through matching funds. These funds also contribute to the support of an average of 7,500 jobs annually and stimulate over $5 billion in economic activity each year.

To learn more about NAWCA and urge your Senators to support wetlands conservation, visit iwla.org/advocacy.

SOIL MATTERS

USDA hosts a cover crop field day for farmers and soil enthusiasts in Oregon.

TRACY ROBILLARD, NRCS

Anemic Progress on Conservation Practices Highlights the Need for Action

By KATE HANSEN, Agriculture Program Director

To make progress toward our goals, we must know where we stand in the present.

This principle is true for many things in life, including conservation on the nearly 900 million acres of agricultural land in the United States.

That's why it's important for all of us—whether you live in Ft. Lauderdale, Fargo, Fairfax or anywhere in between—to care about the potential to improve conservation through incentives in the Farm Bill. And that bill urgently needs attention in Congress right now.

Where we stand today

On agricultural lands, implementing conservation practices, like planting more acres of cover crops, delivers a wide range of benefits. With continued threats to human health, soil health, water quality, our climate and more, these practices are more important than ever. Recent data shows that while we are making progress toward some goals, others are stalled.

Every five years, the U.S. Department of Agriculture (USDA) publishes comprehensive data about our nation's farms and ranches in what is known as the Census of Agriculture. The newest version was released this year, with data from 2022. In its hundreds of pages of detail, the Census tells many stories about American agriculture.

Some of you may have participated in this Census and are represented in the booming dataset. When it is released, the most interesting thing to do is to compare 2022 measures to those from past years. We start to see trends, like the shrinking number of American farms, and the fact

that subsidized commodity crops like corn, soybeans and cotton still reign supreme.

The Census also tells us stories about conservation across the landscape.

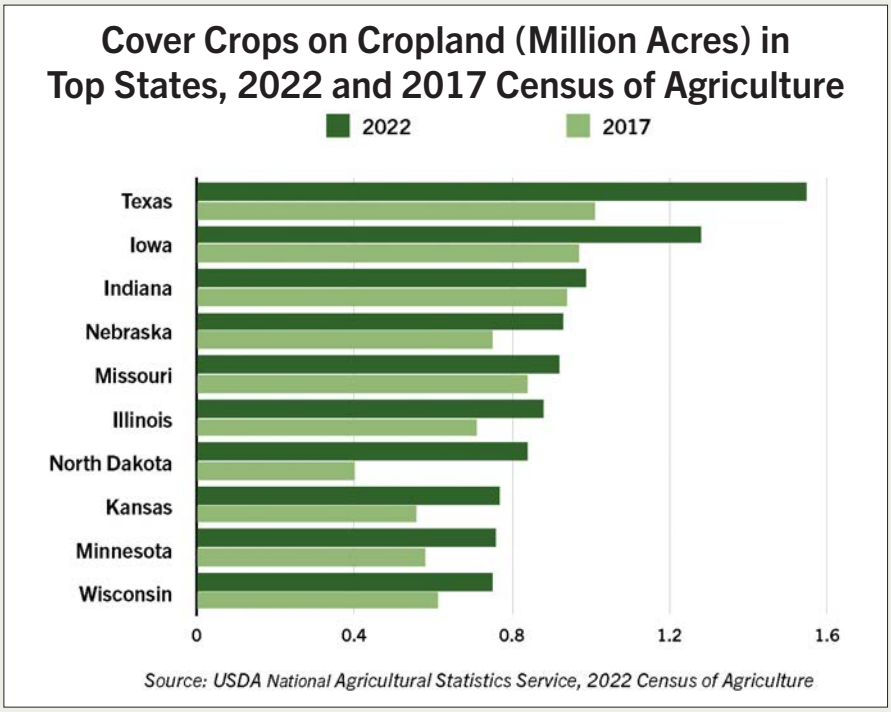
Measures of success

Planting cover crops is an important practice because of their suite of benefits. They build soil health, reduce erosion and store carbon in the soil to fight climate change, among other benefits. Investments have been made at the local, state and federal levels to encourage cover crops broadly.

Between 2017 and 2022, cropland acres in cover crops increased from 15.39 million acres to 17.99 million acres nationwide. The chart shows the top 10 states by acres in cover crops in 2022. Texas secures the top spot for total acres, and other states made measurable progress. While this is all good news, our enthusiasm should be tempered by the greater context.

First, the total number of acres is not nearly enough when we consider its share of total cropland. In Texas, 1.55 million acres becomes less impressive when we consider its 27.9 million acres of cropland. Nationwide, 17.99 million acres in cover crops represents only 4.7 percent of all cropland. There are numerous scientific studies, estimates and strategies that collectively call for a much larger swath of farm country to be protected by a cover crop.

Additionally, while the number of total acres has increased since 2017, the number of farms implementing cover crops has decreased slightly. The difference is made up in a higher average of acres planted per farm. We need more people to implement the practice, not less. This raises important questions about who is becoming a cover crop user, and who we might be losing and why.



The immense gap between farmers' and ranchers' interest in conservation and the available federal funding suggests that we have allowed vital opportunities to slip away for decades.

Conservation curtailed

Disappointingly, progress has stalled on other conservation measures.

Another priority is eliminating or reducing tillage practices, like plowing. Minimizing disturbance to the soil helps to build organic matter and keep fertilizers like phosphorus on the land and out of surface water. However, between 2017 and 2022, there was only a one percent increase in acres where farmers abstained from tillage. Further, there was a decrease of 692,675 acres where conservation tillage or reduced tillage was practiced.

For livestock producers, managing the density, timing and intensity of grazing provides its own set of benefits. Rotational grazing, for example, involves the frequent movement of livestock between sections of a pasture, allowing grazed plants to rest and regrow. It can be used with livestock like cattle, sheep, goats and horses.

The practice benefits wildlife, protects water quality, sequesters

carbon and more. Yet, between 2017 and 2022, the total number of operations practicing rotational or management-intensive grazing decreased by 10 percent. This may be due in part to an overall decrease in operations with pasture or rangeland.

Easements are another opportunity for landowners to prioritize conservation. They are voluntary, permanent or long-term agreements crafted to protect a property's conservation value. They can be used to protect farmland, wetlands, grasslands and other places that need conservation. In both the 2017 Census and this one, total land under conservation easements hovered around 13 million acres nationwide.

Lost opportunities compound

A positive sign I have observed is the growing ranks of people who are working to help deploy conservation. Their strategies are diversifying, too. One that has particularly interested me is the emergence of a new role, "conservation agronomist," within the private sector. Other members of the agricultural community are conducting education, experimenting with new technologies and bolstering the markets required for success.

Nearly all of those working with farmers and ranchers on the ground share information about federal conservation programs. Programs like the Conservation Stewardship Program (CSP) and Environmental Quality Incentives Program (EQIP) are offered by USDA in every county in every state. They provide financial and technical assistance to implement new practices. For many on the fence, these supports can turn "maybe" into "yes."

Congress needs to act now to craft a Farm Bill that meets the moment—a clean water, soil health and climate resiliency bill.

We all stand to benefit when these programs deploy conservation. Their most popular practices include planting cover crops, grazing management and cutting back on tillage. Combined, their impact improves the quality of our drinking water, fights climate change and builds soil health, which has been linked to higher nutritional value in our food.

Yet, the current demand for these programs outstrips funding available. Last year, only 25 percent and 31 percent of applicants nationwide were accepted into EQIP and CSP, respectively. In the case of EQIP, only 34,222 out of 134,450 applications were funded. We all lose out when 100,000 farms and ranches don't move forward with conservation. Over decades, it is hard to imagine the opportunities we have let slip away.

Advocacy is needed

Lawmakers need to prioritize conservation programs in the Farm Bill and beyond. And our efforts are stronger when we work together. League members, supporters, chapters and divisions are all encouraged to join our advocacy work relating to agriculture. Visit iwla.org/advocacy to complete an action alert or reach out to me at khansen@iwla.org to discuss other ways to show support.

As I write this, congressional progress on the Farm Bill has been limited. As time slips away, we inch closer to the September deadline when the extension of the 2018 Farm Bill will expire. Congress needs to act now to craft a Farm Bill that meets the moment—a clean water, soil health and climate resiliency bill.

I started off by suggesting that to make progress toward our goals, we must know where we stand. The Census of Agriculture does not paint the picture that many of us hoped to see. It does provide a stark reminder that we must continue to find ways to promote common-sense conservation practices across the landscape.

Welcome New Staff: Maggie Dombroski, Save Our Streams Coordinator

The Izaak Walton League is pleased to welcome Maggie Dombroski to the national staff as the League's Mid-Atlantic Save Our Streams Coordinator. Before joining the League, she worked as an urban forester in Virginia for Fairfax County's Forest Pest Management Branch.

Dombroski says, "I'm excited to move from working with terrestrial bugs to aquatic ones and to get to work with volunteers and community members who are engaged in the League's Save Our Streams water quality monitoring program.

"It is so important for people to be connected to their local ecosystem and involved in its conservation, and Save Our Streams empowers people to do just that while collecting data that is invaluable to finding pollution problems and informing decision makers about them.

"I look forward to getting to know our many dedicated volunteer monitors and partner organizations and to increasing participation in Save Our Streams, Salt Watch, and Nitrate Watch throughout the Mid-Atlantic region."

She earned a B.S. in Biology and Conservation from George Mason University.

The Future Is Theirs!

The Izaak Walton League builds a brighter future through conservation and engaging Americans in outdoor traditions.

For generations, the League's tireless work and unprecedented success has protected our woods, waters and wildlife—and promoted outdoor recreation in every corner of the U.S.

Through your will, retirement plan, life insurance or trust, you can help continue this legacy.

Plan your gift to the Izaak Walton League and pass along a lifetime of benefits.

Email develop@iwla.org or visit www.iwla.org/support to get started.

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Contact us today for information about including the Izaak Walton League in your will or naming the League as the beneficiary for insurance or other investments.

Anglers and Recreational Boaters Fund Conservation throughout the U.S.

By EARL HOWER, Director of Chapter Relations

Angling is a hobby enjoyed by millions of Americans, often with family and friends. However, it also has a critical role in conservation of our waterways and fisheries—both the dollars and cents of it and the people working to conserve our country's natural resources.

Combating decades of decline

At the turn of the 20th century, uncontrolled discharges of industrial waste and raw sewage, unrestricted logging and mining, and soil erosion caused by poor land use threatened to destroy the nation's most productive waterways. Once-flourishing fisheries and their aquatic habitat were severely degraded during America's rush into the industrial age.

The problem was much broader as fishing for commercial purposes became a major conservation issue. Much like market hunting of wildlife, fishing for profit was unregulated and without catch limits. In many freshwater locations, fish populations were decimated.

In response, anglers and hunters alike led efforts to establish state agencies tasked with restoring fish and wildlife, managing these resources based on sound science and conserving lands and waters that provide essential habitat for fish and wildlife.

Along with regulations to improve and protect habitat and manage fish populations, anglers devised a "user pay" system through which taxes, licenses and other fees paid by sportsmen would fund conservation. Their investments over many decades have revived fish populations and at the same time have helped to improve water quality across the country.

Anglers provide critical conservation funding

It is no secret that sportsmen provide the majority of the funding for state fish and wildlife agencies. In fact, anglers, recreational boaters, hunters and shooting sports enthusiasts fund up to 75 percent of state agency budgets. These investments provide incredible benefits to all Americans. The most significant sources of fisheries conservation funding come in several categories.

ISTOCK; CORBIN RINEHART

Excise taxes: Anglers and recreational boaters contribute to conservation of aquatic resources by funding the Sport Fish Restoration Program. This federal program, administered by the U.S. Fish and Wildlife Service, provides funds for fishery projects, boating access and aquatic education.

In 1950, anglers and groups like the Izaak Walton League helped to pass the Sport Fish Restoration Act, also called the Dingell-Johnson Act. This law provides for dedicated funding to state fish and wildlife agencies for fishery conservation and restoration of sport fish species and their habitats.

Initially, revenue came from excise taxes on fishing tackle and equipment like rods, reels and creels. However, in 1984, the Sport Fish Restoration Act was modified, via the Wallop-Breaux Amendment, to direct a portion of gasoline taxes assessed on small-engine and motorboat fuel to the program, to tax previously untaxed fishing equipment and to impose import duties on tackle and boats.

Over the past 70 years, taxes on fishing tackle, trolling motors, fish finders and boats—including jet skis, yachts and wake sporting boats—and motorboat fuel have generated over $11.7 billion. Those funds help to restore many species of fish, provide boating access (by funding public boat ramps, for example) and improve water quality (for instance, by supporting installation of facilities for disposal of wastewater from larger boats).

Fishing licenses: In general, anglers are required to purchase one or more licenses each year, depending on what species and where they wish to fish (i.e., fresh, salt or brackish tidal water). Some states may require a general fishing license and another for trout.

Nationwide, the sale of fishing licenses and related tags, permits and stamps to 32 million license holders exceeds $903 million.

Conservation investments provide benefits for all Americans

Aquatic habitat that is conserved and managed through funding generated by anglers and recreational boaters directly supports and benefits all life found in our waterways—not just species that are fished. Imperiled native and forage fish species benefit, amphibians and turtles thrive in wetlands and public lands with healthy waterways provide migratory corridors for a variety of wildlife.

Also, a fair amount of the projects funded by the Sport Fish Restoration Program are not connected to fisheries conservation. Projects increase boating access, promote boating safety and recruit anglers and recreational boating participants.

Lands and waters purchased by state and federal governments are generally open to the public—and these purchases are made possible in part by taxes and fees paid by sportsmen. Waterways that support thriving fisheries also provide sources of drinking water for nearby communities. All of these conservation efforts benefit Americans across the country—whether or not they fish or own a motorboat.

Get involved

Americans who enjoy fishing and boating fund critical conservation efforts that simply could not be accomplished without the taxes and fees they pay at the local, state and national levels. The Izaak Walton League and our members proudly support these programs and encourage everyone to enjoy outdoor America and get involved in conserving it for future generations.

join the

NITRATE WATCH℠

IZAAK WALTON LEAGUE OF AMERICA

WWW.NITRATEWATCH.ORG

NITRATE:
A THREAT TO PUBLIC HEALTH AND WATER QUALITY

When excess nitrate from sources like fertilizer and animal waste ends up in waterways, human health and the environment are put at risk. High levels of nitrate in streams and lakes causes algae blooms, fish kills, and the formation of dead zones. In drinking water, nitrate contamination is linked to health conditions like blue baby syndrome, thyroid disease, colon cancer, and birth defects.

Nitrate Watch volunteers are documenting nitrate pollution and advocating for solutions nationwide. *YOU can join them!*

HOW TO GET STARTED:

1. Request a ***free*** kit at **www.NitrateWatch.org**
2. Collect nitrate readings at the lake, stream, or drinking water source of your choosing
3. Upload your results to our national database, the Clean Water Hub
4. Share your findings with your community!

Pay it forward! Visit **iwla.org/NitrateSponsor** to sponsor a kit and help us reach even more clean water advocates!

Illinois Program Supports Reforestation and Conservation Scholarships

For more than 40 years, the Izaak Walton League's Illinois Division has been raising funds for conservation through a tree certificate program that serves as a memorial for the deceased and as a recognition for the living.

Half of the proceeds go to fund the **Illinois Division's** conservation scholarship program, which provides support for college students who plan to study forestry or conservation in college. The other half goes to the U.S. Forest Service for reforestation efforts in the Shawnee National Forest in southern Illinois.

A sign in the forest, in place since the inception of the program, commemorates the long-standing agreement between the Forest Service and the League. The original sign deteriorated but through the efforts of Tom and Crystal Terfler, shown in the photo, and with financial help from the **Elgin Chapter,** a new sign was erected in its place and now stands, proudly recognizing this continuing program.


ILLINOIS DIVISION
OF
THE IZAAK WALTON LEAGUE OF AMERICA
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In the Izaak Walton Plantation
Shawnee National Forest
In Memory of
NAME
Trees Contributed by:
Chairman of Memorials:
Crystal Terfler

More information is on the Division's website under "Gift a Tree," iwla.org/illinoisdivision.

NATIONAL HUNTING & FISHING DAY

HUNT · SHOOT · FISH

SAVE THE DATE

On the fourth Saturday of every September, **NHF Day** recognizes generations of sportsmen and women for their contributions to the conservation of our nation's rich sporting heritage and natural resources.

SEPTEMBER 28, 2024

LEARN MORE ABOUT NHF DAY AND UPCOMING EVENTS AT

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nwtf

Congressional Sportsmen's Foundation

LAST LOOK

“Think of the most beautiful lowlands your mind can picture. Dream of every kind of wild swamp flower, including the lotus beds, and don’t forget the wild rice fields and the waving swamp grasses billowing in the breezes…one can feel such places as is the Winneshiek but one can’t describe them.”

Will Dilg, “The Drainage Crime of a Century,” *Outdoor America,* July, 1923, opposing the drainage and development of the upper Mississippi River wetlands.

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Taking Action Today to Secure a Better Future

At the Hyatt Regency Chesapeake Bay Golf Resort, Spa and Marina

At our 2024 convention, the League will focus on our historic mission to protect the nation's great waterways, including the Chesapeake Bay, and discuss how we can take action today to secure a better future. We will also host a special event to celebrate the 100th anniversary of the League's 1924 achievement of establishing the Upper Mississippi River National Wildlife and Fish Refuge.

Everyone is invited. Meet fellow Ikes, learn about conservation priorities and how to participate in League activities. The scenic Choptank River, Chesapeake Bay and Maryland's Eastern Shore offer many places to explore and opportunities for recreation.

The early bird reception is Sunday evening, July 14. Wednesday July 17 is an optional day for field trips and group activities. This schedule reduces hotel room rates and ensures attendees can travel to the Eastern Shore during off-peak summer hours.

Reserve your hotel room and see more convention details at iwla.org/events.