Georgia’s 2017 CLEAN WATER HEROES

Georgia Water Coalition’s Clean 13 Highlights Public and Private Efforts to Protect Georgia’s Water

Georgia Water Coalition’s Clean 13 highlights individuals, businesses, industries, non-profit organizations and state and local governments whose extraordinary efforts have led to cleaner water in Georgia.

While the pollution problems facing Georgia’s rivers, streams, lakes, estuaries and coastal waters are varied and very real, the solutions to these problems are equally diverse. Across the state, both public and private interests are at work on innovative programs to address Georgia’s most pressing water pollution problems and water policy debates.

These solutions ultimately protect our drinking water sources, fish and wildlife and all the people who use these waterways—Georgia property owners, downstream communities, hunters and anglers and boaters and swimmers.

Individually, the projects highlighted here may seem small in scale and insignificant against the backdrop of large-scale problems, but as one of the honorees included in this report noted, saving Georgia’s water can only be done one stream at a time. The health of the Chattahoochee, Savannah, Coosa, Altamaha and the state’s other rivers depends on the cumulative health of every stream that feeds these rivers.

For instance, in Paulding County, the Georgia Department of Natural Resources is now engaged in a multi-year, multi-million dollar effort to save and restore Raccoon Creek that feeds the Etowah River. While other streams draining Paulding County spill loads of mud and sediment into the Etowah, Raccoon usually runs clear, helping rare fish like Etowah and Cherokee darters thrive.

In urban Atlanta, years of rapid growth has resulted in pollution of the Chattahoochee and other rivers, harming downstream communities, but now, businesses, governments and community groups are cleaning up urban creeks to prevent this pollution.

The City of Atlanta recently adopted one of the most far-reaching stormwater ordinances in the country. Since then, more than 3,500 projects have been approved using rain gardens, porous pavement, rainwater cisterns and other pollution controls. These green infrastructure projects help to slow down and keep polluted stormwater from reaching streams.

The Georgia Institute of Technology has built multiple projects that collect rainwater and keep pollution out of nearby Tanyard Creek, and the non-profit South Fork Conservancy is building trails along and restoring the banks of the North and South Forks of Peachtree Creek. By cleaning up the smaller streams...
that flow into the river, these projects improve the overall health of the Chattahoochee River.

In southwest Atlanta, the Chattahoochee gets another boost at the Cox Enterprises-owned Manheim vehicle remarketing facility. The company details some 68,000 vehicles every year and recycles 60 percent of the water it uses. This means less water has to be pumped from the Chattahoochee to meet metro Atlanta’s water needs.

Elsewhere around the state, entities big and small are making a difference. In the far northeast corner of the state, Ladybug Farms, a small sustainable farm in Rabun County, uses a massive rainwater catchment system to irrigate its crops, and now promotes similar systems to other farmers and gardeners.

In Waycross, the Cleveland-Georgia based Storm Water Systems helped Waycross officials solve a river litter problem. The company installed an in-stream trash trap for the city that captures thousands of pounds of trash annually. The trash is cleaned out and sent to a landfill, keeping the Satilla River and Georgia’s coast cleaner.

On the Altamaha River near Baxley, the Scott Bridge Company used thoughtful bridge design and construction to protect endangered fish and mussels.

In Columbus and other locations around the state, the shipping giant United Parcel Service (UPS) has gone above and beyond state stormwater control requirements to protect tiny streams like Roaring Branch at its distribution hubs.

In the heart of the state, the Macon Water Authority has used innovative pipe repair to help protect the Ocmulgee River.

Meanwhile, a little company in Decatur called Solar Crowdsource helped small businesses and homeowners invest in solar power projects. These clean energy projects reduce Georgians’ reliance on polluting and water guzzling fossil fuel plants.

Individuals are doing their part as well. At the state capital, Rep. John Meadows, the powerful chairman of the House Rules Committee, led the effort to update state policy on oil and gas drilling. Chairman Meadows’ legislation will ultimately help protect the state’s drinking water from risks associated with fracking. And, in southwest Georgia, Mark Masters of the Georgia Water Planning & Policy Center provides data and facts to shape state water policy.

Together, the efforts of these “Clean 13” are adding up to cleaner rivers, stronger communities and a more sustainable future for Georgia.

The Georgia Water Coalition publishes this list not only to recognize these positive efforts on behalf of Georgia’s water but also as a call to action for our state’s leaders and citizens to review these success stories, borrow from them and emulate them.

The Georgia Water Coalition is a consortium of more than 240 conservation and environmental organizations, hunting and fishing groups, businesses, and faith-based organizations that have been working to protect Georgia’s water since 2002. Collectively, these organizations represent more than 250,000 Georgians.
INTRODUCTION:
When afternoon thundershowers rain down on Columbus, polluted stormwater runoff flows across the region’s industrial sites and into streams like Roaring Branch and Lindsey and Bull Creeks, degrading their health and harming fishes and other aquatic wildlife. It’s a phenomenon that happens all across the state. To limit this pollution, Georgia’s Environmental Protection Division (EPD) regulates more than 2,000 industrial facilities to ensure that this polluted runoff is not harming our water. Unfortunately, many facilities fail to invest in measures to stem the pollution. Chattahoochee Riverkeeper estimates that a large percentage of Georgia’s regulated industrial facilities are not doing what's required by state law. But, there are those who are doing the right thing. Among them is the Atlanta-based global shipping giant, United Parcel Service (UPS). When rain hits the UPS distribution center that backs up to Roaring Branch on Belfast Road in Columbus, the stormwater gets treated before it ever reaches the stream. The same is true at UPS’s other distribution centers in Gainesville, Kennesaw and LaGrange. UPS’s stormwater measures at these facilities now treat 13 million gallons of stormwater annually before it reaches local streams.

THE WATER BODY:
The cumulative health of Georgia’s smallest streams ultimately determines the health of the large rivers from which Georgia communities draw their drinking water and recreate by fishing, swimming and boating. The creeks protected by UPS’s stormwater measures include Flat Creek in Gainesville that feeds Lake Lanier, Gainesville’s water supply and a watersports mecca visited by 10 million people annually; Noonday Creek in Acworth that empties into Lake Allatoona, Cobb County’s drinking water source visited by six million each year; Long Cane Creek in LaGrange which flows to the City of West Point where civic leaders are now promoting a recreational boating trail on the Middle Chattahoochee; and Roaring Branch which feeds Lake Oliver and the Chattahoochee’s wildly popular whitewater run through downtown Columbus. Users of these water sources and recreational amenities directly benefit from UPS’s clean water initiatives.
THE CLEAN:

When UPS environmental coordinator Larry Bryant and his co-workers noticed drink containers and other litter accumulating in the parking area of one of the company’s distribution centers, they played a fun—and educational—prank on the perpetrators. Collecting several days of refuse from the site, they then deposited that trash in the delivery trucks of the offending fellow employees. The message was received; and the litter ceased, as did the threat of the litter washing off the site during a storm and into nearby streams.

UPS takes its stormwater seriously. Since the first Georgia industrial stormwater permit was issued in 2003, UPS has inspected its stormwater outfalls, submitted reports to state regulators, implemented spill prevention plans and initiated education programs to prevent the release of fuel, oil and other hazardous materials at their distribution centers. Additionally, they have gone above and beyond state requirements by installing oil and water separators at sensitive stormwater outfalls as a fail-safe to protect local waterways.

When it comes to washing their fleet of delivery vehicles—a huge potential source of polluted water as the carrier will clean its trucks as often as twice a week—UPS limits water use by dry dusting or using environmentally-friendly enzyme cleaners.

Couple these measures with efforts to increase use of alternative fuel vehicles and to streamline delivery routes to minimize mileage, and you have a global delivery giant greatly reducing its overall carbon footprint.

UPS’s fleet now includes more than 8,300 alternative fuel vehicles and since 2013, the company has used technology to reduce the distance driven by its couriers by 210 million miles. That’s the equivalent of eliminating 210,000 metric tons of carbon emissions.

“In an atmosphere where so many industrial facilities are skirting state laws, it is refreshing to see UPS going above and beyond what’s required,” said Jessica Sterling, technical programs director with Chattahoochee Riverkeeper. “UPS’s commitment to the environment sets an important example for other transportation companies.”

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Georgia’s 2017
CLEAN WATER HEROES
Storm Water Systems
GEORGIA’S COASTAL WATERS
Cleveland-based Company’s Litter Traps Keep Plastics Out of Rivers, Oceans

INTRODUCTION:
Earlier this year, researchers with the Dutch-based organization, Ocean Cleanup concluded that between 1.1 and 2.4 million tons of plastic are carried by rivers into the world’s oceans each year—that’s enough to fill up to 100,000 dump trucks. They estimate the cost of that pollution at $8 billion in damage to marine ecosystems, claiming that plastic pollution ultimately kills one million seabirds and 100,000 sea mammals along with untold numbers of fish. There is now so much plastic pollution in the planet’s oceans that during search and recovery missions associated with the disappearance of the Malaysian Boeing 777 in 2014, satellite images of giant mats of floating debris were repeatedly mistaken for parts of the missing airplane. One Cleveland-based company has found a solution to this litter in the form of the Bandalong Litter Trap. Storm Water Systems has installed these instream litter collectors in Georgia at locations in Gainesville, Waycross, Savannah and Griffin as well as locations across the country. The result: cleaner rivers and less trash in our oceans.

THE WATER BODY:
Georgia’s 100-mile coast is a destination. Home to some 650,000 residents, it hosts an estimated 15 million visitors annually, bound for the state’s beautiful beaches and historic cities. These natural amenities support 24,000 tourism and fisheries jobs for Georgia citizens. Wildlife also flocks to the Georgia coast. Federally endangered North Atlantic right whales use Georgia’s coastal waters as their birthing suite each winter, while threatened sea turtles clamber up the state’s beaches to lay eggs during the spring and summer. Meanwhile from the sky, millions of migratory and shore birds refuel and refuge in the area’s 368,000 acres of salt marsh. Recognized as a globally significant ecosystem, Georgia’s coast is one of the state’s signature calling cards.

THE CLEAN:
When Gary Hopkins and Mark Kirves founded Storm Water Systems in 2008, they were, ironically enough, engaged in the business of plastics—performing plastic welding and fabrication for manufacturers in the U.S. and Central and South America. It was a call about plastic litter on Atlanta’s Tanyard Creek that opened their eyes to the problem and changed the trajectory of their business.
Asked if they could build something to collect the trash, they began looking into the possibilities and found Bandalong Litter Traps being manufactured in Australia. Soon there after, they licensed the rights to manufacture, install and market the traps in North America and Storm Water Systems was born.

Since then, the company has built and installed devices manufactured in their Cleveland fabrication facility at locations across the country—each designed to remove floating debris from rivers and streams.

The Bandalong Litter Trap is a surface skimming device anchored in place that directs debris to a collection basket that is then emptied periodically with the collected debris either recycled or landfilled. Likewise, Storm Water Systems’ StormX is a product that allows the capture of debris from stormwater outlets in large, reusable nets.

In 2010, they installed a Bandalong Litter Trap in Waycross when the city and Satilla Riverkeeper sought their help in cleaning up trash in the city’s canal system. In its first five months of operation, the trap kept 73 cubic yards of trash from entering the Satilla River, and today it continues to clear nearly 90 cubic yards from the river system annually.

“We feel like we are intercepting and removing at least 99 percent of floating litter from our canal system,” said Steve Pope with the City of Waycross’ Engineering Department. The trash would otherwise make its way to Georgia’s coast threatening the beaches of Jekyll and Cumberland Islands.

In Gainesville, a trap installed on Flat Creek in 2015 has been so effective that local authorities are looking to add traps on other creeks in an effort to keep the trash out of Lake Lanier. Not surprisingly, the Flat Creek trap fills most quickly after heavy rains when stormwater carries trash to the creek that has been thrown to the ground—rather than deposited in a trash can. The project helped win the City of Gainesville and Hall County a Technical Innovation Award from the Georgia Chapter of the American Public Works Association.

Other traps are at work in Griffin and Savannah.

While these projects are small and localized and represent only a “drop in the trap” compared to the global ocean plastic pollution problem, for Storm Water Systems its about protecting the planet one stream and river at a time.

“It’s a start,” said company co-founder Hopkins. “There’s no better place to stop trash from entering the ocean that upstream in the watershed.”

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INTRODUCTION:
If Peachtree Street is the iconic thoroughfare of Atlanta, the creek that gives the street (and countless others) its name must also be the iconic waterway of the city. But, as is the case with so many of Atlanta’s urban streams, Peachtree Creek, once a waterway where people gathered at ferries, farms, mills and baptism pools, was bridged, bulldozed and forgotten, its banks overgrown with kudzu and privet and inaccessible except for the hardiest of explorers. In stepped a group of citizens that saw the potential for Peachtree Creek to reconnect communities—from apartment complexes to reclaimed industrial sites—through a trail and parks system that would reunite Atlantans with this historic creek. Since 2008, the South Fork Conservancy (SFC) has established some five miles of creekside trails and restored dozens of acres of land through the removal of invasive plants and reintroduction of native species. The group even played a role in the remediation of a 12-acre hazardous waste site that now is home to one of SFC’s signature trails.

THE WATER BODY:
Peachtree Creek, formed by its north and south forks which join in the shadows of I-85 near Piedmont Road, is Atlanta’s iconic creek. It was at one time the source of many Atlantans’ drinking water, powered their grist mills and provided them with a livelihood. Along its banks in 1864, more than 4,000 soldiers died in the Battle of Peachtree Creek during the Civil War. But, as Atlanta grew, this iconic water body became heavily polluted as the city’s sewer system was overwhelmed by explosive population growth. Sewage spilled into the creek and the hardened landscape around it sent torrents of stormwater to the creek scouring and reshaping it into a damaged urban stream. Thirty years of improvements to the region’s sewer and stormwater infrastructure have greatly improved the health of Atlanta’s urban streams, and now SFC is helping to reveal the wonders of Peachtree Creek and its tributaries.

THE CLEAN:
Since its founding in 2008, SFC has recruited more than 3,000 donors and volunteers and coordinated investments of more than $4.5 million to build trails and restore habitat along Peachtree Creek and its two main tributaries (North and South Forks). With five miles of trails already constructed, SFC has a long-term goal of creating a trail system that stretches some 31 miles with connections to the Atlanta Beltline, PATH400 and the Peachtree Creek Greenway.
SFC projects include the construction of the one-mile Cheshire Farm Trail that courses beneath Ga. 400 and I-85 along the North Fork of Peachtree Creek and includes bilingual interpretive signs that encourage children (and adults) to participate in the Wildlife Olympics by imitating native wildlife that can be found along the trail. (Did you know that wading birds like blue herons regulate their body temperature by standing on one leg?). Adjacent to this path is a one-mile loop through a meadow, providing views of the creek.

The 1.5 mile Confluence Trail connects walkers in the Cedar Chase neighborhood to the confluence of the North and South Forks and the beginning of Peachtree Creek. Its development included efforts by SFC to eliminate acres of invasive species like privet and kudzu. In 2013, the group planted $10,000 worth of native saplings along the trail, including hybrid chestnuts, the once dominant tree of north Georgia’s forests.

Meanwhile, upstream on the South Fork, SFC was instrumental in transforming a 12-acre industrial site contaminated with asbestos into an urban oasis park.

In 2010, SFC and property owners successfully petitioned the U.S. Environmental Protection Agency to force the original polluters of this property to initiate a $2 million cleanup. Zonolite Park now features 1.5 mile of trails, forests, wetlands, a community garden and, of course, access to the sandy banks of the South Fork, with future plans to connect the trail with the Morningside Nature Preserve downstream and Emory University upstream.

Ultimately, the goal of SFC is to complete trail connections upstream on the South Fork to Tucker and complete a $1 million bridge project over the North Fork of Peachtree Creek that will connect the SFC trail system to the Atlanta Beltline, PATH400 and the Peachtree Creek Greenway.

With 75,000 people already living within walking distance of the South Fork and with more high-density development expected, SFC is providing more than just recreational paths for intown neighborhoods. They are protecting vital greenspace for people and wildlife and connecting communities.

“People like water and we want to bring people to the streams,” said David Butler, Volunteer Projects Coordinator with the Conservancy. “By getting them there, maybe we can get people to take better care of these urban streams.”

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Top: A wetlands area surrounds a South Fork Conservancy Trail along the South Fork of Peachtree Creek. Left: The South Fork Conservancy’s work along Peachtree Creek and its tributaries have given Atlantans a chance to reconnect with this iconic creek and the critters that call its corridor home. Above: A South Fork Conservancy trail invites walkers down a winter path.

Photos by Eric Bowels
INTRODUCTION:
On the national level, the federal government is currently dismantling the country’s clean energy programs. Funding for clean energy research is on the cutting block, the country has withdrawn from the landmark Paris climate accord and rules governing air emissions and toxic discharges to the nation’s waterways from coal-burning power plants are in jeopardy. Yet on the local level, communities are embracing clean energy projects. The Department of Energy now reports that nearly twice as many people in the U.S. work in the solar industry as work at coal, oil and natural gas plants; in Georgia an estimated 4,000 people work in the solar industry. Among the companies employing these workers is Decatur-based Solar Crowdsource that facilitated significant community roof top solar installations in Athens-Clarke County and DeKalb County. The more than 200 homes and businesses in these communities that are going solar thanks to Solar Crowdsource are now helping alleviate multiple pollution problems associated with fossil-fuel power plants.

THE WATER BODY:
Georgia’s electricity grid is powered by a diverse array of sources including nuclear, coal, natural gas, hydro, wind and solar. But, when it comes to Georgia’s water, coal-fired power plants have the biggest impact, requiring massive amounts of water from our rivers and generating millions of pounds of toxic coal ash waste that poses a threat to both surface and groundwater supplies. The ash stored in massive ponds or landfills at power plants can contaminate groundwater, while also posing failure risks that could send millions of pounds of toxins into our rivers—as has occurred in Tennessee and North Carolina recently. Georgia Power Co. is now closing 29 ash ponds at 11 power plants across the state. While these closures will reduce the threat of coal ash impacting our drinking water and recreational waters, continued reliance on coal and other fossil fuels poses risks to numerous Georgia rivers including the Etowah, Coosa, Chattahoochee, Ocmulgee, Flint and Savannah.
THE CLEAN:
Solar electricity is an easy sell to environmentally-concerned homeowners. A residential solar system reduces power bills and pollution, but the high upfront cost and lack of financing options is often an impediment for families on a budget.

That’s where Solar Crowdsource is making a difference. The company is making solar power affordable for more families by organizing targeted solar installation campaigns.

By organizing homeowners to purchase systems in bulk, Solar Crowdsource secures lower prices for both the solar panels and installations. Depending on the number of homeowners and businesses who join the campaign, participants can realize savings of up to 25 percent. With federal tax credits, systems for single-family homes can cost less than $9000 and result in savings on power bills of up to $25,000 over the 25-year lifespan of the solar panels.

Since 2015, about 50 percent of residential solar installations in Georgia have been facilitated by Solar Crowdsource through campaigns in Clarke County and DeKalb County. More than 200 homes and businesses in these communities have installed solar systems, increasing residential solar capacity in Athens-Clarke County by 300 percent and in DeKalb by 500 percent.

Collectively, these Solar Crowdsource projects have added 1290 kilowatts of power to the grid. Over the projected 25-year lifespan of the solar panels, the clean energy produced at these sites will help avoid 31,500 tons of carbon dioxide emissions. In one Decatur neighborhood, the program was so successful that Mayor Patti Garrett proclaimed Third Avenue “Solar Avenue” to commemorate Earth Day earlier this year.

Beginning in September, Solar Crowdsource is starting a Solarize Dunwoody and early next year will kick off Solarize Atlanta. During these campaigns, interested homeowners and businesses receive free evaluations. Approved sites wishing to purchase systems then sign up; cost savings depend on how many participate.

While at the federal level, current policies are trending toward greater reliance on polluting fossil fuels, in Georgia Solar Crowdsource and others are promoting solar power as Georgia’s top homegrown energy source.

“Georgia has no homegrown petroleum, coal or natural gas,” said Don Moreland, Solar Crowdsource CEO and chairman of the Georgia Solar Energy Association. “While we import all our petroleum, coal and natural gas, we export about $30 billion per year to pay for it. Imagine for a moment if that $30 billion was invested locally. How quickly could Georgia transform from being almost completely dependent on foreign fuel sources that pollute our air to a domestically secure, sustainable and renewable energy future.”

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INTRODUCTION:
When the Georgia Department of Transportation (DOT) put out a request for bids for the new U.S. 1 Highway bridge over the Altamaha River near Baxley, it was a given that Opelika-based Scott Bridge Company would submit a proposal. After all, the business, now under its third generation of Scott family leadership, built the original steel and concrete span over the river in 1948. But, bridge building in the 21st century is a bit more complicated than it was in 1948. This time, the Scott family would have to consider the river and its federally protected fish and mussel species that could be adversely impacted by construction activities. Ike Scott and his crews met the challenge, not only developing a plan that was more protective, but fighting for it to convince DOT to accept it.

THE WATER BODY:
The Altamaha is Georgia’s largest river and the third largest contributor of freshwater to the Atlantic Ocean on North America’s eastern shore. It drains a 14,000-square mile basin stretching from Atlanta to Darien and is a place of unsurpassed beauty. Often called “Georgia’s Little Amazon,” The Nature Conservancy named it to its list of the 75 last great places on Earth. A treasure trove of wildlife calls the basin home, including 120 species of rare or endangered animals. Notably, it is home to the federally endangered short nose sturgeon and Atlantic sturgeon, prehistoric fish that spawn in the river, and the federally endangered Altamaha spinymussel, found only in the Altamaha River system and nowhere else on Earth. The Altamaha system, which includes the Ocmulgee and Oconee rivers, provides drinking water for communities from metro Atlanta to Middle Georgia. The Altamaha itself fuels two major industrial complexes—a nuclear power plant near Baxley and a pulp mill near Jesup. Its freshwater flow supports commercial shrimp and crab harvests and a rich recreational fishery on the Georgia coast.

THE CLEAN:
Building a $25.9 million, 2.5 mile-long bridge across a major river is a daunting task. Throw in construction considerations to protect federally endangered fish and mussel species and the job becomes even more complicated, but for the Scott Bridge Co. project over the Altamaha River, some old-fashioned building techniques actually got the bridge built quicker at a lower cost to taxpayers and with increased protections for the federally endangered shortnose sturgeon, Atlantic sturgeon and Altamaha spinymussel. But...it wasn’t easy.
To avoid working during the spawning season of these species, the company was given just a three-month window to construct new bridge piers and deconstruct the piers from the abandoned bridge. Unfortunately, Georgia DOT’s design specifications were such that building the piers during that window would have been impossible, forcing the company to work outside the period deemed safe for the endangered species.

Rather than follow DOT’s design specifications, the bridge builders petitioned the state agency to use alternative designs that would save money and better protect the sensitive species. A year-long bureaucratic back and forth with a reluctant DOT ensued, but Scott Bridge Co., with support from Altamaha Riverkeeper and National Marine Fisheries Service, finally won approval for their more “environmentally-friendly” design and construction plan.

During construction, the company completed work on the piers in just six weeks and eliminated the possibility of bentonite slurry spilling into the river. The bridge’s final footprint in the river is half of that envisioned in the DOT’s original design specifications. The new bridge opened for business in March.

“It wasn’t rocket science,” said Ike Scott whose family business has been spanning rivers since 1933. “The rivers have been our home and we care a lot about rivers. In my opinion, its not hard to take a few extra steps to protect water.”

Though the long-time bridge builder has never stepped on an Altamaha spiny mussel in an Altamaha slough or seen a mammoth 100-pound Atlantic sturgeon (few people have as they are very rare), he and his company have done their part to ensure their survival.

“God made them too,” he said. “So, I figured he made them for a purpose.”

The National Oceanic and Atmospheric Administration estimates that only 343 adult Atlantic sturgeon spawn in the Altamaha River, down from historic populations in the thousands. The Altamaha spinymussel is known in just five locations in the Altamaha River system and its populations have declined by more than 50 percent in the last 25 years.

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When doctors examine patients, they look in their mouth: “Open wide and say, “Ahh.” The same health test works for Georgia’s streams. Look at the mouth of any creek and generally you can tell how healthy it is. A creek spilling muddy water into a river has some upstream health concerns; a stream pumping clear water generally has a clean bill of health. Unlike its muddy neighboring streams that drain other parts of fast-growing Paulding County, Raccoon Creek empties clear, sediment-free water into the Etowah River in Bartow County. It owes its health to the Georgia Department of Natural Resources (DNR) and a host of other partners that during the past decade have helped preserve 43 percent of the land drained by Raccoon Creek and restored portions of the creek to protect an important piece of Georgia’s natural heritage--fish and mussels that are found only in the Etowah River, and no where else in the world.

Raccoon Creek is an 18-mile tributary of the Etowah River that flows through Paulding and Bartow counties and is part of the larger Etowah River basin. The Etowah is home to 76 species of fish and is considered globally significant in terms of temperate freshwater fish diversity. Of those 76 species, Raccoon Creek is home to 43. It is the only known habitat for the federally protected Etowah darter in the Etowah basin downstream of Lake Allatoona and supports the largest known population of the federally threatened Cherokee darters in the lower Etowah River basin. The U.S. Fish & Wildlife Service has identified it as a stream critical to the survival of these species. In 2013, southern rainbow mussels were found in the creek for the first time in decades, providing hope that restoration and protection efforts on the creek could lead to the reintroduction of four federally-protected mussel species.

Flowing through the heart of the Paulding Forest and Sheffield Wildlife Management Areas in Paulding County, Raccoon Creek has been the focus of the DNR for more than a decade.
Since 2005, DNR has collaborated with federal and local governments as well as private citizens and non-profit organizations to protect 16,932 acres. Contributions from federal, state, local and private donors have amounted to nearly $70 million for land acquisition, and today, more than 43 percent of the total land area in the Raccoon Creek watershed has been permanently protected.

In addition to land acquisition, DNR has worked with partners like Paulding County, The Nature Conservancy, Kennesaw State University, Georgia Power Co., Natural Resources Conservation Service, Georgia Forestry Commission and others to restore sections of the creek and monitor fish populations following those efforts.

In 2013, The Nature Conservancy spearheaded the restoration of a 1.2-mile section of Raccoon Creek to improve habitat for protected fish species and stabilize eroding stream banks, and in 2015, a bridge culvert on Pegamore Creek that was blocking fish passage was removed and replaced with a free-span bridge, thus reconnecting isolated Cherokee darter populations with those in Raccoon Creek.

The multi-layered partnerships have been unique, according to Brent Womack, a wildlife biologist who has been DNR’s on-the-ground lead with the Raccoon Creek project.

“The project is the partnership,” he said. “That’s what has made it so successful.”

For Womack, the preservation of the creek is personal. A native of Paulding County with family roots there dating to the 1800s, he grew up catching trout on the upper reaches of Raccoon Creek. During his life he has seen the steady march of progress transform other wild stretches of Paulding County, and sees the large swath of protected land just 35 miles from the state capitol as a feather in the cap of this suburban community, providing important wildlife habitat, recreation opportunities and an economic and tourism boost without the usual water, sewer and other infrastructure demands of traditional development.

“We’ve got to keep these places so our kids will know what nature is like,” he said.

DNR’s work is far from done, however. The agency is currently seeking another $1.8 million to acquire additional land in the upper reaches of the Raccoon Creek watershed, and once again has lined up private partners to cover nearly half the costs.

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INTRODUCTION:
When the first shots were fired in the water dispute between Georgia, Florida and Alabama over the Apalachicola, Chattahoochee and Flint (ACF) Rivers, Mark Masters was still in middle school. At the time, his knowledge about the ACF was mostly limited to how much water was in Kiokkee Creek, a tiny tributary of the Flint just a “stone’s throw” from his house. These days, Mark’s understanding of the ACF system is considerably more comprehensive and he can tell you all about flow levels, and why they matter, at places like Peachtree Creek, Milford and Sumatra. Since his time as a research assistant at the U.S. Department of Agriculture National Peanut Research Laboratory where he helped develop irrigation methods and strategies designed to conserve water, Masters has been knee-deep in solving Georgia’s water challenges. As Director of the Georgia Water Planning and Policy Center at Albany State University, he works to provide the most objective data possible to inform statewide water planning and management. He also played a key role in the development of the ACF Stakeholders’ Sustainable Water Management Plan (SWMP), a plan that provides a template for the three states and the U.S. Army Corps of Engineers to improve management of the river system to meet the needs of all water users from the mountains of Georgia to Apalachicola Bay.

THE WATER BODY:
Embroided in controversy since 1990, the waters of the ACF Basin both unite, and divide, the states of Alabama, Florida and Georgia. The Chattahoochee supplies drinking water for some 4 million Georgians, the Flint and underlying aquifers in southwest Georgia provide water for another million Georgians, plus supplemental irrigation water to hundreds of thousands of acres of cropland that serve as the economic foundation for the region; and in Florida, the Apalachicola River feeds Apalachicola Bay, which is considered one of the most productive estuaries in the northern hemisphere. The ACF is a basin defined by an arguably unmatched diversity of water use and stakeholder interests.

THE CLEAN:
On May 13, 2015, members of ACF Stakeholders accomplished what 25 years of history suggested was impossible: they reached consensus on a plan to equitably share and manage the water in the ACF Basin. The seven years leading up to the eventual adoption of the SWMP Masters called “frustratingly powerful.”
The consensus decision-making process adopted by the Stakeholders was anything but efficient. At times, it was tedious and contentious as the 56-member panel worked to reach agreement, but Masters credited that process with the Stakeholder’s ultimate success.

“Without all those early meetings on what, at the time, seemed insignificant issues, I don’t think the members would have developed the trust in each other needed to get over the finish line. It was the very definition of team accomplishment,” he said.

Some Stakeholders point to Mark’s support behind the scenes as key. “If it hadn’t been for his calm hand and sage advice, it would have all fallen apart. He was the glue,” said Gordon Rogers, Flint Riverkeeper and ACF Stakeholders Board member.

While the SWMP never received an endorsement by the states, the recommendations included in the plan received a formal review by the U.S. Army Corps of Engineers and it was referenced a number of times by Special Master Ralph Lancaster in last year’s hearing in the Florida v. Georgia equitable apportionment case.

For Masters, a scientist by training, developing a plan to manage the river system for the benefit of all three states is about knowing facts and working cooperatively with all the people that depend on the rivers.

“It’s all about the people,” he said. “The lasting relationships built across political, geographic, economic, social and institutional boundaries are the true value of ACF Stakeholder process. The Basin is truly better off because of this work.”

While the “water war” remains unresolved, Masters continues to provide critical data to help state and regional water planners make informed decisions, particularly regarding agricultural water use. Recently, he led a team that produced estimates of current and future agricultural water demand to inform Georgia’s Regional Water Planning process.

“The fact remains that you can’t manage what you can’t measure,” notes Donald Chase, farmer and Chair of the Upper Flint Regional Water Council. “Mark and the team from the Water Policy Center are a trusted resource for those of us in agriculture and their support was critical in completing our first two water management plans.”

This planning and the continued collection of data about the Apalachicola, Chattahoochee and Flint leaves Masters optimistic about the future: “The truth is, we are blessed with a relative abundance of water in our part of the world, irrigators are remarkably efficient with their on-farm water use, the foundation for on-going planning work is as strong as ever and, importantly, the universe of stakeholders willing to sit down and cooperatively seek solutions is growing. That’s all good news.”

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INTRODUCTION:
Water and sewer pipes are the blood vessels and veins of our communities. They carry drinking water to our taps and collect the wastewater that we flush down our toilets and drains. When they fail, we suffer. Our tap water can become contaminated, and sewage spills can ruin our neighborhoods, fouling the streams and rivers where we play. For water and sewer utilities around the state, it’s a constant struggle to stop leaks, eliminate back ups and spills, and keep these vital systems flowing. In 2016, the Macon Water Authority (MWA) used innovative pipe repair methods to not only keep Macon’s sewage flowing but also protect sensitive areas along the Ocmulgee River. In doing so, the Authority saved ratepayers millions of dollars, kept sewage from leaking into the river and prevented the disruption of popular recreational trails along the river.

THE WATER BODY:
Formed by the Yellow, Alcovy and South Rivers that rise in metro Atlanta, the Ocmulgee begins its life at Lake Jackson, a man-made reservoir just north of Juliette formed by Lloyd Shoals Dam. From the dam it flows some 300 miles to its confluence with the Oconee River to form the Altamaha, Georgia’s largest river. On its journey through middle Georgia, it supplies drinking water for more than 1.3 million people, including the people of Macon. The river is also home to an effort to restore a population of Robust Redhorse, a rare fish that was rediscovered in the Altamaha River basin in 1991. A mecca for paddlers, boaters and anglers, communities along the Ocmulgee are now working to create a 54-mile long water trail stretching from Macon to Hawkinsville.

THE CLEAN:
Beneath Macon and Bibb County course more than 1200 miles of Macon Water Authority sewer pipes. Over time, these mains become corroded, roots infiltrate them and grease and other debris builds up and clogs them. Ultimately, aging pipes need repairs or replacement.

Herein lies a quandary for MWA and Georgia’s other sewer utilities: because sewer mains are usually gravity fed, the largest lines tend to be placed along low-lying areas adjacent to streams and rivers.
When they fail, the sewage has a short trip to the places where we fish and swim. And, replacing them brings its own set of problems—namely digging them up and disturbing sensitive land along our streams and rivers.

Faced in 2016 with replacing more than two miles of large corroded and failing sewer mains along the Ocmulgee River and the city’s riverside recreational trail, MWA chose an option that kept the pipes in the ground and minimized disturbing soil and plants along the river: cured-in-place pipe.

Resin impregnated tubes were inserted into existing sewer mains and cured using hot water. The result: a water-tight seal impregnated into the existing sewer mains that stops leaks and allows the sewage to move more rapidly to the Authority’s wastewater treatment facility.

What’s more, the work was completed without digging and disturbing the river or the 11-mile long Ocmulgee River Heritage Trail that parallels both the river and the sewer mains. Runoff from construction activities and utility work that spills dirt and sediment into our rivers during rain events is among the top pollution problems for Georgia’s rivers.

Since 2004, MWA has invested more than $35 million rehabilitating aging sewer mains using the cured-in-place pipes.

“We take the view at the Water Authority that we’re about doing the right thing,” said Tony Rojas, the Authority’s Executive Director. “When you’re working along the river you take into account other considerations besides just monetary factors. If we have a choice we’re going to do the least disruptive construction method because we have an obligation to the river itself.”

Aside from getting their drinking water from the river, Macon has, in recent years, begun recognizing the importance of the river as a recreational amenity. This re-orientation to the river has made keeping the river clean and the river corridor inviting all the more important for the Authority.

Amerson River Park, completed in 2015 on the site of the city’s former water treatment facility and named for MWA’s former chairman, Frank Amerson, now offers up canoe, kayak and tube float trips. In a town of with a population of about 150,000, the park now hosts more than 300,000 visitors annually.
INTRODUCTION:
Rainwater harvesting has been around since the dawn of civilization. Cultures in dry climates went to great lengths to collect and store rainwater for use when it was needed. Today, the same low tech engineering is being employed to reduce demands on stressed rivers and streams. In the far reaches of North Georgia, farmer Terri Jagger Blincoe is employing it to keep her 14-acre farm near Persimmon Creek green and growing, even during periodic dry spells in the rain-rich Appalachian Mountains of Rabun County. At Ladybug Farms, some 1600 square-feet of roof tops are used to collect and store up to 6,000 gallons of irrigation water that help Jagger Blincoe produce between 8,000 and 10,000 pounds of sustainably grown vegetables annually.

THE WATER BODY:
Nestled in the upper reaches of the Tallulah River watershed in Rabun County, Ladybug Farms lacked a readily available and abundant supply of surface water. Without a municipal water supply or well, the farm was without a drought backup plan until it installed its rainwater catchment system. Across Georgia, however, agriculture and landscape demands on both groundwater sources and municipal water supplies can reduce flows in streams and rivers that are critical for maintaining stream health and aquatic wildlife. By harvesting rain, the farm is helping keep the mountain stream that flows past Ladybug Farms full and feeding Persimmon Creek, the Tallulah River, Lake Burton and the chain of other hydro-power reservoirs built on the Tallulah in the early 1900s. A gem of Rabun County, the Tallulah is known for its crystal clear lakes and especially for the wild and rugged, 2-mile-long, 1,000-foot deep Tallulah Gorge, one of Georgia’s seven natural wonders.

THE CLEAN:
When Jagger Blincoe established her Rabun County sustainable farm in 2007, she wanted to connect local consumers with locally-grown food. But, how to grow food on a farm with limited water supplies—even in a place that gets on average 71 inches of rainfall a year? Jagger Blincoe knew there would be periodic droughts so a dependable—and cheap—supply of water was needed.
She secured it with the help of a U.S. Department of Agriculture Natural Resources Conservation Service program that usually aids farmers in developing wells. With a little persuasion, Jagger Blincoe convinced the federal agency to fund a rainwater harvesting project instead. The system uses four interconnected 1,500-gallon concrete storage tanks that collect rain falling on the roof of an old chicken barn.

The collection system not only serves as crop insurance, it’s a money saver. Every drop of water from the system comes to the fields without assistance from pumps or fuel. A 300-foot pipe and 14-foot elevation drop from the cisterns delivers the water through drip irrigation in each quarter acre field. It is considered the largest gravity-fed rainwater catchment system in the state.

The system has enabled Jagger Blincoe to produce upwards of 10,000 pounds of produce annually. She provides weekly produce delivery to some 20 families in Clayton and she sells directly to consumers at the Clayton Farmers Market. During the course of the growing season, she produces more than 40 different varieties of heirloom vegetables, ranging from arugula to zucchini and everything in between...all thirsty for water.

And, she’s taken what she’s learned from her rainwater system and shared it with other farmers and gardeners through workshops sponsored by Georgia Organics. You might call her Georgia’s Johnny Appleseed of rainwater catchment, touting not only the cost-savings of her gravity fed system but also the health benefits of irrigating with mineral rich rainwater as opposed to treated water from municipal supplies.

“Fresh water is becoming less available and increasing in value,” she said. “And, I personally believe that most farmers overwater or use water to push production. When you depend on rain water, you are more aware of water usage and most likely more conservative in water usage.”

Top: The crops at Ladybug Farms are kept green and growing through what is considered the largest gravity-fed rainwater catchment system in Georgia. Left: Terri Jagger Blincoe produces upwards of 10,000 pounds of produce annually from her Rabun County farm with the help of her rainwater catchment system. Right: Irrigation water for Ladybug Farms, a sustainable farm in Rabun County, is collected from the roof of this and a second building. Downspouts are connected to underground tanks holding 6,000 gallons of rainwater. Bottom: These tanks hold the water that now irrigates Ladybug Farms crops. The system relies entirely on gravity with the fall from the tanks to the field generating enough water pressure to allow drip irrigation.

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INTRODUCTION:
In late 2015, when wildcatters began calling property owners around Calhoun and Rome seeking to purchase their mineral rights to drill for natural gas, a community stood on high alert. Concerned residents poured into a public meeting that winter about natural gas and fracking sponsored by the Southern Environmental Law Center (SELC) and the Coosa River Basin Initiative (CRBI), making it a standing-room only affair. There, they learned that beneath a large swath of northwest Georgia was the Conasauga Shale formation, a geologic feature said to hold as much as 625 trillion cubic feet of natural gas. They also learned that the controversial practice of hydraulic fracturing or “fracking” might be used to extract this gas, and that Georgia’s existing laws offered no protections against the risks associated with fracking—risks that have resulted in the contamination of groundwater and surface water in other areas. That’s when local residents turned to Rep. John Meadows (R-Calhoun) for help. The powerful chairman of the House Rules Committee did not disappoint his constituents.

THE WATER BODY:
About a half million people in an eight county area in northwest Georgia that sits atop the Conasauga shale formation depend upon the rivers and streams and underground aquifers of Northwest Georgia for their drinking water. The streams that drain the 5,000 square-mile upper Coosa River basin are home to 30 species of fish, mussels, snails and crayfish that are found no where else in the world, making this river system the most biologically unique in North America. The basin is home to 114 species of fish, 27 species of mussels, 24 species of snails and 18 species of crayfish, including 14 federally protected aquatic species. A treasure trove of biodiversity, it is also home to a thriving outdoor recreation economy, catering to boaters and anglers.

THE CLEAN:
Upon hearing concerns of local residents, Chairman Meadows took action. He consulted the governor’s office, identified gaps in existing laws and by the opening weeks of the 2017 legislative session introduced HB 205, a measure to update the state’s 1975 Oil and Gas and Deep Well Drilling Act, a law adopted long before the widespread use of fracking techniques to extract natural gas.
“I’m a fan of fracking,” Meadows said, citing the need for U.S. energy independence. “But, I’m not a fan of fracking at the expense of our drinking water. I read some of the articles about things that had happened, particularly up in Pennsylvania, where whole cities and counties have had their water sources invaded. I don’t want us to have to go through that.”

HB 205 improves the state’s 40-year-old drilling laws that forced EPD to review and issue complex drilling permits in just 15 days and permitted gas companies to drill without notification of local governments or adjacent property owners. It sets in place regulations that provide for public involvement in the permitting process and require drillers to identify and monitor drinking water sources near their wells.

In introducing his legislation from the House well in February, he first made sure that each of his colleagues had a bottle of Calhoun’s Big Springs water on their desks. “The bill is not about ‘I’m for fracking or against fracking,’” he said. “It’s about I’m for water.”

That Chairman Meadows took the lead on new drilling regulations in a conservative political climate in which “regulation” is often viewed as a four-letter word came as no surprise to those that have followed him since he served as mayor of Calhoun from 1985 to 1998. He was known to take elementary school children on tours of the city’s water and wastewater treatment plants during that era, and he often says that the region’s two most important resources are children and water.

That’s because he knows something about the impacts of water pollution. A native of Calhoun, he grew up eating fried catfish pulled from the Oostanaula River. “The Oostanaula River used to be one fine place to go,” he said, but by the time he began serving on Calhoun’s city council that once fine place had become so polluted by upstream industries that the city was forced to abandon its drinking water intake on the Oostanaula and spend $8 million to build a new raw water intake on the nearby and unpolluted Coosawattee River.

Since entering the legislature in 2004, he has been a steadfast defender of clean water. He cut his teeth (and got put in leadership’s doghouse) fighting a massive resort development on state-owned Jekyll Island—a place whose golf courses and nesting turtles are near and dear to the long-time island visitor.

Since ascending to the chairmanship of the Rules Committee, he has repeatedly stepped in to halt and/or amend legislation. His efforts led to improving the Flint River Drought Protection Act in 2014 and strengthening the marshland protection act in 2015.

Though HB 205 did not pass during the 2017 session due to an unfriendly and unrelated amendment added in the Senate, Chairman Meadows expects full passage early in the 2018 session. If adopted, it will bring Georgia’s outdated oil and gas drilling laws into the 21st century.

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INTRODUCTION:
When Chattahoochee Riverkeeper was looking for a way to show a group of intown Atlanta residents how to use green infrastructure to manage stormwater at a proposed neighborhood park, they had to look no further than the campus of the Georgia Institute of Technology. Georgia Tech has been a leader in green infrastructure since it built its first LEED certified building in 2003. Since then, the Institute has taken on the challenge of managing the rain that falls on the campus. Now that rain is collected and conserved, the campus has become a veritable zoo of green infrastructure projects that save water and keep pollution out of local streams. The campus’ green solutions to stormwater runoff are so numerous, faculty and students have even developed a smartphone app that allows anyone to take a virtual tour of Tech’s innovative approaches to managing stormwater.

THE WATER BODY:
In 1888, when Georgia Tech opened its doors, Tanyard Creek flowed through what was then undeveloped property west of Georgia Tech’s iconic Tech Tower building. When thunderstorms rattled over Tech students in those days, the rain hit the ground and seeped slowly into it and eventually to Tanyard Creek. Over the course of the next century as the Institute and Atlanta grew in unison, Tanyard was slowly piped and buried. Today, almost 70 percent of the land surrounding Tanyard Creek is covered in concrete, asphalt and buildings. Now, when rain hits the ground, instead of soaking in and moving slowly to the creek, it rushes off these hard surfaces picking up pollutants and spilling into the creek in torrents. For the creek, that change has been devastating. The resulting stormwater runoff is one of the biggest threats to Tanyard Creek, causing erosion and harming the stream’s health. In larger storms, this rain water runoff can also strain Atlanta’s underground combined sewer system. As development in the watershed increases, the volume of runoff and its impacts do the same. But, over the last decade, Georgia Tech has attempted to make its urban campus behave like the wooded landscape that existed when the school was founded.
THE CLEAN:

With a campus filled with 25,000 of some of the smartest undergraduate and graduate students in the country instructed by national experts in far-ranging fields of engineering, it’s no surprise that Georgia Tech is on the cutting edge of green infrastructure projects. But, can the campus achieve its goal of restoring the historic function of Tanyard Creek as it set out to do when it adopted its 2004 Campus Master Plan?

More than a decade into the effort, the engineers are off to a hell of a start.

The Institute is restoring Tanyard Creek by creating an Eco-Commons, a series of connected greenspaces that mimic what happens to rain when it hits the ground in a natural setting. The goal is to reduce the campus’ contribution to Atlanta’s Tanyard CSO Treatment Facility by 50 percent.

Around the campus are other projects that help protect Tanyard Creek. The Clough Undergraduate Learning Commons features a green roof and the building’s cisterns capture up to 1.4 million gallons of rain water and air-conditioning condensate for reuse throughout the building; the Klaus Advanced Computing Building captures rainwater in 120,000 gallon cisterns for reuse and is surrounded by infiltration rain gardens that decrease the building’s stormwater runoff by 34 percent; and Roe Stamps Athletic Field features 332,000 gallons of below-ground stormwater infiltration capacity.

In 2013, the Institute adopted a stormwater master plan that sets the goal of using green infrastructure to manage the first 1.2 inches of stormwater runoff from any redeveloped areas, a standard nearly 20 percent better than what’s required by law.

And, coming soon, administrators expect to begin construction on what will be Atlanta’s first Living Building, a structure that will produce more energy than it uses and that collects, treats and uses all water on site. Among the expected features of this classroom building will be composting toilets, a solar array, radiant floor heat, and a rooftop garden with honeybee apiary and pollinator garden.

Georgia Tech’s holistic approach to water management on campus is an impressive model for others to follow, and the cumulative impacts of Tech’s green infrastructure projects mean a healthier Tanyard Creek. Downstream of the campus, Atlantans are returning to the creek along recreational trails in Tanyard Creek Park that is part of Atlanta’s ambitious Beltline multi-use trail system.

Though Tanyard Creek may never see the light as it did when students first walked through Tech’s doors in 1888, nearly 130 years of engineering has brought solutions that may one day restore it to a semblance of what it once was.

Top: Landscaping on the Georgia Tech campus is designed to allow rainwater to soak into the ground. The designs also trap sediment and other pollutants before they flow to stormwater systems and on to nearby creeks. Left: Porous brick pavers on the Georgia Tech campus allow rainwater to seep into the ground, helping eliminate stormwater runoff surges to nearby Tanyard Creek.

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INTRODUCTION:
Imagine detailing 62,000 vehicles each year. That’s the task facing Manheim Georgia, which is part of the world’s leader in vehicle remarketing services. Vehicles of a variety of makes and models course through Manheim’s facility just west of the Atlanta airport and each one must be cleaned and prepped for resale—a process that requires thousands of gallons of water daily and generates corresponding amounts of wastewater. Water scarce Atlanta, where extended droughts routinely create water supply crisis, would seem an unlikely location for such a facility, but Cox Conserves, the sustainability arm of Atlanta-based Cox Enterprises, has developed water conservation solutions that help the mega-car wash facility live in harmony with the Chattahoochee River and the some four million Georgians that depend on the river for their drinking water.

THE WATER BODY:
Nestled on the divide between the Flint and Chattahoochee rivers in southwest Atlanta, Manheim Georgia, like other businesses in metro Atlanta, depends upon the municipal water supplies from the Chattahoochee River to clean its ever-changing inventory of vehicles. The Chattahoochee supplies more than 70 percent of the water used by metro Atlanta’s 5.7 million people—an average daily withdrawal of 450 million gallons a day. Additionally, residents downstream in cities like LaGrange, West Point and Columbus also depend on the river’s flow. Since the early 1990s, Atlanta’s dependence on the Chattahoochee has been at the center of a feud between Georgia, Alabama and Florida over water rights that remains unresolved and now sits before the U.S. Supreme Court.

THE CLEAN:
Sandwiched between bustling I-285 and South Fulton Parkway in southwest Atlanta is Manheim Georgia’s sprawling 189-acre operation filled with a veritable sea of used vehicles. Amongst this sea is the Manheim Water Conservation Center, which cleans and repurposes water for its reconditioning center and returns clean water to the Fulton County Water Department.
Each day a steady stream of cars flows through Manheim Georgia’s reconditioning facility and a steady stream of pressurized water is used to tidy up those vehicles. The used water is collected, equalized, treated with micro-organisms that remove oil, soap and grease, run through filters to remove additional solids and finally treated with reverse osmosis membranes to create reusable water.

When all is said and done, 60 percent of the water that enters the facility gets used on the next vehicles set for cleaning with the remainder sent to municipal wastewater treatment plants where it is ultimately returned to the Chattahoochee River.

The process produces 3,000 gallons of clean water each day and over the course of a year, saves two million gallons of water.

Combined with another Manheim conservation facility in Pennsylvania, Cox Enterprises saves 10 million gallons of water annually, keeping that water in our rivers where it sustains fisheries, recreational opportunities and drinking water supplies for downstream communities. Through efforts at Cox Enterprises other subsidiaries, the company saves more than 32 million gallons of water annually.

In announcing the tenth anniversary of the company’s sustainability program earlier this year, Cox Enterprises Chairman Jim Kennedy stated: “Cox Conserves is a story about taking action and inviting everyone to join us on our sustainability journey. While the world has seen drastic changes over the last decade, our commitment to sustainability has been unwavering. In fact, it’s grown and will continue to do so. We know that efficiency is good for the environment and for the bottom line, but Cox Conserves is much more than just an operational program. It’s a part of our culture that brings positive change to the communities around us.”

In addition to water conservation efforts, Cox’s employees are also active in river and ocean cleanups across the nation, having removed more than 25 tons of trash from waterways. Meanwhile, the company remains a strong supporter of numerous Georgia-based environmental organizations, including many members of the Georgia Water Coalition.

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When it rains in Atlanta, it pours... stormwater flushes into streams coursing through the city and into the Chattahoochee and South rivers. That stormwater carries an urban brew of grease, oil, heavy metals, pet waste, household chemicals, lawn and garden fertilizers and salts—stuff that has no business in a natural stream. The result of this polluted runoff? Every stream—from Peachtree to Utoy—in the city of Atlanta fails to meet state stream health standards. Fortunately, the City of Atlanta is taking steps to restore these streams. During the past decade, the City of Atlanta has become a national leader in addressing water pollution issues associated with stormwater runoff, and in 2013, the City Council adopted one of the most far-reaching post-development stormwater management ordinances in the country. Since its adoption, more than 3,500 projects have been permitted using the city’s mandatory green infrastructure standards, equating to the removal of approximately 700 million gallons of polluted run off from streams annually.

Unlike other major metropolitan cities in the U.S., Atlanta does not have a major river flowing right through the middle of it. Instead, the city is drained by numerous small creeks like Nancy, Proctor, Peachtree and Utoy, all of which fail to meet state standards for stream health and all of which feed into the Chattahoochee and South rivers which in turn supply drinking water for hundreds of thousands of people downstream in communities like Macon, LaGrange, West Point and Columbus. The state’s longest and most important river, the Chattahoochee supplies drinking water to some 4 million people. The South River feeds the Ocmulgee River, Macon’s water source, and is part of Georgia’s largest river system—the Altamaha.

In 2013 when the Grand Hyatt Buckhead Hotel in Atlanta looked for ways to save money and practice environmental responsibility, they borrowed a page from the City of Atlanta’s recently adopted stormwater ordinance. They installed a rainwater harvesting system on the hotel’s 50,000 square-foot roof, and began using that rainwater to flush toilets and operate the hotel’s cooling systems. The project resulted in more than $30,000 in annual savings for the hotel and helped reduce the amount of polluted stormwater coursing to nearby Nancy Creek.
It was innovative projects like this that the City of Atlanta expected to create when in 2013 it adopted its progressive stormwater requirements. The city’s ordinance requires green infrastructure on all new and redevelopment projects. The goal is to mimic the natural hydrology of a forest, but in an urban setting. Since adoption of the ordinance, residents have seen rain gardens, bioswales, permeable pavement, and rainwater cisterns pop up all over the city. These projects allow water to soak into the ground, and Atlanta’s streams are then recharged with cleaner and cooler water.

There’s a porous concrete parking lot at Delia’s Chicken Sausage Stand helping save Proctor Creek; homeowners on Leslie Street use cisterns to collect rainwater and slow the flow to nearby Sugar Creek; and permeable pavers at the Urban Market at Howell Mill are doing their part to protect Peachtree Creek.

In addition to requiring green infrastructure on new commercial and residential projects, the city itself is leading by example. In 2012, the city addressed stormwater pollution and chronic flooding in the Summerhill, Peoplestown and Mechanicsville neighborhoods by replacing four miles of asphalt streets with porous pavers and stormwater planters. Completed in 2016, the project is the largest roadway project of its kind in the country.

In the city’s Old Fourth Ward neighborhood, the city, in partnership with Atlanta Beltline, Inc., transformed a blighted industrial area into a 17-acre park featuring a two-acre stormwater retention pond that reduced flooding in nearby neighborhoods. The project also saved the city close to $15 million (compared to other infrastructure solutions) and spurred more than $500 million in private redevelopment.

Atlanta’s success with green infrastructure is now serving as an example for others. City staff have worked closely with the Atlanta Regional Commission and Georgia’s Environmental Protection Division to develop templates that other Georgia cities and counties can use to adopt similar ordinances.

With its green infrastructure ordinance, Atlanta is reversing the impacts of more than 100 years of urban development on the area’s creeks and the Chattahoochee and South rivers. That’s good news for the city’s downstream neighbors.

“Green infrastructure has proven to be a practical and cost-effective solution to the problems associated with stormwater runoff,” said Cory Rayburn, watershed manager with the city. “By combining our own capital improvement efforts with a strong stormwater ordinance, we hope to improve the overall water quality in our streams while providing an aesthetic benefit to surrounding communities.”

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