

A CITY PERSPECTIVE

Charlotte-Mecklenburg Storm Water Services is by all accounts a success story in proactive strategy, team work, and innovation. Leading the effort for the City of Charlotte is Kruti Desai, PE.

Desai has served the City of Charlotte for 18 years, including Right-of-Way Manager with the Charlotte Department of Transportation and Senior Project Manager with the Department of Engineering & Property Management before taking over the role of Division Manager for City of Charlotte Storm Water Services two years ago. Instantly in awe of the volume and breadth of the work being done she set about building an even more cohesive team and mentoring staff to handle new challenges.

Desai's division designs, manages, implements and inspects a tremendous number of projects. The division also regulates and inspects for water quality permit requirements, executes educational activities in the community, and is building an Asset Management and Maintenance Program, all while managing operating and capital budgets in a manner that earns the program a triple-A bond rating.

What is the hardest part of your job?

It would have to be balancing the needs of the community against the costs of the projects. With limited funding and a growing list of requests for assistance it is imperative to strategically identify and implement the best and most cost beneficial alternatives to address the public needs.

What would you say are two of the greatest strengths of the division?

By far the greatest strength of Storm Water Services is the staff. Every day I see their work ethic, professionalism, and commitment to public service in all that they do. As we have continued to increase our productivity and expand our services to better meet the needs of the community, staff have shown an amazing adaptability to the constant change that brings us to a division that is five times larger than it was when we started.

What is the most challenging aspect?

Even though our focus is on infrastructure, at the end of the day we are trying to help people. We have thousands of requests for assistance and it is difficult to balance a need to

keep citizens' Storm Water Services fees low while at the same time making sure we are resourced to be responsive to a real community need. It is challenging to effectively communicate to policy makers the full scope of the needs that we see every day.

How do partnerships help the division work more efficiently?

Partnerships are all about playing to your own strengths and leveraging the strengths of others. We are able to further our deep expertise by partnering with others, including Mecklenburg County, the U.S. Army Corps of Engineers, and the Charlotte Department of Transportation Street Maintenance Division, just to name a few. For example, Street Maintenance has a workforce and vehicle assets that give us an efficient way to complete routine work such as installing barricades, replacing pipe collars, and cleaning pipes and catch basins.

What technological effort or initiative are you most proud of?

The Surface Water Quality and Environmental Permitting Program has advanced the science of surface water quality through an innovative monitoring program that includes a stormwater control measure testing program that enabled us to write peer-reviewed scientific articles, and benchmark costs and effectiveness. Our research data is in various databases and the data was used to develop our own local design manual, rather than use the State manual. In turn, our manual serves as a model for municipalities throughout the Southeast. Our stream and wetland restoration projects are showcased in presentations and have been studied by universities and researchers.

Desai says she is grateful to be part of a division that is on the leading edge of best practices nationally, citing the Surface Water Quality and Environmental Permitting Program and the unique stormwater control measures testing program as just two of many examples. In the future, she looks forward to Charlotte-Mecklenburg Storm Water Services moving towards a sustainable approach that reflects a philosophy of maximizing and extending the useful life of the storm drainage system in place and advancing the science of surface water quality, while preserving Charlotte's economic development potential.

A COUNTY PERSPECTIVE

Dave Canaan came to Mecklenburg County after spending years as a consultant, developing watershed plans and guiding the city and county on how to build and run what is now known as Charlotte-Mecklenburg Storm Water Services. Prior to that he spent years collecting and analyzing surface water data while working for the U.S. government. He has been with Storm Water Services since the beginning.

The Mecklenburg County Storm Water Services Director says the three biggest changes he has seen over that time is the way the floodplains are managed, increased emphasis on improving water quality that has resulted in significant reduction in bacteria levels in our creeks and the expansion of communication and education programs specifically through social media and volunteer efforts.

Canaan also praised the significant partnerships that have developed over the years with numerous state, federal and local agencies and believes Storm Water Services will continue to increase its footprint on emphasizing quality of life parameters that are paramount in supporting our community values.

What are the biggest risks to the quality of our surface waters?

I think our biggest risks are probably the stream banks failing or collapsing contributing sediment to creeks due to changing weather patterns and development upstream. To address that we have a capital improvement program to go in and stabilize our stream banks.

What do you think people would be most surprised to know that the department is doing?

I think a lot of people don't really know how the floodplain mapping program and floodplain buyout program have supported the community's expansion of greenways. At one time the floodplain buyout program was 75% funded by state and federal sources but now it's funded 90% by local sources. During Hurricane Florence, we had 700 less families to worry about and 450 less structures at risk because of the buyout program. We still have a good amount of people in the floodplain that are still at risk. It's going to take a while but we will get to them.

What have been the hardest moments on the job for you over the last 25 years?

To jumpstart our floodplain buyout we laid off about 70% of our maintenance staff. Those were the guys who hand placed the rocks and cut all the vegetation. But for us to aggressively revamp our program we reduced our staff significantly. That was a hard call and a difficult process to get through but that's what we had to do. Removing vegetation from the creek bank was not a sustainable approach to creating a resilient community.

What was one of the most rewarding moments?

Last year we got the Community Rating System (CRS) Class 4 rating and were recognized as one of the highest populated communities in the United States with that rating. FEMA runs a program in which communities that go above and beyond the FEMA minimums of their floodplain management program get discounts on flood insurance policies. We're the largest community that has a rating of 4 or better in the United States. What that means is that folks in the floodplain with flood insurance policies get a 30% discount on their premiums. No other metropolitan area our size or larger has those kind of discounts. That program takes into account how we address water quality, how we address open space, how we run our flood warning system, and our regulatory programs.

Canaan is very proud that the department places a high emphasis on stakeholder groups, including getting environmentalists, engineers, and developers in the room to work through issues. It is an approach that has paid off repeatedly including the adoption of critical policies like the first of its kind Future Conditions Floodplain Maps. And Canaan hopes the approach will continue for the next 25 years.