



# Charlotte-Mecklenburg **Storm Water Services** Fiscal Year 2015 Annual Report



# CHARLOTTE-MECKLENBURG STORM WATER SERVICES

Charlotte-Mecklenburg Storm Water Services is a national leader in managing stormwater runoff to reduce flood risks and to protect streams and lakes from pollution. This report showcases the City's overall performance and accomplishments during fiscal year 2015.

Charlotte-Mecklenburg Storm Water Services operates as a stormwater utility. About 61% (108) of employees work for the City of Charlotte Engineering & Property Management Department supporting the following five program areas:

- **Administrative and Technology Program**  
Manages accounting, budgeting and technology, provides billing support and conducts drainage system inventory.
- **Construction Management Program**  
Inspects the construction of storm drainage improvement, water quality enhancement and repair and maintenance projects.
- **Design Management Program**  
Investigates citizen requests for service and designs and manages repair and maintenance projects.
- **Engineering Program**  
Manages storm drainage improvement and water quality enhancement projects.
- **Water Quality Program**  
Enforces pollution control regulations, inspects sites for potential pollution, implements watershed plans and educates the public.

The remaining 39% (70) of employees work for Mecklenburg County Land Use & Environmental Services Agency.

## FOCUS AREAS



SERVING OUR CITIZENS



INVESTING IN INFRASTRUCTURE



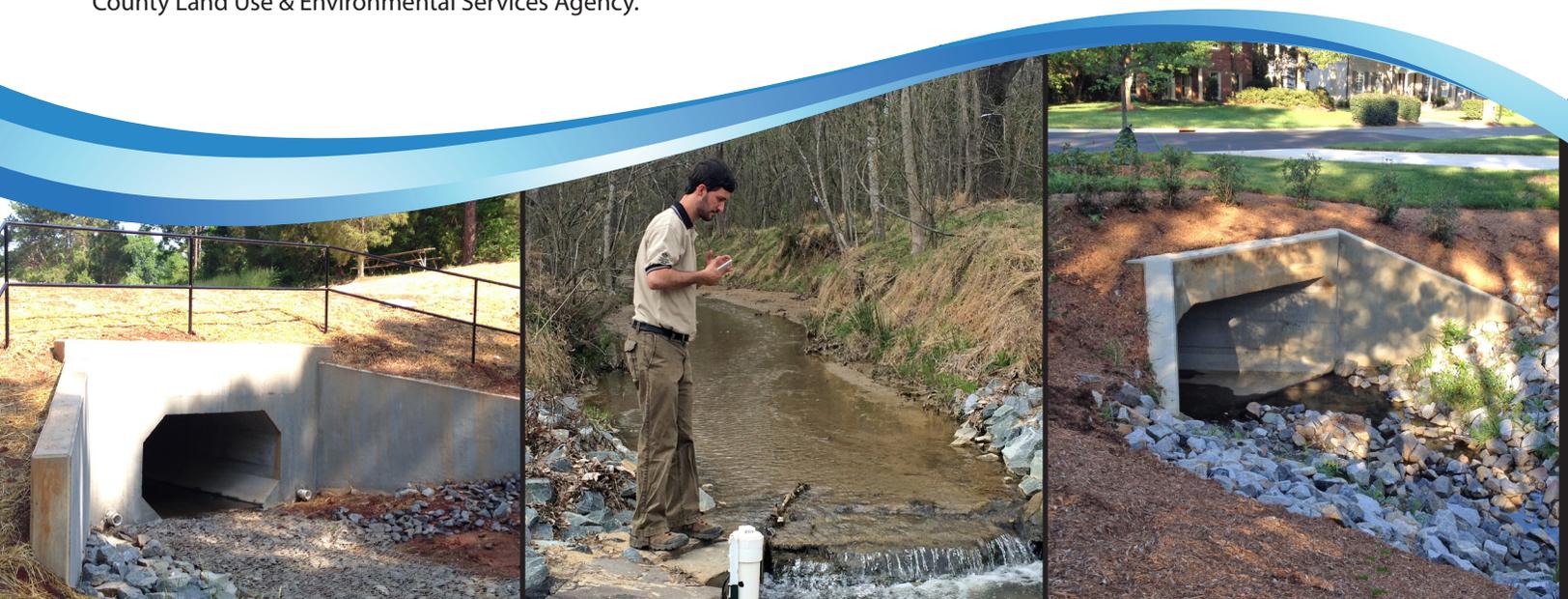
PROTECTING OUR WATERWAYS



ENGAGING OUR COMMUNITY



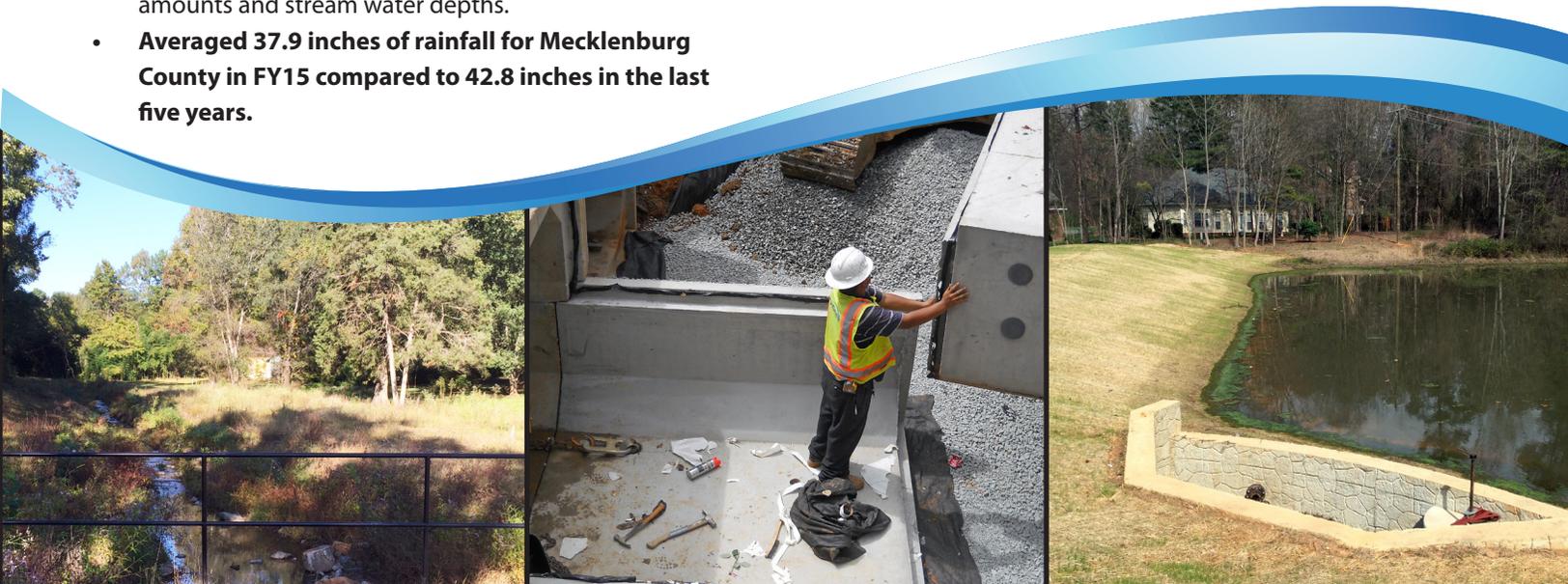
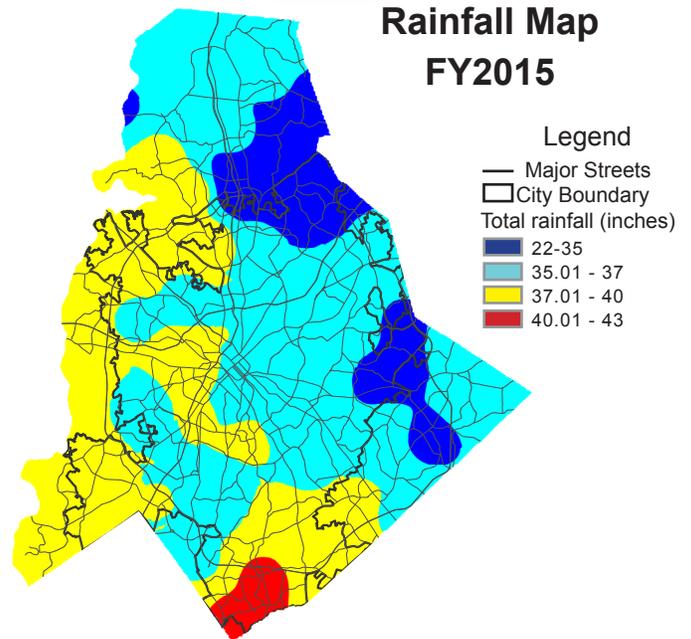
MANAGING OUR RESOURCES



# SERVING OUR CITIZENS

Charlotte's public storm drainage system includes more than 100,000 storm drainage inlets and 5,000 miles of pipes and open stream channels. Citizens are encouraged to call 311 to report street or structure flooding, stormwater infrastructure problems and potential stormwater pollution.

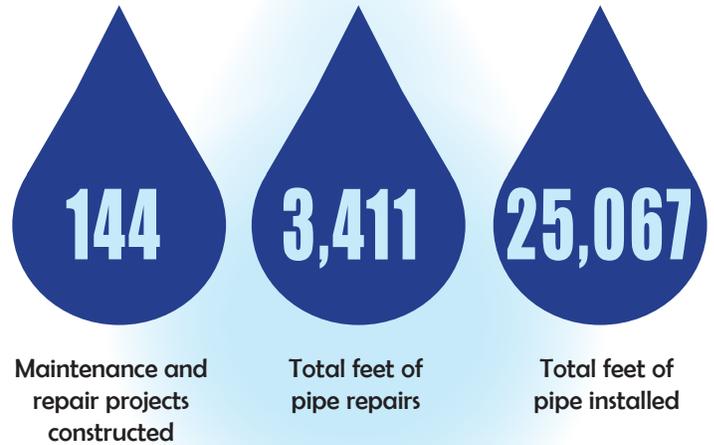
- **Addressed 445 citizen requests for service.** Requests are resolved after repairs or infrastructure improvements are constructed to address drainage problems.
- **Received 1,714 citizen requests and 784 qualified for service.** To qualify, the problem must result from stormwater runoff coming from a publicly maintained street and fall within a program classification category.
- **As of June 30, 2015, there are 1,004 outstanding high and medium priority qualifying requests waiting for service.**
- **Responded to an additional 432 reports of potential stormwater pollution issues.** Examples of pollution prevented from entering our waterways include sewage, sediment, paint, detergents, oil and yard waste.
- **Collected Geographic Information System (GIS) data on 23,097 stormwater features including 143 miles of pipe and 74 miles of open drainage systems.** Virtual Charlotte is updated bimonthly, giving staff and citizens easy access to stormwater infrastructure inventory data.
- **Partnered with United States Geological Survey (USGS) to maintain 38 rain gauges and 29 stream gauges.** This information is incorporated into the Flood Information & Notification System, an online tool used by emergency responders, meteorologists and citizens that shows rainfall amounts and stream water depths.
- **Averaged 37.9 inches of rainfall for Mecklenburg County in FY15 compared to 42.8 inches in the last five years.**



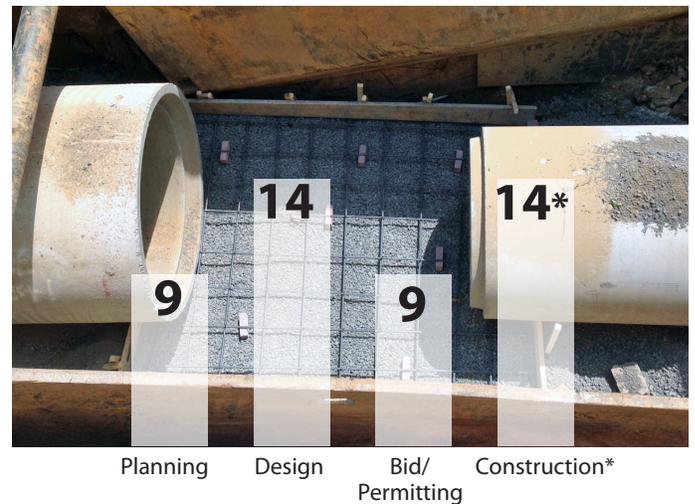
# INVESTING IN INFRASTRUCTURE

Charlotte has an aging public storm drainage system, much of which is past its useful life. Storm Water Services repairs, replaces and installs new storm drainage infrastructure when it deteriorates or becomes too small to handle increases in stormwater. Investing in infrastructure protects public safety, guards private property, improves water quality and enhances quality of life.

- **Fully evaluated 269 maintenance and repair projects.** Typically, after the engineering design is complete, the project is ready to move forward with construction.
- **Constructed 144 maintenance and repair projects investing approximately \$7.5 million in construction.** These projects included installation of pipe totaling 14,787 feet and 3,358 feet of pipe repairs.
- **Initiated construction of 14 storm drainage improvement projects investing approximately \$18.7 million in construction.** Projects included installation of 10,280 feet of pipe and 53 feet of pipe repairs.
- **Managed an additional 32 storm drainage improvement projects.** These projects typically take five to eight years to complete. As of June 30, 2015, projects are in a planning (9), design (14) or bid/permitting (9) phase.
- **Analyzed and designed 71 miles of storm drainage system for potential improvements.**
- **Cleaned 13,705 feet of streams.**
- **Completed 32 confined space entries to assess the condition of storm drainage infrastructure.** The Confined Space Entry Team trained 12 employees in safety and procedures.



## Storm Drainage Improvement Projects



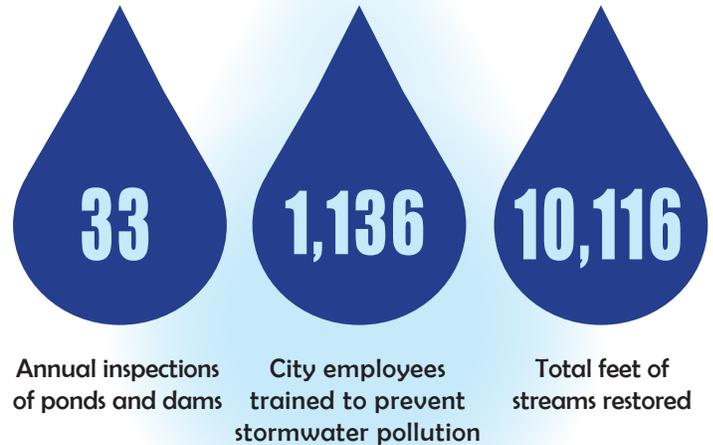
\*Three were completed in FY2015: Eastburn, Scaleybark and Shillington



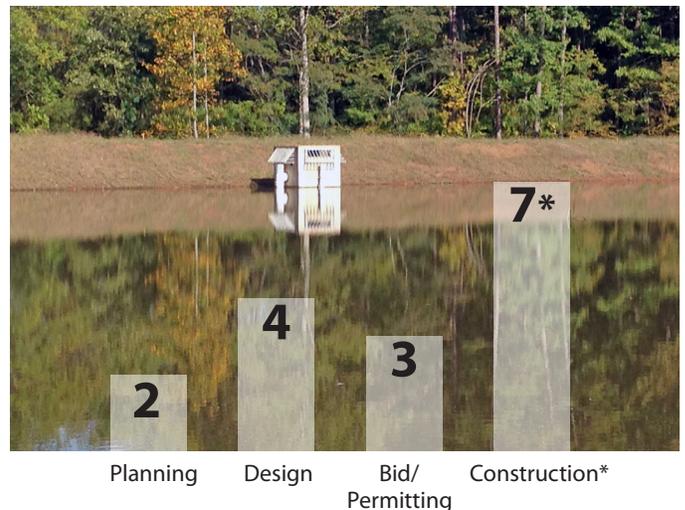
# PROTECTING OUR WATERWAYS

Improving and protecting water quality are essential elements of effective stormwater management. Streams, lakes and ponds are natural infrastructure components of the City's storm drainage system. Rainwater carries pollutants from streets to streams. Federal and State laws require the City to restore and maintain the quality of our surface waters.

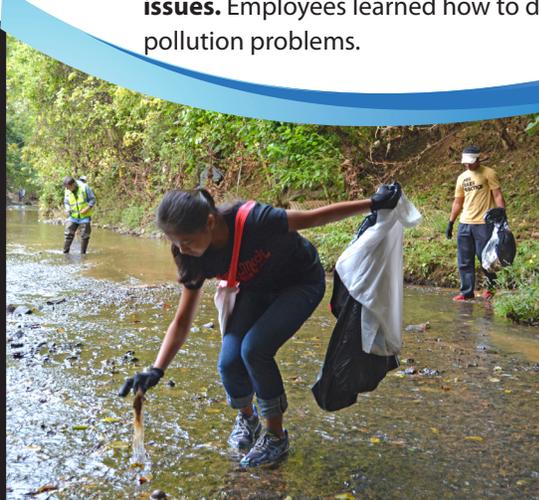
- **Initiated construction of 7 water quality enhancement projects, investing approximately \$1.9 million in construction.** Efforts enhance water quality, stabilize stream banks and improve habitat.
- **Constructed more than 10,116 feet of stream restoration generating mitigation credits, and initiated construction of an additional 5,560 feet.** Mitigation credits are used to offset city infrastructure project impacts, allowing projects to proceed while strategically restoring streams and wetlands.
- **Managed an additional 9 water quality enhancement projects.** As of June 30, 2015, projects are in a planning (2), design (4), or bid/permitting (3) phase.
- **Completed annual inspections of 33 ponds and dams to ensure proper functioning and to identify maintenance needs.** Restored ponds provide pollution control benefits, enhancing the quality of our waterways.
- **Inspected 509 stormwater control structures and approved 109 for installation.** These structures treat stormwater runoff from urbanization and mitigate the effects of increased stormwater runoff.
- **Assisted with Post Construction Stormwater Ordinance compliance on 445 acres of new and redeveloped impervious area.** This included installation of 57 stormwater control structures and protection of 240 acres of natural area.
- **Trained 1,136 City employees, a 27% annual increase, at 30 facilities on pollution prevention issues.** Employees learned how to detect and report pollution problems.



## Water Quality Enhancement Projects



\*Five were completed in FY2015: Ashley Farm Pond, Edwards Branch Phase IV, Glassy Creek, North Park Pond and Wilson Pond.



# ENGAGING OUR COMMUNITY

Charlotte-Mecklenburg Storm Water Services projects and programs make a difference in the lives of residents across the City. An engaged community understands the City's stormwater management challenges, values the services provided and participates during project planning and implementation. Our community benefits when stormwater quickly drains off roads, flood risks to homes are reduced and the health of local streams are protected or improved.

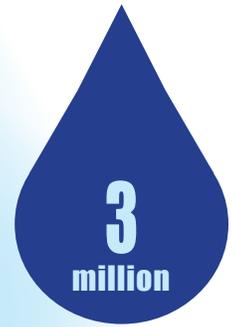
- **Sent more than 19,000 project postcards to residents.** These postcards provided status updates, announced public meetings and included staff contact information.
- **Facilitated public involvement through 10 community meetings.** Staff engaged citizens in the planning, design and construction of storm drainage improvement and water quality enhancement projects.
- **Reached nearly 2,500 citizens with stormwater information through 14 community events.** Examples include International GIS Day, UNC-Charlotte Weather Fest and Queen City Earth Fest.
- **Reached 1,950 students at 17 schools in partnership with Mecklenburg County.** A variety of presentations engaged students in hands-on learning activities focused on stormwater pollution prevention and stream water quality.
- **Administered the Adopt-A-Stream Program in partnership with Mecklenburg County.** A total of 2,029 volunteers removed 11 tons of trash. An additional 16 volunteers helped with monitoring.
- **Administered the Storm Drain Stenciling Program in partnership with Mecklenburg County.** A total of 133 volunteers marked 1,061 storm drains with "no dumping" messages.



Students reached with stormwater pollution presentations



Water Quality volunteers



Residents reached through monthly utility bills

## OUR MESSAGES

Flood Preparedness, Pollution Prevention, Volunteer

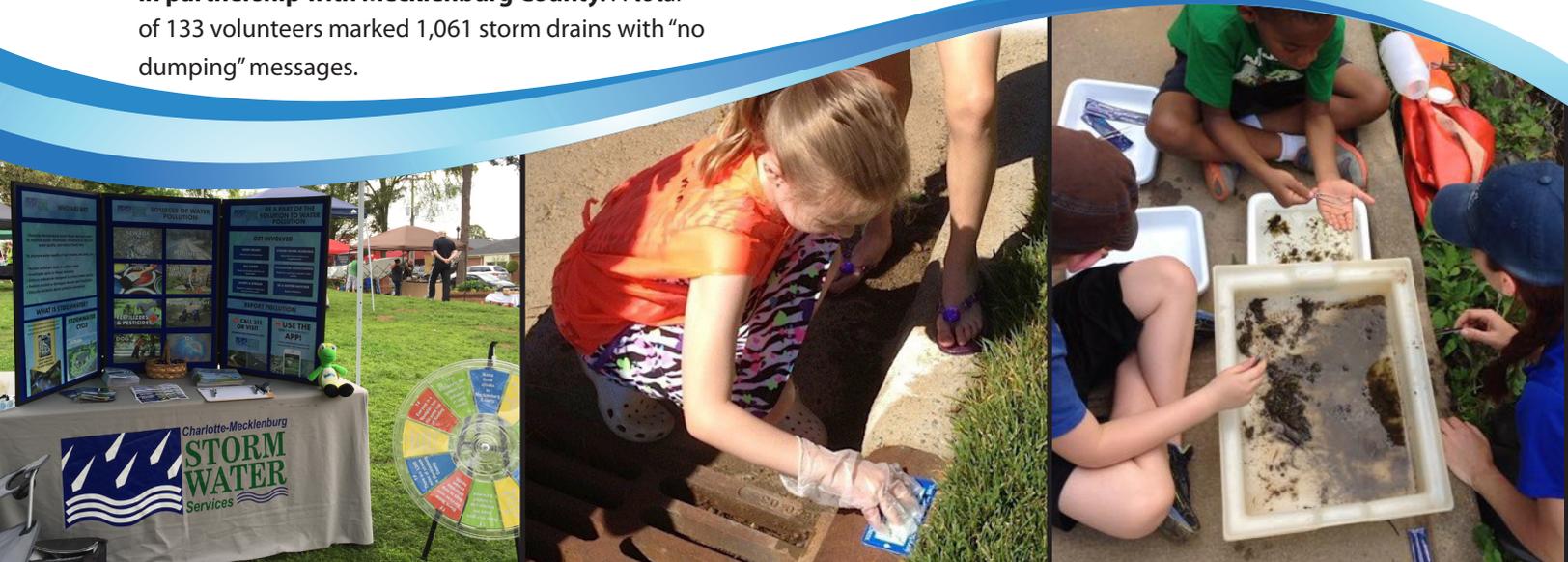
Reached 1 million people with TV and radio commercials.

Mailed almost 3 million monthly utility bill inserts.

Responded to 40 media requests.

Engaged 425 people in a public opinion survey.

Increased website traffic 155%; received 275,000 views.



# MANAGING OUR RESOURCES

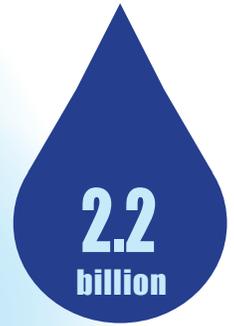
Charlotte-Mecklenburg Storm Water Services is an enterprise fund established in 1993, which immediately began improving drainage infrastructure and eliminating sources of stormwater pollution. The Storm Water fee is based on a property's impervious surface area such as rooftops, driveways and concrete walkways. The more impervious surfaces, the more stormwater runoff flows from the property into the public storm drainage system. About 61% of single-family residential property owners in the City paid a monthly Storm Water Services fee of \$10.18 or less.



Amount spent on projects for each dollar collected

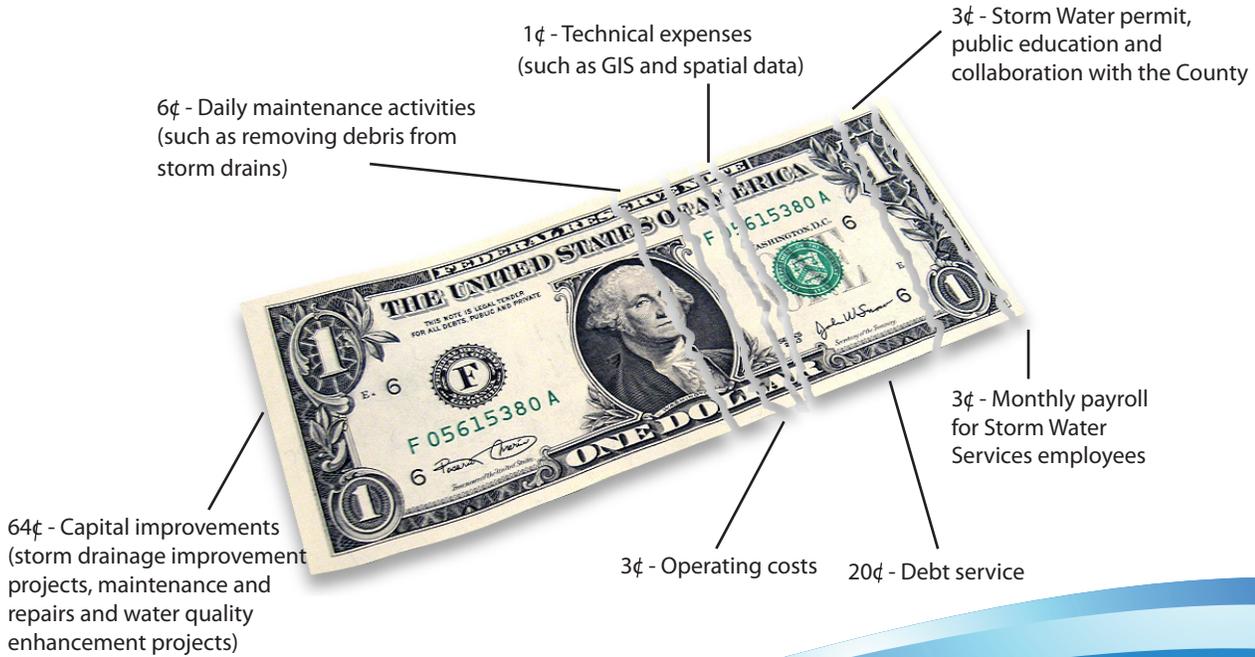


Square feet of impervious area for most residential customers in the City



Square feet of impervious area within the City limits (26%)

## For Each Dollar Storm Water Services Collected in Fiscal Year 2015...





# CHARLOTTE-MECKLENBURG STORM WATER SERVICES

**Jennifer Smith**

*Division Manager*

**Daryl Hammock**

*Assistant Division Manager*

**Stewart Edwards**

*Design Management Program Manager*

**Matthew Gustis**

*Engineering Program Manager*

**Joe Hecksher**

*Administrative and Technology Business Manager*

**Marc Recktenwald**

*Water Quality Program Manager*

**Susan Tolan**

*Construction Management Program Manager*



*Charlotte-Mecklenburg Storm Water Services  
Leadership Team: (front row) Jennifer Smith, Matthew Gustis, Marc Recktenwald, Joe Hecksher (back row)  
Susan Tolan, Daryl Hammock and Stewart Edwards*



**StormWater.CharMeck.org**

600 E. Fourth Street Charlotte, NC 28202

