

Preparing FOR Climate Change IN Decatur

**Stormwater Management
for Climate Resiliency**

**Turn Your Inefficient House into a
Resilient High-Performance Home**

**Building a More Resilient
Power Grid**

**Water Conservation:
Critical for our Future**

STORMWATER MANAGEMENT FOR CLIMATE RESILIENCY

We often hear about the increased temperatures associated with climate change. But according to the U.S. Geological Survey, global warming will also cause an increase in the frequency of severe storms as higher temperatures evaporate more water vapor more quickly.

The City of Decatur is taking steps to make its stormwater system more resilient, but there are also steps that you can take at home to prevent flooding of your property and your house. First, here's what the city is doing to bolster the municipal stormwater system.

Decatur is investing \$36 million over the next 20 years across 74 projects to help control stormwater, which will protect property, improve public safety, and reduce environmental impacts due to stormwater runoff. If you would like to provide input on areas you know need additional stormwater control, be on the lookout for the community input meetings associated with your neighborhood. To follow all the stormwater design updates, go to decaturga.com/masterplans.

In addition to traditional stormwater improvements, the city is also working to implement innovative green infrastructure to further reduce runoff. One highly visible example is the stormwater infrastructure that has been installed alongside the bike lanes on North McDonough Street.

Green stormwater infrastructure on N. McDonough Street
Source: Decatur Storm Water Master Plan, Volume I: Report, City of Decatur



Stormwater projects currently in design phase:

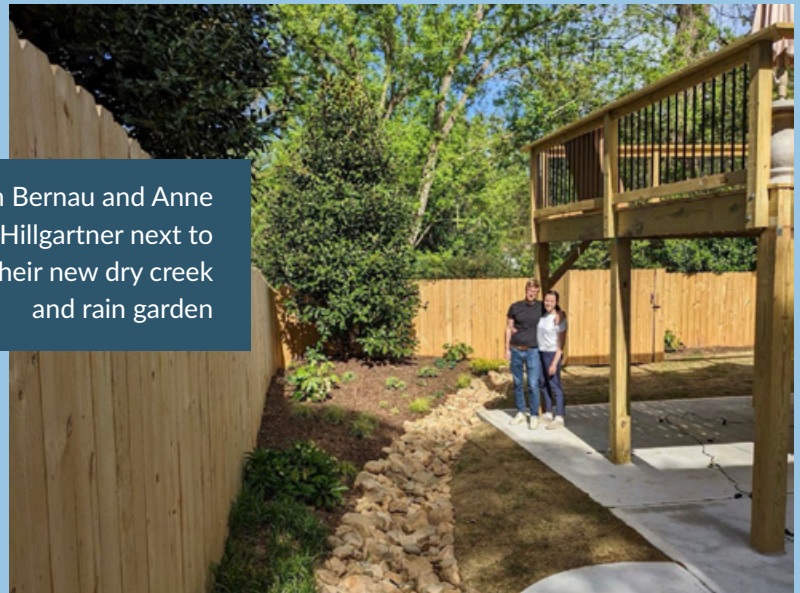
- Brower and McClean Streets, Park Drive and Candler Street
- Derrydown Way
- North Decatur Road

While the city is implementing large stormwater infrastructure projects, it has also assembled a set of guidelines and graphics to help residents understand what they can do at their own homes to reduce flooding due to stormwater, including utilizing french drains, permeable pavers, rain gardens, and more.

To view the full list of recommendations, go to decalurga.com/unifieddevelopmentordinance and click on “Green Infrastructure for Single Family Residences.”

Anne and John Bernau live along Wolfpack Creek and recently completed a project to renovate their deck and backyard. They also wanted to reduce their runoff to prevent erosion and improve drainage in their yard, so they hired Fern Cook of Shady Grove Landscaping to remove old concrete, which increased their pervious surface area by 60 square feet, installed a dry creek bed with perforated pipe for gutter and concrete runoff, graded their yard to drain into the dry creek bed, and planted native and other deep-rooted plants to soak up runoff.

The combined efforts of the city’s improvements to the existing stormwater drainage infrastructure and its innovative green stormwater solutions, along with residents’ individual projects, will all be needed to ward off the potential damage that increased severe storms will bring with our changing climate.



John Bernau and Anne Hillgartner next to their new dry creek and rain garden

LEARN MORE

- usgs.gov/faqs/how-can-climate-change-affect-natural-disasters
- usgs.gov/search?keywords=climate+change+impact
- wabe.org/researchers-can-now-explain-how-climate-change-is-affecting-your-weather

Read Decatur’s Stormwater Master Plan at decalurga.com/masterplans

Learn what you can do at your own home

- crcwatersheds.org/rain-gardens/
- thisoldhouse.com/gardening/21016338/how-to-build-a-rain-garden-to-filter-run-off

TURN YOUR INEFFICIENT HOUSE INTO A RESILIENT HIGH-PERFORMANCE HOME

Educate Yourself

There are a number of ways to become more knowledgeable about this – either by tackling DIY projects or by simply acquiring the know-how to speak to a contractor.

Volunteer with mlkserviceproject.com to learn some of these skills and do great things for your community.

Visit southface.org/insights/building-science-webinars to watch any or all of 12 one-hour webinars on various topics and download the free essentials for upgrades: “Energy-and-Water-Efficiency-Project-Implementation-Verification-Checklist”

Buy the book: *A House Needs to Breathe – Or Does It?* by Decatur’s own Dr. Allison Bailes (and read his excellent blog at energyvanguard.com)

Check out drawdownga.org/How-to-create-an-energy-efficient-home-in-Georgia for great FAQs about energy projects

Sign up at decaturclimate.com and decatur100.com for more info on what you can do to increase the efficiency of your home.

Good Things To Do

100% LED lighting – Don’t even wait for your incandescent and halogen bulbs to burn out – replace them immediately. Discard old compact fluorescent bulbs properly as they contain mercury

Air-seal your home – It’s actually not windows and doors, but often plumbing, HVAC and electrical leak pathways from your attic or crawl space.

Test your home for radon and remediate if needed.

Insulate all hot water piping. Insulate any potentially exposed cold lines to prevent freezing and condensation risk.

Use mastic to seal your ducts – remove registers from the house side, vacuum if possible, and seal with mastic from the inside and seal duct boot to floor or ceiling. Then, move insulation aside to seal all duct connections at the air handling unit (then return the insulation and secure with foil tape).

Clean your dryer exhaust vent and bath fan ducts (upgrade to ENERGY STAR bath fans).

Upgrade ceiling fans – if you have fans that run a lot, improve them with DC motor ceiling fans (e.g., search Hampton Bay – Blakeford & Wellton)

Consider **upgrading your mechanical systems** to inverter-driven variable speed heat pump – consider mini-split heat pump units!

Upgrade your water heater to a heat pump water heater – great incentives available as well.

Investigate induction cooking – you can buy a stand-alone single burner unit for less than \$100 to practice with!

Have questions? Email mikeb@southface.org

PHOTO 1

MLK volunteer Peter Coiron of Decatur installs hot water pipe insulation

PHOTO 2

MLK volunteer Lily Mae Barcik of Decatur scrubs HVAC registers

PHOTO 3

MLK volunteer Brendan Gardes of Decatur applies mastic to seal ducts in a basement.

... and

DON'T assume new replacement windows are a fast payback – in fact, the economic payback on window replacements is VERY long!

DON'T retrofit a gas tank water heater to a gas tankless – Nothing wrong with these units but the savings will never pay off.

DON'T just add more insulation to your attic – the air sealing and attic prep beforehand is crucial for this to be a successful upgrade project.

DON'T leave lights, ceiling fans, chargers and appliances on when they are not needed.



BUILDING A MORE RESILIENT POWER GRID

By now, it's become a common sight in and around Decatur – traffic control directing cars around lane closures as utility crews in bucket trucks work on nearby power lines. If you've ever wondered why so much work seems to be happening all at once, the answer can be found in Georgia Power's Grid Investment Program (GIP).

Approved by the Georgia Public Service Commission in 2019, the GIP is a \$1.3 billion multi-year effort to strengthen the transmission and distribution networks serving Georgia Power customers around the state. The goal is to build a more resilient power grid capable of maintaining reliable service even as we experience more frequent severe weather events.

Here in Decatur and the surrounding communities, Georgia Power and its contractors are performing several types of work on the distribution lines that power our homes. According to the company, residents served by under-performing lines may see a greater than 50 percent improvement in service reliability following grid upgrades. These upgrades include:

- 1 Line Strengthening.** Many of the utility poles around Decatur are decades old, making them vulnerable to high winds and extreme weather. As part of the GIP, Georgia Power is replacing many of the poles that no longer meet its safety standards while also installing new insulation, crossbars, and other equipment to improve performance.
- 2 Line Automation.** When a fault occurs somewhere along a power line, the resulting power outage can often affect many, if not all, of the homes connected to that line. Fortunately, recent advances in line automation technology allow utilities to remotely detect faults and automatically isolate outages to smaller sections of the line. GIP-related investments in line automation devices, such as reclosers, will enable Georgia Power to reduce the frequency of power outages and restore service more quickly by rerouting power around damage when severe weather hits Decatur.
- 3 Line Connections.** Georgia Power is also adding new connections between power lines in some neighborhoods in and around Decatur. These connections add redundancy to the distribution network by providing households with an alternate source of power when an outage occurs on the primary line serving their neighborhood.
- 4 Undergrounding.** The GIP also calls for Georgia Power to relocate some power lines underground. Burying lines can reduce outages by making those lines less vulnerable to wind, storms, and vehicle collisions. However, undergrounding is expensive and not always a good choice, particularly in flood-prone areas or areas with extensive networks of tree roots, so this work is performed only where it makes sense.



Georgia Power contractors upgrade a distribution line along S. McDonough St. in the Oakhurst neighborhood

WATER CONSERVATION CRITICAL FOR OUR FUTURE

Benjamin Franklin observed, “when the well is dry, we know the worth of water.” The Atlanta area receives an average rainfall of 53 inches, well above the national average. Why should we be concerned about water conservation here in Decatur?

Conserving water in Decatur is important to prepare for water shortages from future droughts and the ever-increasing demand for freshwater due to the growing population in the Atlanta region. Ninety-nine percent of

our water is surface water runoff from rivers that is stored for future use in a reservoir system. The largest is Lake Lanier, fed by the Chattahoochee River and providing nearly 75 percent of metro Atlanta’s (and Decatur’s) water.

To prepare for water shortages in the future, Decatur residents can make the best use of limited water resources, save money, and lower energy demand which improves air quality by adopting these ten conservation tips into their daily routines.

1 TURN OFF FAUCETS Save 1-2 gallons a minute by not letting the faucet run while brushing your teeth or shaving

2 FIX THOSE LEAKS! A leaky toilet can waste the equivalent of 100 extra flushes a day while a dripping faucet can send up to 10 gallons a day straight down the drain.

3 BUY EPA DESIGNATED WATERSENSE PRODUCTS WaterSense products meet EPA specifications for water efficiency and performance.

4 SHORTER SHOWERS Showering uses less water than filling up the bathtub. Install shower heads with low-flow aerators and stop buttons to conserve water, maintain water temperature, and save money.

5 RUN THE DISHWASHER Washing dishes by hand requires more water. Scrape clean – do not rinse the dishes – and start the dishwasher only when full.

6 CREATE A COMPOST PILE Compost your food waste to create a nutrient-rich soil amendment instead of using the garbage disposal.

7 WASH ONLY FULL LOADS OF CLOTHES If running a smaller load, adjust machine to appropriate water level.

8 WATERING LAWNS AND GARDENS WHEN IT'S MOST EFFICIENT Water when necessary and only during the early morning or evening when evaporation is lower using a flow-restrictor nozzle or soaker hose.

9 FINE-TUNE SPRINKLER SYSTEMS Install moisture sensors on sprinkler systems and adjust sprinkler to water the lawn and garden only – not the street or sidewalk.

10 USE NATIVE PLANTS AND MULCH IN YOUR LANDSCAPE Native plants require less water than ornamental varieties while mulching around plants reduces evaporation from the soil surface.

Test Your Toilet!

To test your toilet for leaks, add 10-15 drops of food coloring into the tank at the back of your toilet and let sit for 10 minutes without flushing. If the dye is visible in the bowl after 10 minutes, you have a leak.

Incorporating some or all these changes into your daily routine will conserve valuable water resources, save money, and reduce energy usage.

DeKalb County moved from bimonthly to monthly water and sewer billing earlier this year. Monthly billing allows customers to view water usage data more frequently to adjust water usage habits and alert them sooner to potential issues or leaks in their systems.

Learn more about where Decatur drinking water comes from: dekalbcountyga.gov/watershed-management/water-conservation

Water usage calculator: mydropcounts.org/water-use-calculator/

Water Detective worksheet for children from North Georgia Metropolitan Planning District mwdkidsclub.org/wp-content/uploads/2015/10/MDC-water-detective.pdf

EPA WaterSense Products epa.gov/watersense/watersense-products



About the Environmental Sustainability Board

The City of Decatur Environmental Sustainability Board was established to provide recommendations to the City Commission regarding the city's environmental regulations, plans, and initiatives as well as assisting with implementation of city projects that impact the natural environment to protect and improve the quality of life for citizens and property owners in the City of Decatur. This board assumed the duties of the Waste Management Advisory Board and the Greenspace Commission as well as fulfills the requirements for a Stormwater Management Advisory Board.

Please contact David Nifong at david.nifong@decaturga.com for more information regarding appointments to the Environmental Sustainability Board or participation on ESB-related committees.

BOARD RESPONSIBILITIES

- Assist city staff with development and implementation of an environmental sustainability plan
- Provide recommendations regarding implementation of the City's urban tree management plan and plan for tree bank funds
- Provide recommendations in all subject areas of environmental sustainability
- Assist city staff with implementation of environmental program objectives and activities
- Assist city staff with environmental public education and outreach
- Provide recommendations for internal program evaluation and reporting, and assist city staff in reporting to the City Commission

