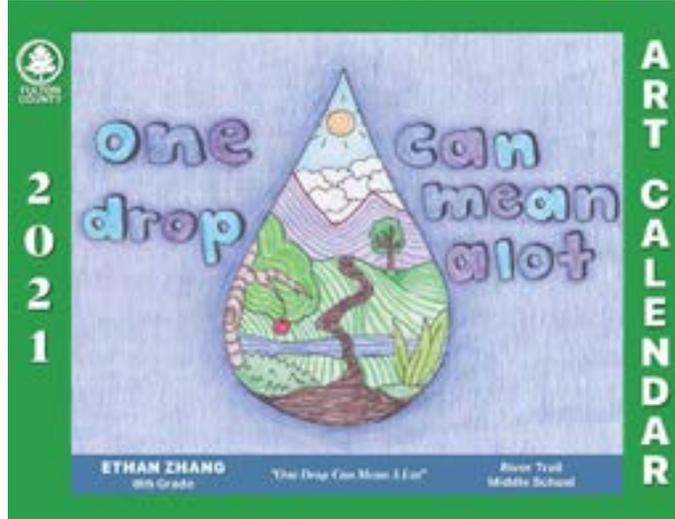




CONNECTIONS

Fulton County Public Works' Quarterly Newsletter



2021 Art Calendar Contest Success Despite COVID-19

By: Hannah Penn

Each year producing our Art Calendar Contest has always brought about a different set of challenges as we work to grow this outreach tool to students in Fulton County. With annual changes in marketing efforts and finding new portrayals of the importance of water in the artwork pieces, the contest continues to tap into our creativity. This past year's contest was no different, in fact we were challenged to facilitate even more than normal, due to COVID-19.

When we began soliciting entries for the contest in August of 2020, the majority of Fulton County students and teachers were distance learning in response to the pandemic. The separation was daunting as we worked to think of ways to connect and keep in touch with our teachers and students regarding the contest. We have many students who have become very engaged and participate in the contest almost every year, so we knew we could count on this group of

teachers and students to keep an eye out for submission deadline information. But, how do we reach students, teachers, and schools who have never heard of the program? Since we couldn't interact directly with the schools, we had to think a bit outside of the box from our usual school visits, social media advertisements and flyers. We reached out to staff with the Fulton County Library System, and they helped out by distributing flyers and entry forms to people who were picking up books from locations throughout Fulton County. Fulton County Public Schools helped promote the contest in a few issues of the teacher newsletter leading up to the contest deadline. The additional efforts helped our annual contest to once again be a successful one. During a time of disconnect and virtual meetings, our annual contest received 107 entries of original artwork that once again created a beautiful calendar.

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This year's contest asked students to use a theme to guide their artwork creation as they pondered "You Need Water, Water Needs You" and how water conservation and water quality principles played into this simple statement. Our winners managed to find the perfect way to portray the importance of water in our daily lives.

The Public Works Public Education and Outreach team would like to thank everyone who helped make this calendar a successful venture as well as the students who submitted original artwork to create another wonderful calendar with daily reminders to protect and conserve our shared water resources.

Director's Corner

By: David Clark



Happy New Year and congratulations for surviving all of the challenges thrown at us – both personally and professionally in 2020. I am looking forward to a much happier and healthier 2021.

Whereas our daily methods on how we do our jobs have changed over the past year, the fact that we still do our jobs have not. So thank you for your continued commitment to serve Fulton County. In this issue, you will read about the Public Education staff's annual art calendar contest highlighting some very talented students. Interacting with these students is always a highpoint of the year for me and I am sorry that we were not able to host them for the annual breakfast last December.

Also in this issue you will read about how Public Works staff continue to oversee the largest capital improvement project in Fulton County's history at the Big Creek Water Reclamation Facility and how staff continues to improve our sanitary sewer collection system through liners. Finally, March will bring us our annual Fix-a-Leak week to ensure responsible use of our water supply.

I cannot guarantee what all 2021 will have in store for us. So please keep in mind that how we do our jobs must remain flexible, the fact that we will do our jobs will never waver. Again, thank you for your service and your commitment makes me proud to be a part of Public Works every day.



Thomas Czczil

Scott Dickson

Joe Sager

| Public Works By the Numbers October - December 2020 | | |
|---|--------------|--|
| Water Resources | 24.65 MGD | Total Potable Water Distributed (average day) |
| | 7.4 % | Non-Revenue Water (annualized) |
| | 284 | Small Meters Replaced |
| | 52.08 MGD | Total Wastewater Treated (average day) |
| | 177.42 Acres | Sewer Easement Cleared |
| | 6.32 MG | Reuse Water Provided (JCEC) |
| | 15.95 MG | Reuse Water Provided (Little River) |
| | 555 | Water and Sewer Service Applications Processed |
| | 8 YTD: 25 | Sewer Overflows >10,000 gallons (major spill) |
| | 612 YTD: 36 | Sewer Overflows <10,000 gallons (minor spill) |
| Airport Services | 525 | People Reached by PEO Staff |
| Airport Services | 59,984 | Total Aircraft Operations 2020 |
| FID Transportation Operations | 111 | Potholes Repaired |
| | 36 Tons | Litter Picked Up |
| | 20 | Traffic Signals Maintained |
| Development Permits | 28 | Utility Plans Approved |
| | 122 | Utility Projects Under Construction |
| | 8 | Utility Projects Completed/Accepted |

Big Creek Water Reclamation Facility Expansion Update

By: Corlette Banks

After years of planning and public meetings, construction of the expansion of the Big Creek Water Reclamation Facility is officially underway. The \$300 million project, the largest single capital expansion project in Fulton County’s history, by the design-build joint venture team of Archer Western and Brown and Caldwell. On November 12, 2020, Fulton County leaders and staff joined the architects and engineers and others who helped craft the proposed new project to officially break ground and to observe the start of construction.

A lot of work has taken place to get us to this point. The project was separated into two phases (Phase 2A – Initial Site Preparation and 2B – Building Construction) in order to increase the speed of implementation and reduce the cost of the overall project. Phase 2A began in the fall of 2019, and is almost complete. This phase included the excavation and backfill for final grade, demolition of multiple structures around the site, establishment of erosion control improvements, relocation of some existing utilities, and installation of foundation piles for dewatering, UV, and membrane gallery.

Phase 2B began in August 2020 and is expected to be completed in mid 2024. Over the past several months, significant progress has been made on the concrete slabs at the primary clarifiers as all base slabs have been poured. At the dewatering building, all underslab piping has been installed, ground floor slabs have been poured, and structural columns are being poured. Site preparation is underway at the Biological Nutrient Reactors (BNR) for concrete slabs. Upcoming construction activities include: concrete placements for the Membrane Biological Reactor (MBR) walls and base slabs at the BNR. Underslab piping will be installed at the Headworks Building and BNR basins. Concrete columns will be poured at the Dewatering Building in preparation for construction of the second floor. It is the goal of Archer-Western to have the new dewatering building in operation by the end of the year. It is an aggressive goal, but one that Archer-Western is fully committed to attain in 2021.

Located in Roswell, Georgia and within the Big Creek watershed, the facility serves the Cities of Roswell, Alpharetta, portions of Milton, Johns Creek, and Sandy Springs in addition to small areas of Cobb, Forsyth, and DeKalb Counties. The joint venture will utilize progressive design-build to expand the 50-year-old facility’s treatment capacity from 24 to 32 million gallons per day to meet the projected wastewater treatment demands from future growth through at least 2050. The expansion will result in reduced light, noise and odor emissions, with the new treatment process producing cleaner water than the existing plant, along with reduced discharges to the river, even at the higher flow capacity. For more information on the project, please visit www.bigcreekexpansion.com.



Groundbreaking Ceremony 11/12/2020



Groundbreaking Ceremony 11/12/2020



MBR DeOx Walls Columns
(photo courtesy of Brown and Caldwell)



Dewatering Building
(photo courtesy of Brown and Caldwell)

Fix a Leak Week 2021: Take the 10-Minute Challenge

By: Amy Warnock

Each year during the third week of March, Fulton County Public Works joins other WaterSense partners in celebrating Fix a Leak Week by encouraging our residents to find and fix leaks in their homes. This year, we're asking everyone to take the "10-Minute Challenge". The average household leaks more than 10,000 gallons of water each year, and in just 10 minutes you can take steps to "nip those drips", lower your utility bills, and protect your home from water damage. Here's how you can take the challenge:



1. Start by dye-testing your toilets for leaks (use our step-by-step instructional video: <https://youtu.be/5ZWCwdsVq60>)
2. While you wait 10 minutes for your dye test to finish, do a quick visual inspection of your water fixtures and connections.
3. Check for faucets that drip when completely turned off, water seeping from the base of a faucet or dripping from your showerhead connection, or any drips coming from supply lines.
4. Tighten connections if needed. If that doesn't solve the problem, check for worn or damaged gaskets and replace as needed. Use plumber's tape to seal the threads of your shower arm.
5. Check the consumption graph on your water bill and compare to the same season during the previous year. Any large unexplained spikes could indicate a leak.
6. Read your water meter with all water fixtures turned off. Wait an hour without using any water and check the meter again – if the number has changed, you may have a leak.
7. Inspect your sprinkler heads for damage and check hose connections for leaks.
8. If any of your fixtures need to be replaced, be sure to look for the WaterSense label when buying new ones! WaterSense labeled products have been third-party tested for both efficiency and performance, so you can upgrade your water savings without sacrificing your shower.

Fulton County's water source, the Chattahoochee River, is shared by most of the metro-Atlanta area as well as thousands more people downstream of us. It is also one of the smallest watersheds in the country to support a population as large as ours, so it's important for each of us to do our part to prevent water waste. Start by taking this 10 minute challenge to nip those drips and slow the flow at home. You can find a helpful fix-a-leak checklist and more conservation tips on our website: <https://fultoncountyga.gov/services/water-services/water-conservation>.

For more information about water conservation or Fix a Leak Week events, contact Amy Warnock at (404) 612-8006 or amy.warnock@fultoncountyga.gov.



Fulton County Executive Airport to Install LED Runway Lighting

By: *Tim Beggerly*



Fulton Executive Airport (FTY) will be replacing its current incandescent airfield lighting system with the a new state of the art LED lighting system. The GDOT agreed to accept a bid from Precision Approach to replace the deteriorating incandescent system with newly introduced LED runway lights, taxiway lights, directional signage, and new wind cone systems. Included will be new underground wiring and new electrical regulators. FTY will be only the second airport in the Northern Region of GA to install LEDs on its runway.

What are the advantages of the LED lights? The first and foremost is visibility. The LEDs are brighter and can be seen from farther distances in both clear and inclement weather conditions, thus allowing pilots to identify the runway and airport environment from greater distances. This equates to safer operations on and around the airport. From the airport operator’s standpoint, the LEDs last 10 to 15 times longer than incandescent’ s, require less hours of maintenance, and consume 79% less energy than incandescent lighting systems. This equals a substantial cost savings to the airport.



The preconstruction meeting for this project has been completed and a notice to proceed will be issued soon. The project cost is \$1,002,638 with the GDOT funding \$751,979 and the Airport \$250,659.

LED lighting is a game changer for airports across Georgia and the Nation. FTY is proud to be one of the first in the state to offer this new technology. We plan to continue making these types of improvements to the airport as we implement the new Airport Master Plan.

| Upcoming Events |
|---|
| <p>Homeowner Septic System Virtual Workshop Wednesday, February 10, 2021 6 PM Register for this workshop by emailing Kelli Edwards at kelli.edwards@fultoncountyga.gov</p> |
| <p>FC Holiday-President’s Day Monday, February 15, 2021</p> |
| <p>GA Arbor Day Friday, February 19, 2021</p> |
| <p>Adopt-a-Stream Macroinvertebrate Workshop Autrey Mill Nature Preserve March 6, 2021 10:00 AM Register for this workshop at www.autreymill.org</p> |
| <p>Fix a Leak Week March 15-19, 2021</p> |
| <p>World Water Day March 22, 2021</p> |

| Fulton County Board of Commissioners |
|--|
| <p>General Number 404-612-8200</p> |
| <p>Chairman-Rob Pitts (At-Large)</p> |
| <p>Vice-Chair Natalie Hall (District 4)</p> |
| <p>Commissioner Liz Hausmann (District 1)</p> |
| <p>Commissioner Bob Ellis (District 2)</p> |
| <p>Commissioner Lee Morris (District 3)</p> |
| <p>Commissioner Marvin S. Arrington Jr. (District 5)</p> |
| <p>Commissioner Khadijah Abdur-Rahman (District 6)</p> |

Trenchless Technologies Offer a Less-Invasive Rehabilitation to Aging Pipes

By: Sam Tamakloe

When older pipes in the collection system begin to fade, there is often thinning of the pipe walls allowing for water and roots to infiltrate. In the past, most of these pipes would be repaired by digging up the old pipes and replacing them with newer versions with longer life expectancies. Luckily, as the pipes age, new technologies have become available to rehabilitate older pipes with these qualities without digging and replacement.

A product from Saertex (STX) which uses a liner with trenchless technology is being used by Public Works' Technical Services Division to rehab pipes in Fulton County's collection system. Following the thorough cleaning of the existing pipeline, the STX liner is pulled into place. A protective sliding film or glide foil can be used in significantly deteriorated lines to aid in the pull-in process and to further protect the liner. Both ends of the liner are then sealed with protective end caps and air pressure is introduced, allowing the liner to expand into place. An ultraviolet (UV) light train is then inserted into the line, and cameras on the train allow for viewing of the alignment and fit—both before and during the cure process.

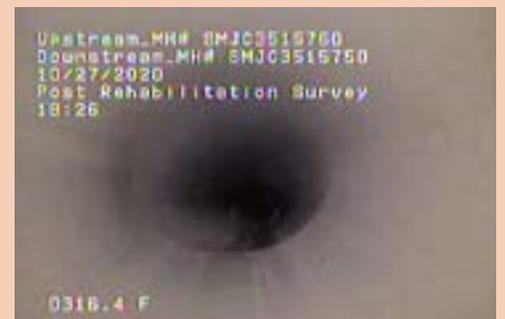
Once proper placement is confirmed, the UV light train is activated and drawn through the pipe at a controlled, preconfigured speed of up to 6 feet per minute. This computer-monitored process collects and stores data relevant to temperature, pressure and rate of conveyance to ensure proper curing of the installed liner. When complete, lateral pipe connections can be reinstated using a remote-controlled cutting unit or via man entry in larger diameter pipelines.

The end result is a rehabilitated pipe segment that is seamless, water tight, and renews the structural integrity. All while working through existing manholes and without digging. The installation timeline using this technology is much faster than digging and replacing pipes, and has the added benefit of minimal traffic disruptions that often are created when pipes are being rehabbed that run underneath roadways.

For this project, 479 linear feet of pipe was removed and replaced and 7, 319 linear feet of pipe was repaired by Cured In Place Pipe (CIPP) using the STX linear rehab process. This project mainly consisted of trenchless technology such as CIPP, spiral wound, and pipe bursting. Cost, location and effectiveness are considered when determining which repair would be utilized.



Before-active infiltration and root intrusion



After-new seamless, structural repair, completed without digging



After-trenchless, no digging reinstatement of service lateral via robotic cutter

It's Still Winter: Protect Your Pipes!

By: Amy Warnock

When temperatures drop, it's important to make sure your home plumbing system is protected in order to prevent frozen or burst pipes. Burst pipes can cause major damage to your home and waste large amounts of water, and can be easily prevented with a few simple measures.

During the month of December, Public Education and Outreach staff presented virtual workshops via Zoom and by conference call for Fulton County residents, sharing important tips on winterizing home plumbing. Taking a little bit of time to prepare your home for cold weather can save a lot of trouble when freezing temps hit, and can help you reduce your energy usage as well! You can download our Protect Your Pipes fact sheet from the website at: <https://fultoncountyga.gov/services/water-services/water-conservation>.