WK DICKSON
community infrastructure consultants

submitted via email to mhuffman@hvlnc.gov

July 1, 2022

Michael Huffman
Stormwater Administrator
City of Hendersonville

Re: RFQ # 220127555001 Professional Engineering Services for Comprehensive Stormwater Master Plan

Dear Mr. Huffman:

WK Dickson is pleased to provide this proposal for a stormwater master plan for the City of Hendersonville. Our watershed services team for this work combines the expertise of Lisa Wells, who has served as municipal employee and program consultant to multiple municipal clients, and Tom Murray, who has shepherded well over a dozen communities through master planning and CIP development. WK Dickson believes we bring the following differentiators to this work for the City:

- Our watershed team leaders have **extensive experience with projects from planning through project implementation.** While other firms separate planning and modeling experts from project design and construction practice professionals, we believe the best plans are developed when team members developing concepts and estimating costs have implemented project solutions. From stream and pond restoration to green infrastructure to programmatic solutions, **each solution is thoughtfully considered and developed with constructability, effectiveness, cost, and long-term maintenance at top of mind.**

- **Our project team brings intimate knowledge of the planning, prioritization approaches, and programs of other benchmark communities.** A few of the communities we are currently serving include Albemarle, Charlotte, Raleigh, Greenville, Fayetteville, Chapel Hill, Asheville, Charleston, SC, and Myrtle Beach, SC, Johns Creek, Roswell, and Gwinnett County, GA. Each of these communities bring unique approaches to local challenges and specific community priorities and we believe we can leverage our experience with these communities to develop a program for Hendersonville. In particular, we have included Booker Creek, Walnut Creek, and Myrtle Beach as examples of active projects that align with our recommendations for Hendersonville project implementation.

- **No firm can rival our track record in funding.** With Angie Mettlen as our director of funding and regulatory affairs, the answers to any and every funding question are readily available to the City. Our extensive experience with capture, management - and most importantly – integration of funding sources is unparalleled. Lots of consultants name funding programs but none have the dedicated staff and proven track record of our team in securing and managing these funds. As the master plan is developed, Angie will be able to direct project options and plan development to maximize and leverage existing funds with outside sources. With our decades of experience navigating the full funding cycle, we will ensure you properly navigate the complex rules, deadlines, implementation constraints, and all the strings that come with many grant funds. The ultimate goal will be to leverage planned funding from the local level to secure the maximum amount of grant dollars for projects.

Hendersonville has accomplished a lot of work in the past several years and we look forward to supporting these next critical steps. If you have any questions, please feel free to contact me.

Sincerely,
W.K. Dickson & Co., Inc.

Lisa Wells

Lisa Wells, PE
Vice President / Director of Watershed Services
lwells@wkdickson.com /864.990.0201

WK Dickson is a community infrastructure consulting firm specializing in the growth of communities since 1929.

We are an innovative, diversified organization of 180 professionals with a reputation in the industry for superior client satisfaction, technical competence, innovation, and integrity. We provide turnkey community solutions with services ranging from master planning and conceptual design through permitting, funding assistance, construction administration/observation and project closeout. In the role of advisor and technical extension of staff, we realize the need to react quickly on projects large and small, and the timespan of our relationships with our clients speaks to our responsiveness.

For over 25 years, WK Dickson has provided sound, responsible stormwater solutions across the Southeast centered on the art and science of urban stormwater management and ecological restoration to protect public safety, improve watershed functions and enhance quality of life. We have introduced innovation and sustainable practices to many of our clients with solutions that are carefully considered to best enable decisions for cost-effective context sensitive solutions to your stormwater drainage needs.

The WK Dickson Watershed Services team boasts 30 engineers, scientists, and GIS specialists that focus on stormwater management – from planning and concept to implementation and closeout. **Our collaboration and workload sharing across our offices and with our firm partners ensures that our clients have access to all of our regional expertise and benefit from the best practices in being implemented across the Southeast.** We have decades of planning and design experience that we believe will ensure a viable and vibrant plan for the City of Hendersonville as they enter an unprecedented time in terms of infrastructure investment in North Carolina.

A HISTORY OF SUCCESS

ENR SOUTHEAST TOP 50 DESIGN FIRM

180
EMPLOYEES

30
watershed professionals specifically focused on providing sustainable stormwater solutions.

98%
WK Dickson's rate of client retention.

Once trusted with a community's infrastructure, they want to continue that relationship.

LEGAL NAME
W.K. Dickson & Co., Inc.

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PROJECT TEAM

LISA WELLS, PE, CFM
Program Director

MASTER PLANNING TEAM

Tom Murray, PE, CFM - *Team Leader*
- Daniel Whittington, PE, CFM
- Earl Bingham, PE, GISP
- Jennifer Heard, PE
- Savannah Sill

CAPITAL IMPROVEMENT PLAN

Marc Horstman, PE, PH, CFM - *Team Leader*
- Jeff Edney, PE
- Collin Filo, PE
- Michael Tassitino, PE
- Brendan Byrne, PE

ECOLOGICAL & ENVIRONMENTAL SERVICES

Michael Ellison - *Team Leader*
- Julie Ball, CFM
- Dan Zurlo
- Burke Lipscomb
- Liz DiNatale, PE

STRATEGIC FUNDING TEAM

Angie Mettlen - *Team Leader*

Grant & Funding Application & Administrative
- Anita Robertson, PE
- Tricia Malinowski, PhD, PE
- Susan Turner

Funding Strategies
- Jennifer Tavantzis • Raftelis
- Katie Cromwell • Raftelis

PUBLIC OUTREACH TEAM

Lisa Wells, PE, CFM - *Team Leader*
- Amy Hathaway, PE, CFM
- Inga Kennedy • PEQ
- Rachel Weinburg • Raftelis

FIELD SURVEY SERVICES

Vaughn & Melton

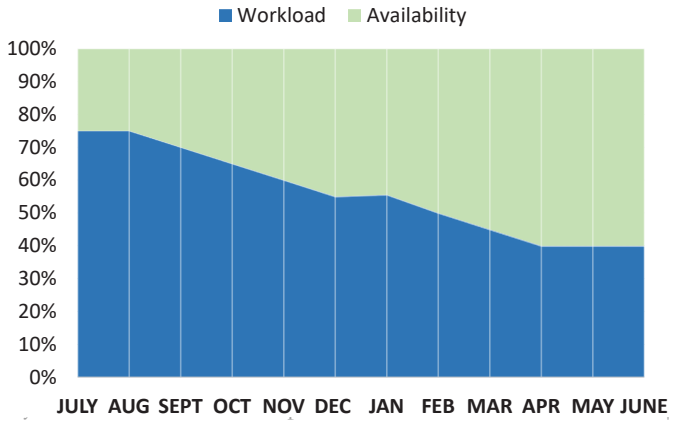
EASEMENT AND PROPERTY ACQUISITION

TELICS

Organization and Ability to Deliver Results

Lisa Wells, from our Greenville office less than an hour from Hendersonville, will serve as the Project Director leading the development and implementation of this project to ensure full alignment with the City's needs. Our Master Planning Team Leader, Tom Murray, located in Raleigh, has extensive planning experience with multiple communities in NC and across the Southeast. Marc Horstman, located in Raleigh, will lead our CIP development and implementation team, located in Greenville and Charlotte, who bring experience with dozens of municipal drainage projects. Our watershed scientists, three of whom are located in Greenville, will be led by Michael Ellison who brings decades of experience with ecological restoration, use of natural systems for stormwater management, permitting, and mitigation. Angie Mettlen, our strategic funding specialist also in Greenville, will lead funding efforts with a team of trained grant writers and administrators. We have also included subconsultants with whom we routinely partner in delivering stormwater program services. Raftelis will assist with funding strategies that relate to debt issuance and rate considerations. PEQ stands ready to supplement our public outreach team if the City desires an extensive program. Vaughn & Melton and Telics will provide services as needed for field survey, easement, and property acquisition.

We are structured to routinely work across offices collaborating on best practices and latest innovations, balance workload, ensure schedule adherence, and efficiently deliver on project budget. Because we operate seamlessly across our footprint, Lisa has access to all of the 30+ WK Dickson watershed staff and can readily access resource availability throughout the company. Our workload and availability for the next year is shown below. Our individual project team members' current and projected workload will allow us to begin serving the City immediately with the planning and development phase noted in our approach and have ample capacity to assign and reserve the modeling and field assessment resources in the time frame they will be needed.



WK DICKSON

Lisa Wells, PE, CFM | Project Director

- Extensive public agency experience including CIP development and prioritization for municipal stormwater utility

With more than 25 years of experience, Lisa brings a broad perspective and knowledge of public infrastructure and local government operations. Lisa's expertise includes stormwater utility and program management, capital planning and project management for gray and green infrastructure, asset management for stormwater systems and wastewater collection, watershed master planning, and collection system operations and project implementation.

Professional Engineer, NC, SC | Certified Floodplain Manager | MS Civil Engineering | BS Civil Engineering

Years Experience: 25 *Years with WK Dickson:* 3

Tom Murray, PE, CFM | Master Planning Team Leader

- Extensive planning and prioritization experience

Tom has more than 22 years of experience in guiding municipalities to proactively manage their stormwater infrastructure assets. **He previously served as the Program Manager for the City of Greenville, NC to develop Citywide Watershed Master Plans that included an ESRI-based inventory and condition assessment component and the development of capital projects and maintenance recommendations with a quantified prioritization matrix.** Tom has worked on similar projects for communities throughout the southeast including Albemarle, Fayetteville, Hope Mills, Atlantic Beach, Greensboro, and Wilmington, as well as Gainesville and Dalton, GA and Myrtle Beach, SC.

Professional Engineer, NC, SC | Certified Floodplain Manager | MS Civil Engineering | BS Environmental Science & Engineering

Years Experience: 22 *Years with WK Dickson:* 17

Marc Horstman, PE, PH, CFM | CIP Team Leader

- Delivered approximately $40 Million worth of municipal infrastructure improvements

Marc has extensive experience related to municipal storm water infrastructure, including planning and design, hydraulic and hydrologic modeling, innovative and sustainable site design, and stormwater BMP design. Marc's expertise includes planning and designing innovative water quality devices for Capital Improvement Projects (CIPs), Low Impact Development (LID) and infrastructure upgrade projects.

Professional Engineer, NC, SC, TN, GA | Professional Hydrologist | Certified Floodplain Manager | MS Biological Engineering | BS Biological Engineering

Years Experience: 13 *Years with WK Dickson: 11*

Angie Mettlen | Strategic Funding Leader

- Has secured over $800M for community infrastructure planning and improvements.

Angie brings over three decades of engineering, grant writing and administration, project management, and regulatory permitting experience throughout the Carolinas and Tennessee. She is an expert in grant and funding for infrastructure projects and has assisted units of government throughout the Southeast. She has worked closely with regional Councils of Government, the state Departments of Commerce (CDBG and economic development programs), the US Economic Development Administration, the US Rural Development Administration, the US Environmental Protection Agency and other state and federal funding agencies.

NASSCO Certified | BS BioScience/Bioengineering

Years Experience: 30 *Years with WK Dickson: 15*

WK Dickson has a deep bench of modeling specialists that work in multiple modeling platforms including HEC-RAS, HEC-HMS, XPSWMM, PCSWMM, Infoworks ICM, ICPR, and WTM. This expertise will ensure development of a sound methodology for Citywide watershed planning.

Daniel Whittington, PE, CFM | Master Planning Team

- Entire career focused on watershed master planning, CIP cost/benefit analysis, BMP selection, and NPDES compliance for municipal clients

Daniel has more than 22 years of experience focused on developing solutions to stormwater issues for municipalities throughout the Southeast. He is an expert in hydraulic and hydrologic modeling and GIS data analysis and presentation having worked with communities like Greenville and Charleston for over 15 years with his previous employment. He has certifications in GIS water quality analysis and is well-versed in hydraulic and hydrologic modeling software packages such as PCSWMM, XPSWMM, ICPR, HEC-RAS, HEC-HMS, InfoSWMM. Daniel also has extensive experience in watershed master planning, prioritization, CIP cost/benefit analysis, BMP selection, and NPDES storm water permitting compliance.

Professional Engineer, SC | Certified Floodplain Manager | MS Civil Engineering | BS Civil Engineering

Years Experience: 22 *Years with WK Dickson:* 3

Jennifer Heard, PE | Master Planning Team

- Has developed customized modeling methodologies and project prioritization scoring

Jennifer has over 19 years of experience in water resources, water supply, storm water and related environmental engineering projects. She has been the project manager or lead project engineer for a range of stormwater planning projects including watershed assessment and modeling of grey and green systems, development of storm water management programs for the Cities of Durham, Cary, Fayetteville and more. Her modeling software experience includes XP SWMM, SWMM, HEC-RAS, HEC-HMS, PC SWMM, WaterCAD, MODRET and SEEP2D.

Professional Engineer, NC | MCE Civil Engineering | BS Natural Resources- Soil and Water Systems

Years Experience: 19 *Years with WK Dickson:* 4

Earl Bingham, PE, GISP | Master Planning Team

- Focused expertise in GIS & stormwater planning & modeling for municipalities

Earl has more than 12 years of experience developing and utilizing models for basin master plan studies for stormwater and wastewater systems, BMP design, flood studies, stream restoration and capital improvement projects. He routinely distills and integrates large GIS datasets into hydrologic and hydraulic platforms such as XPSWMM, HEC-RAS, HEC-HMS, EPA SWMM, Hydraflow Storm Sewers/Hydrographs/Express and TR-55. He has collected and managed data from the inventory of pipes, structures, and BMPs for the purpose of constructing detailed hydraulic models. Earl provides technical expertise in customizing website solutions and mobile GIS applications. His field experience includes inventory, BMP inspections, stream assessments, flow testing, CCTV, illicit discharge investigations, and outfall inspections.

Professional Engineer, SC | GIS Certified Professional | NASSCO Certified | BS Civil Engineering

Years Experience: 12 *Years with WK Dickson: 11*

Savannah Sill | Master Planning Team

- Expertise in ESRI Experience Builder, Power BI, Dashboard and Mapping Interfaces

Located in our Charlotte office, Savannah is one of WK Dickson's Senior GIS Specialists. With over seven years of experience in the industry, her expertise is deeply rooted in environmental GIS and mapping. As an AutoCAD and ArcGIS expert, Savannah is highly skilled in asset management database administration and deployment, data curation, utility analysis and development, project coordination and management, client training, road mapping, COTS solutions, application deployment, and Enterprise systems engineering.

MS Geographic Information Science | BS Environmental Science and Geography

Years Experience: 7 *Years with WK Dickson:* 1

Our capital design team has produced plans and supported construction of major and minor drainage improvement projects, culvert upgrades, and nature-based solutions.

Jeff Edney, PE | Capital Improvement Plan Team

Jeff has 20 years of progressive civil design and project management experience in a variety of civil engineering and land development projects in 18 states across the United States. He has delivered projects from the concept/due diligence phase thru the design, permitting, bidding, construction administration, and final as-built and close-out stages for institutional, commercial, industrial, residential, and municipal infrastructure projects. Jeff has significant experience in erosion control, stormwater management, water and sewer facility, railway, and transportation design.

Professional Engineer, NC, SC, GA | LEED-Green Associate | BS Construction Engineering & Management

Years Experience: 20 *Years with WK Dickson: 3*

Collin Filo, PE | Capital Improvement Plan Team

Collin has more than nine years of experience in watershed planning and assessment, hydraulics and hydrology, stormwater management, erosion and sediment control, and grading and drainage design for public and private sector clients. His experience includes more than seven years of fast-paced, design-build experience. Collin has considerable expertise in closed and open system storm drain design, complex H&H modeling, stormwater management design, earthen dam design, floodplain and dam breach modeling, and watershed assessments to meet NPDES MS4 and TMDL Program requirements.

Professional Engineer, NC, SC, MD, GA | BS Civil Engineering

Years Experience: 9 *Years with WK Dickson: 1*

Michael Tassitino, PE | Capital Improvement Plan Team

Michael has eight years of experience in stormwater design, including leading water resource projects during design and construction phases. Michael has planned and designed roadside drainage plans on capital improvement projects, created storm water management plans, including storm water BMP design, modeling of urban watersheds, and cost-benefit analysis of multiple design scenarios. In addition, Michael has analyzed natural channels, including FEMA studied streams, using HEC-RAS for low-impact bridge replacements and stream remediation projects.

Professional Engineer, NC, SC, CO | MS Civil and Environmental Engineering | BS Civil and Environmental Engineering

Years Experience: 8 *Years with WK Dickson: 1*

Brendan Byrne, PE, CFM | Capital Improvement Plan Team

Brendan has eight years of experience in general civil engineering, floodplain management, stormwater detention modeling, floodplain mapping, drainage and detention design, channel maintenance, and master drainage planning. He has a vast knowledge of federal, state, and local regulations regarding stormwater and drainage design. Brendan has coordinated projects through approval with City and County governments, and FEMA. He has extensive experience with hydrologic and hydraulic modeling software such as HEC-HMS, HEC-RAS (steady-state, unsteady-state, and 2D analyses), XPSTORM, InfoWorks ICM, and HY-8, as well as in-depth experience with AutoCAD, AutoCAD Civil 3D, and ArcMap/GIS.

Professional Engineer, NC, SC, TX | Certified Floodplain Manager | BS Civil Engineering

Years Experience: 7 *Years with WK Dickson: 1*

Michael Ellison | Ecological & Environmental Services Leader

- Project manager and technical lead for 13 watershed plans, over 50 water quality retrofit projects, and over 100 stream restoration projects

Michael has over 31 years of experience as a consultant and restoration contractor, providing natural systems analysis and restoration services to government agencies, private and institutional landowners, and nonprofits. Michael has analyzed and overseen installation on over fifty urban stream improvement designs in NC, MD, VA, SC, and GA.

USACE Certified Wetland Delineator | BS Geology | Rosgen Levels I-IV

Years Experience: 31 Years with WK Dickson: 7

Julie Ball, CFM | Ecological & Environmental Services Team

Julie has over 22 years of project experience as a staff scientist. Her background covers all facets of the applied science and includes Section 404/401 permitting, wetland delineations and wetland mitigation. She has prepared Environmental Assessment (EA) documents in compliance with NEPA, Section 404/401 Individual Permit (IP) applications, and Jurisdictional Determinations (JDs) requests.

Certified Floodplain Manager | BS Geographic Resource Management and Environmental Studies

Years Experience: 22 *Years with WK Dickson: 16*

Liz DiNatale, PE | Ecological & Environmental Services Team

Liz has 14 years of experience in water resources and related engineering projects. She has been responsible for various water resources projects including culvert design, H&H modeling, streambank stabilization and restoration, and permitting. Liz has completed No-Rise certifications for a dozen stream restoration projects for Floodplain Development Permits. In addition, she has overseen the construction of stream restoration and dam removal projects.

Professional Engineer, NC, SC, TN | BS Environmental Eng.

Years Experience: 14 *Years with WK Dickson: 1*

Amy Hathaway, PE | Public Outreach

Amy has 11 years of experience in stormwater green infrastructure design, municipal program development, and public outreach. She gained extensive knowledge of MS4 program management from her prior experience as an engineer with the City of Raleigh's Stormwater Program. Amy secured, administered, and implemented multiple projects with grant funds from North Carolina Clean Water Management Trust Fund, the EPA 319 Grant Program, and ARRA Federal Stimulus Funds and she facilitated partnerships with North Carolina State University.

Professional Engineer, TN, GA |MS Biological & Environmental Engineering |BS Environmental Engineering

Years Experience: 11 *Years with WK Dickson: 2*

Inga Kennedy • PEQ (Planners for Environmental Quality) | Public Outreach

Inga has 38 years of national experience in urban planning, with an emphasis on environmental, land use, transportation, and citizen awareness and participation. She is an expert meeting facilitator and has facilitated more than 900 public meetings, working closely with agencies, elected officials and citizens groups. She has been involved in the conduct of a variety of water resource projects throughout the southeast including watershed and stormwater management planning, wastewater services, water planning and rate studies.

MA City Planning | BA Urban Studies

Years Experience: 38 *Years with PEQ: 30*

PROVEN PERFORMANCE

Our team has modeled, studied and designed more than

340
CULVERTS

65,000
LF OF CLOSED SYSTEMS

1,800,000
LF OF STREAM ASSESSMENTS

Our team has designed and supervised construction of more than

60
CULVERTS

50,000
LF OF CLOSED PIPE

170,000
LF OF STREAM RESTORATION AND STABILIZATION

$160M
FROM AT LEAST 20 DIFFERENT FUNDING SOURCES SPECIFICALLY FOR STORMWATER CIP PROJECTS

Anita Robertson, PE | Grants & Funding

- Managed over $764 million in municipal wastewater infrastructure projects funded through NCDEQ

Anita has over 20 years of progressive engineering and management experience, including process design, remediation engineering, municipal water and wastewater engineering, project management, state and local environmental permitting, state and federal funding program administration, and asset management. Prior to joining WK Dickson, Anita was the engineering supervisor of the wastewater project unit at the NC Department of Environmental Quality, Division of Water Infrastructure, State Revolving Fund Section where she was responsible for managing over $764 million in municipal wastewater infrastructure projects funded through the division.

Professional Engineer, NC | NASSCO Certified| BS Environmental Engineering

Years Experience: 21 *Years with WK Dickson: 1*

Jennifer Tavantzis • Raftelis | Funding Strategies

Jennifer has a strong background in water resources and utility management, and possesses extensive data management and analytical skills. Her educational background lies in the areas of water quality, hydrology, and resource conservation. In her seven years with Raftelis, she has consulted with numerous local governments on projects related to stormwater program development and review, and stormwater utility feasibility, development, implementation, and reorganization studies.

MS Environmental Management | BA Environmental Studies & Urban Planing

Years Experience: 11 *Years with Raftelis: 7*

PROJECT APPROACH AND MANAGEMENT

Our team is vested in seeing the City of Hendersonville's Stormwater Master Plan succeed, and have identified crucial elements for success in meeting the City's goals.

Our Current Work in Similar Communities

As community infrastructure consultants, we prioritize fostering the client relationship in addition to the project. We take pride in providing exceptional stormwater services to develop a community roadmap and then assisting to implement the developed plan. Below, you will find a map of communities that we are actively serving in delivery of those services.

- Asheville - Citywide Stormwater Programmatic and Level of Service recommendations
- Albemarle - Stormwater program development, utility study, and citywide master planning for 17 sq miles
- Cary - Pilot basin study, watershed plan, 2D model for capital prioritization and development control
- Chapel Hill - Master planning for Booker Creek watershed (6 sq miles), project implementation
- Greenville, NC - Program Manager for Citywide Watershed Master Plans with asset management, capital projects development, prioritization matrix
- Georgetown, SC - 7 sq mile citywide master plan and capital plan, rate evaluation, project implementation
- Charleston, SC - Restoration Master Plan, CIP identification
- Myrtle Beach, SC - Citywide Master Plan, CIP development, wetland enhancement implementation project
- Dorchester County, SC - Limited subbasin studies and CIP implementation
- Johns Creek, GA - Stormwater master plan, CIP development
- Roswell, GA - Big Creek Watershed, update of 100 sq mi study, prioritized CIP

Capital Design Experience - All Project Types and Time-Tested

Our team has extensive experience in stormwater capital design projects in the Carolinas and throughout the Southeast. Furthermore, our team has been assisting entities like the City of Hendersonville with a variety of stormwater design services including planning, infrastructure design, flood mitigation, wetland enhancements, dam assessments and design, capital planning and cost estimating, property and easement acquisition support, and construction administration. This experience will allow us to provide the programmatic support necessary to implement the master plan, further develop recommended solutions, and provide guidance for prioritization, implementation, and funding of those projects. While every community is unique, we can reflect on our experiences with other communities to share a wide range of multi-layer strategies with respect to project implementation that meet multiple community goals while leveraging a variety of funding resources.

- **Chapel Hill, NC** – With limited resources and multiple stormwater objectives, our team conceptualized, designed, and provided construction services for the Booker Creek Basin Park, which reconnected an urban stream to the floodplain in a park setting. The project provided flood mitigation, nutrient treatment, wetland enhancement, and stream stabilization in a dense urban environment. Pedestrian connectivity was incorporated into the project to allow residents better and safer access to nearby commercial businesses.

- **Greenville, NC** – Our team provided planning, design, and construction services for the Town Creek Culvert Project, the largest capital stormwater project the City has ever implemented. The drainage infrastructure project mitigated flooding in downtown Greenville near East Carolina University and incorporated green infrastructure components throughout the corridor. Our team of funding specialists was able to secure and administer a 0% loan from CWSRF, saving the City almost $4M over the life of the loan.

- **Spartanburg, SC** – Butterfly Branch is a tributary to Fairforest Creek, which flows through downtown Spartanburg, SC. By daylighting a piped system in the floodplain, this project provided permittee-responsible mitigation to offset unavoidable stream impacts associated with the Spartanburg Downtown Memorial Airport's runway expansion. Restoration activities included daylighting approximately 1,125 LF of closed drainage system and restoring an additional 710 LF of channel to create a greenway/park amenity as a catalyst for redevelopment.

Prioritization and Funding

Determining the most effective way to prioritize limited resources will be critical moving forward. Every community is unique, thus we firmly believe in a collaborative approach with staff, key stakeholders, and elected officials to determine the most crucial factors in prioritizing capital solutions. Interwoven into that process is the development of a detailed funding strategy that leverages both external resources and evaluates internal resources. Angie Mettlen, director of strategic funding and regulatory affairs, has assisted communities in North Carolina and throughout the Southeast procure hundreds of millions of dollars in infrastructure funding and our team is actively engaged daily with funding activity to assist our clients in securing infrastructure funding from a wide range of resources. **Our team of funding specialists support the project and grant administration through design, construction, and closeout.**

WATER RESOURCE INFRASTRUCTURE GRANTS & LOW-INTEREST LOANS

Client and Project	Types of Funding
City of Myrtle Beach, SC Broadway Wetlands & Streams Improvements	SRF Funding application & administration
City of Charleston Johns Island Restoration Plan	NFWF Emergency Coastal Resilience Fund grant administration
City of Georgetown Historic District Stormwater Improvements	EDA Grant
Eastern Band of Cherokee Lower Oconaluftee Watershed Plan	319 (h) Grant
NCDENR Town of Newland, NC Flood by-Pass Channel Design	State Funded
Town of Harrisburg, NC Grant Application	319 (h) Grant
Town of Hope Mills, NC	CWSRF Loans
City of Jacksonville, NC	CWSRF Loans
Town of Atlantic Beach, NC	CWMTF
City of Greenville, NC Town Creek Culvert	CWSRF Loan
Town of Hope Mills, NC Town Hall Flooding	CWSRF Loan
Town of Burgaw, NC Culvert Improvements	NCDEQ & Golden LEAF
Town of Wake Forest, NC Smith Creek Watershed Restoration Plan	319 (h) Grant
City of Rocky Mount, NC Tar River Watershed Restoration Plan	CWWMTF Grants
City of Greenville, NC Stormwater Improvements	Golden LEAF & DWR Funding

In addition to our in-house team of funding experts, we have included Raftelis Financial Consultants on our team to provide insight and feedback on debt ratios and other market dynamics if warranted during this process.

In the most recent FEMA BRIC cycle, WK Dickson developed full project applications for Rocky Mount and Oak Island for stormwater projects. These two projects are currently the highest ranked projects in the state of NC based upon the scoring of NCDEQ.

WK Dickson secured and administered a $32M 0% interest loan from the Clean Water State Revolving Fund by integrating low-cost green infrastructure into the Town Creek Culvert Drainage System Improvements and Green Infrastructure project.

WK Dickson secured and administered $30,500,000 in NCSR Bond Grants and Loans, Clean Water State Revolving Fund Loans, CWMTF Grants,and NCDEQ Grants.

Hendersonville's Unique Road Map

Our team understands the amount of time and effort the City of Hendersonville has invested in stormwater management and protection of the City's natural resources. In addition to the extensive work of the Multi-Area Stream Restoration (MASR) Project and the Public Works GI elements, the City has invested in proactive planning efforts such as the Wash Creek Master Plan (2018) and Britton Creek Master Plan (2011) in addition to the significant work of inventory and condition assessment through CCTV. We believe these efforts, in particular the inventory and condition assessment work, will provide a great beginning data set for robust master-planning efforts.

Leveraging the strong building blocks the City has developed and applying the four key elements for success to the City's project plan, WK Dickson offers the following suggested approach for the 1st Phase of Master Plan Development:

1. Conduct gap analysis of existing studies and data
2. Lessons learned workshop to assess previous work
3. Define and memorialize program goals
4. Develop comprehensive and holistic criticality approach
5. Prioritize subbasins for plan development
6. Establish modeling and assessment protocols
7. Establish project development parameters
8. Conduct H&H modeling and spatial analysis
9. Conduct ecological assessments and evaluations
10. Apply criticality to identify project focus areas
11. Develop project list and conceptual estimates
12. Develop strategic funding plan

Integrated Strategic Asset Management Framework

Master Plan Protocols

Pilot Study

DEVELOP A STRATEGIC ASSET MANAGEMENT FRAMEWORK

While the RFQ does not mention the development of an Asset Management Strategy, we believe a Strategic Asset Management Plan can serve as the foundational building block for the comprehensive master plan and subsequent work. It serves to define and memorialize the operational and capital program goals and objectives into a singular coordinated framework.

1. Conduct gap analysis of existing studies and data

The Britton Creek Master Plan provided a comprehensive analysis of water quality and quantity improvements with consideration of natural and manmade systems. Capacity analysis was evaluated for multiple storms up to the 100-year event. The data used was planning level and the prioritization was study specific and not readily repeatable and transferable across watersheds. The stream assessments were valuable and represent a critical component of a sustainable stormwater system. However, with limited capacity analysis and no consideration of condition of the assets, the master plan is heavily driven by water quality needs. A balanced approach in a citywide master plan is necessary to ensure the stewardship of the stormwater system accounts for flood resiliency and citizen safety in addition to water quality and protection of the natural assets that make Hendersonville such a special place to live.

The Wash Creek Master Plan, by contrast attempted to utilize asset management approaches focused on only grey infrastructure to assess structures and provide a simplified criticality analysis to identify capital projects. Broad assumptions were made, such as assigning pipe condition based upon structure condition and assigning an age for pipe based upon the likely timeframe the popularity of a certain pipe type. A 10-year level of service (LOS) was used as the target for determining appropriate capacity. While this plan was effective in identifying capital projects to address specific areas of concern, the criticality analysis was limited in consideration of the consequences of failure and too broad with assumptions on pipe age and condition. For this reason, we do not believe this master plan effort provides the robust starting point the City needs to develop a city-wide framework that is repeatable, defensible, and balanced in focus on grey and green stormwater assets.

The City of Hendersonville is investing considerably in inventory and condition assessment which will prove valuable in the master planning effort. WK Dickson will evaluate the geodatabase structure and related records so that we are able to leverage all appropriate data but do not rely on data sets that are incomplete or that are subject to changes in format or condition.

2. Lessons learned workshop to assess previous work

3. Define and memorialize program goals

Following the gap analysis and a more thorough review of the existing studies and data, WK Dickson proposes a workshop to collect feedback on previous efforts and share results from our analysis of the data review. The purpose will be to understand the successes that have been realized by the City in the stormwater program and determine areas for improvement in programmatic development. Leveraging the analysis previously completed in the Britton Creek and Wash Creek watersheds will be critical while also developing a consistent repeatable process for prioritizing capital projects. We will also discuss and evaluate any gaps in the data sets, previous study approaches, or project implementation by City staff, the public, and WK Dickson. This will inform the specific goals and protocols that will be developed to facilitate the master planning efforts.

With the gap analysis results and lessons learned, it will be possible to define and memorialize goals for the stormwater master planning efforts and more importantly for the stormwater utility as a whole. Using the Stormwater Rate Study as a basis, we will seek to assist the City in defining SMART strategic goals -specific, measurable, achievable, relevant, and time bound. This will form the basis for the Strategic Asset Management Framework that can be used to drive the development and maintenance of the stormwater program.

4. Develop comprehensive and holistic criticality approach

An integrated stormwater master plan will require a methodology to score and prioritize hard infrastructure and nature-based solutions in a way that considers community impacts and benefits, social justice factors (more and more important to capture funding), protection of natural resources, etc. A truly integrated plan considers consequence and likelihood of infrastructure failure based upon a more comprehensive lens than just pipe condition, age, and pipe size. Typically factors such as public health and safety, property ownership, permitting requirements, water quality benefits, structure risk, utility conflicts, and constructability will factor into the overall CIP prioritization ranking.

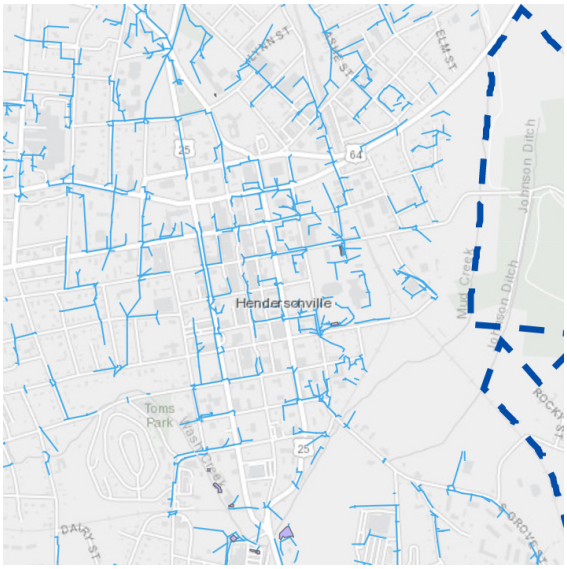
WK Dickson boasts six professionals who specialize in watershed analyses and have developed multiple methodologies with varying data sets and priority schemas. This team can bring a wealth of alternatives for consideration in prioritization. In Durham County, our team developed a prioritization matrix to focus on the four priorities of the County's stormwater program which include compliance, efficiency, resiliency, and environmental justice.

By developing an approach for prioritization of assets and projects early in the planning process, our modelers will be able to craft solutions that are targeted towards the City's priorities. We will seek to create this tailored **priority rating system** to be objective, repeatable, and defensible.

DEVELOP MASTER PLAN PROTOCOLS

5. Prioritize subbasins for plan development

The City has a subwatershed priority map that reflects the Master Plan efforts that have been completed and remaining priorities. Based upon review and adjustment of the comprehensive prioritization we develop as part of this effort be applied for citywide planning, we anticipate the downtown and surrounding corridors will remain the highest priority. Our experience with downtown drainage projects will ensure a plan that will lead to successful outcomes AND funding.



6. Establish modeling and assessment protocols

WK Dickson will lead the City through evaluation and selection of the watershed modeling methodology based on factors such as: cost, input requirements, available data, Storm Water needs, etc.

Just as it is important to have a consistent rating system for projects that applies across study areas, it is crucial to develop planning protocols that will carry and translate across study areas. The hydrologic modeling approach should consider both existing and future land use conditions as well as the potential for more frequent, higher intensity storm events in the future. The evaluation of future hydrologic conditions provides a modeling framework for evaluating the impacts of potential future development as well as the design and assessment of proposed stormwater projects geared toward risk mitigation, asset management and resiliency. Various hydrologic modeling methods can be used to represent the rainfall-runoff process. Our team is well versed in hydrologic theory and modeling methods and can assist the City with selecting a hydrologic modeling method which best captures and replicates conditions inherent to the City and incorporates desired levels of conservatism.

As with hydrologic modeling methods, hydraulic modeling methods also vary. One of the most notable variations found in hydraulic models is in the level of detail associated with the inclusion and representation of the stormwater infrastructure and overland flow patterns to be analyzed. We believe that determining the level of modeling detail necessary for developing relevant and useful data is the most important objective of the modeling task. This model planning effort sets the stage for what information will be able to be obtained from the models, how useful the models will be in the future, and how much development and maintenance of the models will cost. Our stormwater modeling experience ranges from the development of models intended to focus only on the performance of major stormwater trunklines and open channels to the development of models intended to capture the details of stormwater inlet capacities, two-dimensional overland flows and predicted scour risks. Our Team's approach to the hydrologic and hydraulic modeling task will involve meeting with staff at the beginning of the project to discuss the pros and cons of various modeling methods and software. Our approach will focus on helping the City pay only for stormwater modeling that provides the answers needed to meet the goals of the Strategic Asset Management Framework and Master Plan.

7. Establish project development parameters

Developing integrated stormwater solutions – Stormwater management can not be confined to larger pipes and riprap channels – particularly in communities like Hendersonville with high value water resources. Innovative solutions for stormwater management must be considered that integrate quantity management and reduction as well as quality treatment all while fitting into the context of the community. The City has had great success with stream restoration projects and green infrastructure projects like Mud Creek Park. WK Dickson will review a complete suite of alternatives with the City to determine most desirable project types and situational approaches to project development.

The ability to select the appropriate alternatives is often driven by cost, local politics, or both. While nature-based solutions like stormwater wetlands and other green infrastructure appeal to us, Hendersonville faces a challenge with steep slopes that limit application of real estate heavy BMPs. Innovations like RSCs and application of traditional mining solutions that are used to address water quality on steep slopes will be vetted with the City to ensure that the projects developed will garner support from the public in addition to the City operations and engineering staff.

PILOT MASTER PLAN

8. Conduct H&H modeling and spatial analysis

9. Conduct ecological assessments and evaluations

10. Apply criticality to identify project focus areas

These steps are the core tasks and represent the guts of the master planning effort. The development of the framework and protocol documents that are developed in prior steps will ensure a flow of progress and efficiency. WK Dickson recommends that the modeling and master planning phase begin with a singular basin as a pilot watershed study. By selecting a basin and utilizing a pilot watershed approach, the protocols and prioritization can be vetted and tested in detail for the City before proceeding to other basins. This will allow for tweaks in the modeling approaches, project selection, and prioritization approaches before a significant amount of effort is expended across multiple basins.

We believe in developing modeling results and capacity scores that are easy to input into an asset scoring system and to use in project identification and prioritization. Automated Data Output, Repeat Prioritization Tools and Visualization aids can produce powerful results that ensure efficient and effective outcomes that are repeatable and defensible. We utilize an iterative process of evaluating system criticality that can begin at a macro scale of watershed analysis and prioritization and be refined as more detailed information becomes available. Detailed modeling results and condition assessment can feed the decision support model to better identify systems that may be at greater risk of failure which can then update the criticality and probably cost estimates.

11. Develop project list and conceptual estimates

Conceptual designs developed to mitigate identified problem areas will be broken into discrete project units which typically consider the following: potential for utility conflicts that may be cost prohibitive; traffic control; cost vs. benefit; constructability; easement requirements; permitting; and downstream impacts. Based on several recent capital stormwater design projects, WK Dickson has current and relevant information to help generate detailed cost estimates and schedules for proposed improvements. Recent contractor bid tabs for similar projects will be used to help refine the cost estimates. In addition to the conceptual designs and cost analysis, our team is well suited to evaluate the integration of these concepts into other county projects and the impacts to streams and natural systems.

Permitting requirements can often delay or significantly change a drainage project, costing time and resources, potentially reducing the benefit of a potential project. Furthermore, permit requirements can impact the types of alternatives recommended in the watershed plan. WK Dickson will identify the required permits during the planning phase and provide alternatives that can be permitted in today's regulatory environment. At a minimum, likely permits for capital projects include a 401 water quality certification, 404 permit, erosion control permit, and potentially a FEMA no rise or conditional letter of map revision (CLOMR),in addition to County review requirements.

12. Develop strategic funding plan

Funding for infrastructure projects is often a critical factor in a project's viability. Understanding the needs facing our governmental clients, we focus on identifying a wide variety of funding opportunities and successfully leverage local resources to secure grants, low interest loans, and specialized niche funding. We can create a Strategic Funding Plan for the master plan and concept projects that sets a clear path for the project's design elements, funding initiatives, and schedule.

To develop a Funding Plan, we first assess the required and desired project outcomes and potential additional benefits of a project. **With this knowledge, we identify sources of available funding and plan the project in a manner that allows us to maximize the outcomes, additional benefits and amount of funds that can be secured.** Our team can determine budget limits and constraints, evaluate grant funding cycles, available funding amounts, local match requirements and other critical elements in conjunction with the City's needs. During this process our team can monitor the fluid situation surrounding funding programs so that we capitalize on any new funding streams that may emerge in the coming months and could benefit the City.

Once a project list has been prioritized for the watershed, WK Dickson will work closely with the City to determine the most appropriate source of funding for each project. Our team has significant experience in assisting communities with strategic funding plans leveraging a variety of funding mechanisms as we outline in several projects and in our approach. Additionally, we are partnered with Raftelis Financial Consultants (RFC), the industry expert in utility development and solutions for maximizing revenue and collections.

In our review of the most recent rate study conducted for Hendersonville, we noted that expenditures far outpace revenue by the end of the planning period. The debt issuance is often a necessary financing mechanism for stormwater programs but bond ratings depend upon acceptable debt service coverage ratios and we have real concern about the model projections in this area. If the plan is accurate in reflecting the pace of capital improvements, our teams recommends that we evaluate more incremental rate increases. grants, funding strategies, and re-evaluation of rates will be even more critical.

BOOKER CREEK WATERSHED PLAN & IMPLEMENTATION PROJECTS | Chapel Hill, NC

The Town of Chapel Hill selected WK Dickson to implement a master planning process across four subwatersheds in the Booker Creek watershed (6-square-miles). We utilized methodology of the Town's Storm Water Management Master Plan and applied it to the Town's highest priority watershed. Our team provided a full inventory of the watershed's natural and manmade assets, including stream and riparian assessments, outfall stability analyses, and infrastructure condition assessments. Field assessments were completed using mobile applications that result in the immediate population of the GIS database from the field.

WK Dickson produced hydrologic and hydraulics models and a water quality model for the entire Booker Creek watershed. In addition to the detailed hydrologic and hydraulic analysis, the team performed a suite of desktop analyses including right-of-way screening for Green Infrastructure retrofits, SCM retrofit analysis, and criticality analysis for maintenance prioritization. When possible, project clusters were developed to address multiple objectives, including quantity control, quality treatment, stream stabilization, asset management, and recreational opportunities. Proposed Storm Water control measures (SCMs) were modeled using a Watershed Treatment Model and the Jordan Lake tool to evaluate the potential reduction in nutrients from the proposed improvements. All projects were ranked and prioritized to drive the Capital Improvement Plan for the Town.

Public outreach was a critical component of the watershed studies. Chapel Hill has a very involved citizenry including multiple non-profit organizations with a goal of creating a sustainable lifestyle within the Town. WK Dickson's outreach philosophy included a multi-pronged approach utilizing digital resources to the extent possible including a project website and online survey questionnaires. Residents and business owners were also given an opportunity for face-to-face meetings through a variety of small group and larger group meetings.

WK Dickson worked with the Town to implement the highest priority project, the Booker Creek Basin Park. The project delivers stream stabilization, floodplain management, and recreational components to an enhanced green space that reduces flooding in the Eastgate shopping area and provides a sustainable amenity in an urban environment. The flood storage facility incorporates pedestrian amenities, including walking trail.

Client/Reference

Town of Chapel Hill
Sue Burke, PE, CFM
Senior Engineer, Stormwater Management Division
919.969.7266
sburke@townofchapelhill.org

Dates

Lower Booker Creek Study:
Aug. 2015- Sept. 2017
Eastwood Lake: in draft review,
Feb 2017- estimated Sept. 2022
Cedar Fork Study: in draft review,
June 2018- estimated Oct. 2022
Basin Park: Sept. 2017- construction completed Feb. 2021

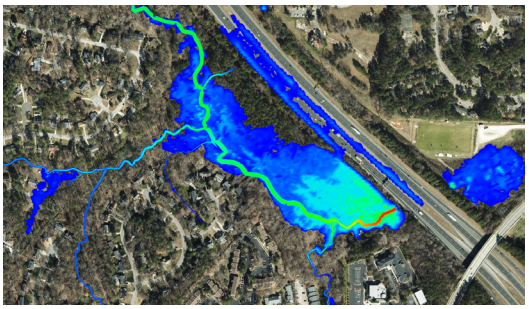
Project Budget

Lower Booker Creek Study:
Eastwood Lake Study: $359,450
Cedar Fork Study: $420,770
Basin Park: $452,503 (fee)

Team Members

Tom Murray- Project Manager
Ebony Hagans- Engineer/modeler
Jennifer Heard- Engineer/modeler
Alex McMillan- Engineer
Earl Bingham- GIS Services
Valerie Wilkinson- Designer

WALNUT CREEK PILOT BASIN STUDY AND WATERSHED STUDY | Cary, NC



The Town of Cary implemented a pilot watershed basin master plan study that, in concert with their newly developed asset management program, is allowing proactive development of a stormwater management framework for the Walnut Creek basin as part of the Adaptive Stormwater Initiative conducted in 2018. The Walnut Creek Basin is a highly urbanized area that is a focus area for the Town. WK Dickson integrated the H&H model results into the broader context of the condition assessment program and, in conjunction with structural risk assessment mapping, has provided the Town the analysis to prioritize capital improvement projects. WK Dickson has implemented this synergistic combination of a basin master plan and a newly developed asset management program, allowing the Town to have a quantifiable justification for project ranking, program funding, maintenance, and capital improvement plans. This proactive development and overall improvements to the stormwater management planning framework have resonated well with the Town Council as a means to prioritize and promote the condition and needs of the watershed.

Client
Town of Cary
Billy Lee, PE
Stormwater Engineering Manager
919.462.3932
billy.lee@townofcary.org

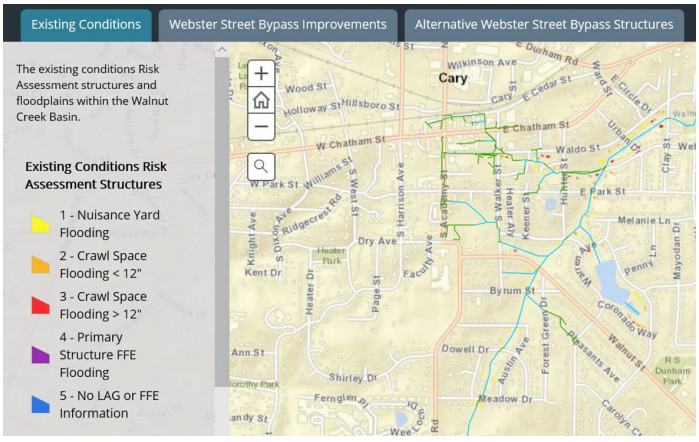
Dates
Pilot Study: July 2017- Dec. 2019
Watershed Study: Aug. 2019 - ongoing

Project Budget
Pilot Study: $197,932
Watershed Study Fee: $258,933

Team
Marc Horstman - Project Manager
Jennifer Heard - Modeler
Daniel Whittington - Modeler
Ebony Hagans - Modeler
Brenden Byrne- Project Engineer
Earl Bingham - GIS Analyst

As a continuation of our flood study and remapping of the Walnut Creek Basin, WK Dickson upgraded the model from a 1-D HEC-RAS model to a 2-D PCSWMM model so that the Town can further understand the flooding risks associated with structures located within the floodplain fringes. The 2-D modeling approach allows the Town to evaluate further the expected flooding depths, flow vectors, and velocities associated with the existing conditions and potential flood reduction alternatives. A significant cost-savings benefit to the modeling approach is the Town can evaluate how changes to culvert and pipe systems sizing in the upper part of the watershed will have an impact on downstream flooding depths and floodplain widths.

Utilizing this powerful model, WK Dickson recommended that open space preservation be initiated to provide a significant flood mitigation opportunity. This suggested approach is the Town's most effective tool in managing flood impacts within the Walnut Creek watershed. The Town wants to maintain this model, continuously updating it as developments are added. The map will be used as a greenway system and impervious base map for future revisions to their UDO regulation language.



As part of this study effort, extensive public engagement was used to garner support and solicit input. WK Dickson developed Story Maps and online content as a vehicle to that end.

STORMWATER MANAGEMENT PLAN | Albemarle, NC

As a result of ongoing flooding issues, the City hired WK Dickson to lead and facilitate the development of a comprehensive stormwater management program. Historically the City of Albemarle provided reactive stormwater services in response to storm events with no staff assigned exclusively to stormwater management. The comprehensive stormwater management study included a review of current stormwater management policies and procedures and recommendations for a new stormwater program. Specific services included:

- **Community Evaluation and Needs Assessment:** Through a series of staff meetings with City management, the public works and public utilities department, the team evaluated the existing stormwater services provided by the City and recommended areas for expanded service related specifically to level of service and extent of service.
- **Financial Analysis:** To determine the customer impacts from the new stormwater program, the team determined an annual revenue requirement based on staffing, proactive operation and maintenance, equipment needs, customer response, permit compliance, watershed planning, capital projects, and reserve allocations.
- **Public Outreach:** A multi-layered outreach approach was completed to reach as many customers as possible to best educate the community and to receive feedback related to stormwater management concerns.
- **Watershed Evaluation:** WK Dickson led a team of consultants for development of watershed plans to identify and locate infrastructure assets, hydrologically and hydraulically model the infrastructure, and develop prioritized capital projects.
- **Program Management:** WK Dickson led a team of five consultants to provide comprehensive stormwater services support from development of the program through utility implementation. Additional services managed by WK Dickson to those listed above include funding support, infrastructure asset inventory, ordinance and policy development, and strategic planning.

Client
City of Albemarle
Ross Holshouser
Director of Public Works
704.984.9605
rholshouser@albemarlenc.gov

Dates
March 2021- ongoing

Project Budget
Fee: $1,054,144.50

Team Members
Tom Murray - Project Manager
Ebony Hagans - Engineer/modeler
Liz DiNatale - Senior Project Engineer
Lisa Wells - QC Reviewer
Katie Cromwell - Utility Study
Rachel Weinburg - Financial Planning

CITYWIDE WATERSHED MASTER PLAN | Myrtle Beach, SC

The City of Myrtle Beach selected WK Dickson to complete a citywide watershed master plan for the 23-square mile coastal community. Sustainable stormwater management is critical to maintaining the capacity and health of the City's natural resources, while also ensuring the public safety of residents, tourists, and business owners. Identifying integrative stormwater solutions that provide flood mitigation while addressing the quality of stormwater runoff is a critical component of the master plan. The Withers Basin (3.19 sq. miles) was completed as a pilot study before expanding to a citywide effort.

Individual watershed plans focus on identifying capital projects to reduce the severity, frequency, and duration of flooding and improve water quality specific to bacterial removal.

The desire for integration results in much of the focus on identifying and developing natural systems solutions. Proposed projects include enhancing and creating stormwater wetlands, floodplain reconnection, green infrastructure, and stream enhancement. The final reports for each watershed include the 9-step EPA 319 plan process to allow for potential funding for implementation.

Client
City of Myrtle Beach
Janet Curry
Public Works Director
843.918.2021
JCurry@cityofmyrtlebeach.com

Dates
Pilot Study: Aug. 2018- Feb. 2020
Citywide: May 2021- ongoing

Project Budget
Pilot Study Fee: $378,343
Citywide Fee: $921,657

Team Members
Tom Murray - Project Manager
Jennifer Heard- Sr. Engineer/modeler
Ebony Hagans - Engineer/modeler
Liz DiNatale - Senior Project Engineer
Savannah Sill- GIS Services
Earl Bingham- Engineer/GIS Services
Michael Ellison- Environmental
Lisa Wells - QC Reviewer

REFERENCES

Project References

Lisa Kirby, PE, CFM
Director of Engineering
City of Greenville
1500 Beatty Street
Greenville, NC 27834
252.329.4683
lkirby@greenvillenc.gov

WK Dickson has completed multiple projects for the City of Greenville since 2010, including watershed master plans and capital improvement projects.

Janet Curry
Public Works Director
City of Myrtle Beach
PO Box 2468
Myrtle Beach, SC 29578-2468
843.918.2021
JCurry@cityofmyrtlebeach.com

WK Dickson is completing a Citywide Master Plan for the City. We're also working on the Broadway Wetlands & Stream Improvements project for the City.

Elisabeth Brown
Stormwater Administrator
Town of Hope Mills
5770 Rockfish Road
Hope Mills, NC 28348
910-429-3516
EABrown@townofhopemills.com

WK Dickson completed a Master Plan for the Town and the highest ranked project identified in the plan, Town Hall Drainage Improvements. The Town was awarded a 0% interest loan from the Clean Water SRF in excess of $1,000,000 for project construction.

Grant Funding References

Lisa Kirby, PE, CFM
Director of Engineering
City of Greenville
1500 Beatty Street
Greenville, NC 27834
252.329.4683
lkirby@greenvillenc.gov

Secured and administered a $32M 0% interest loan from the Clean Water State Revolving Fund by integrating low-cost green infrastructure into the Town Creek Culvert Drainage System Improvements and Green Infrastructure project.

James Gantt
Town Manager
Town of Burgaw
109 North Walker Street
Burgaw, NC 28425
910-663-3440
town.manager@townofburgaw.com

Secured and administered $347,000 NCDEQ Water Resources Development Project Grant and $824,000 Golden LEAF funding for the Pender Memorial & Osgood Canal Stormwater Improvements.

Terry Shelton
Public Utilities Director
City of Eden
PO Box 70
Eden, NC 27289
336.623.2110
tshelton@edennc.us

Secured and administered $30,500,000 in NCSR Bond Grants and Loans, CWSRF Loans, CWMTF Grants, NCDEQ Grants

Compliance with Federal and State law Requirements for Federally Funded Projects

Lisa Kirby, PE, CFM
Director of Engineering
City of Greenville
1500 Beatty Street
Greenville, NC 27834
252.329.4683
lkirby@greenvillenc.gov

Capital improvement projects for the City of Greenville have included the $32M Town Creek Culvert Drainage System Improvements.

Byron Reeves, PE
Project Manager
City of Fayetteville
433 Hay Street
Fayetteville, NC 28301
910.433.1301
Byron.Reeves@Fayettevillenc.gov

Federally funded capital improvement projects for the City have included Devonwood Lower Dam Hurricane Repair and Sunbury Drive Drainage Improvements.

David Melton
Director of Water Resources
City of Asheville
PO Box 7148
Asheville, NC 28802
828.259.5957
dmelton@ashevillenc.gov

Projects for the City of Asheville have included waterline and sewer projects in addition to ARPA funding support.

FEE SCHEDULE

WK Dickson 2022 Rate Schedule

LABOR	HOURLY RATE
Principal	$250.00/hr.
Senior Consultant	$230.00/hr.
Senior Project Manager	$220.00/hr.
Senior Engineering Manager	$220.00/hr.
Project Manager	$192.00/hr.
Engineering Manager	$192.00/hr.
Senior Project Engineer	$170.00/hr.
Project Engineer	$160.00/hr.
Senior Scientist	$150.00/hr.
Scientist	$137.00/hr.
Senior Planner	$182.00/hr.
Planner	$139.00/hr.
Senior Engineering Designer	$145.00/hr.
Engineering Designer	$132.00/hr.
Senior GIS Analyst	$155.00/hr.
GIS Analyst	$118.00/hr.
GIS Technician	$112.00/hr.
Senior Construction Observer	$133.00/hr.
Construction Observer	$112.00/hr.
Project Administrator	$82.00/hr.

EXPENSES	
Reproductions	Cost
Mileage	IRS Rate
Telephone, Postage	Cost
Travel (Meals/Lodging)	Cost
Subconsultants	Cost + 10%

Note: The above rates are effective January 1, 2022. WK Dickson reserves the right to revise to reflect inflationary increases.

Rafetlis

LABOR	HOURLY RATE
Jennifer Travantzis, Sr. Manager	$285.00/hr.
Katie Cromwell, Manager	$250.00/hr.
Rachel Weinburg, Consultant	$190.00/hr.

PEQ

LABOR	HOURLY RATE
Principal/Project Manager	$170.00/hr.
Senior Public Involvement Coordinator	$130.00/hr.
Public Involvement Specialist	$85.00/hr.

Telics

As requested, below are Telics' hourly rates for the key employees associated with this pursuit. However, please note that Telics' fees are unit based, not hourly.

LABOR	HOURLY RATE
Senior Manager	$125.00/hr.
Acquisition Agent / Relocation Agent / Appraiser	$95.00/hr.
Administrative Support	$50.00/hr.

TELICS LUMP SUM RATES	
Negotiation	$4,000 per parcel
Relocation	$5,500 per relocatee
Title Opinion and Closing	$1,500 per parcel
Appraisals	Pricing varies based on assignment and Appraisal type.