2020 Grant Projects

Stormwater Outfall Retrofit in Swansboro, NC (Grant Award: $69,155; 01/01/21-12/31/22)

The N.C. Coastal Federation is partnering with the Town of Swansboro in Carteret County to install a series of infiltration chambers to reduce the polluted stormwater runoff into Ward Creek and White Oak River. The Ward Creek watershed discharges untreated stormwater directly into shell fishing and recreational waters that are closed due to high bacteria loads. The infiltration basin was be designed to reduce runoff by 4,800 cf and reduce sediment by 1,250 lbs./year. Project partners plan to conduct K-12 lessons on stormwater control and its benefits for water quality and to promote the project through social media.

Edneyville Community Center Stream Restoration Project (Grant Award: $150,000; 1/1/21-9/30/22)

Henderson County Soil and Water Conservation District is partnering with local stakeholders to stabilize approximately 2,000 feet of streambank along Lewis Creek that is impaired for benthos due to erosion in Henderson County. The restoration will include the construction of a floodplain, riparian buffer, in-stream structures, a new walking trail, and an educational access point. Load reductions are estimated to be 216 Tons/Year of soil. Project plans include an educational access point that will be used for educational events to teach the public about healthy stream systems, natural stream design, and ecological sampling methods.

Bradley Creek Water Quality Improvement (Grant Award: $255,804; 1/1/21-6/30/23)

NC State University is partnering with the City of Wilmington and UNC Wilmington to control and remediate water quality of Bradley Creek, where the bacterial levels threaten Wilmington and Wrightsville Beach recreational and ecological communities. A series of restoration projects are planned, including retrofitting four stormwater management practices with improvements and converting a parking lot roundabout into a rain garden. The estimated load reductions are 63 lbs./Year of Nitrogen, 3 lbs./Year of Phosphorous and 462,500 ft^3/Year of stormwater. City of Wilmington personnel and NCSU faculty will deliver multiple educational efforts, targeting both local citizens and the design community.

Middle Fork New River Section 1B Restoration (Grant Award: $295,000; 1/21-12/31/23)

New River Conservancy is partnering with local stakeholder to restore 2,000 linear feet of the Middle Fork New River in Watauga County to prevent sedimentation and habitat loss. Restorations will include providing access to the floodplain for filtering and flood storage, stabilizing the riverbanks to prevent erosion, restoring aquatic habitat, and

planting native stream buffer vegetation. Load reductions are estimated to be 6010 lbs./Year of Nitrogen, 548 lbs./Year of Phosphorous and 72 Tons/Year of soil. Project partners have committed to installing an educational sign at this site to educate visitors on the restoration project and the importance of water quality.

Stormwater & Channel Retrofits for the Upper Portion of Hominy Creek Swamp in Wilson, NC (Grant Award: $299,127; 1/1/21-6/30/23)

NC State University and the City of Wilson are partnering to implement five stormwater control measure (SCM) retrofits that are designed to improve water quality of Hominy Creek, listed as impaired for benthos. Project plans include the implementation of a stormwater wetland, the improvement of an eroding headwaters channel by either bank stabilizing or linear wetland channel creation, retrofitting an existing wet pond with floating wetland islands, and converting 2 alleyways into green alleys. The estimated load reductions are 320 lbs/Year of Nitrogen, 54 lbs/Year of Phosphorous, and 10 tons/year of sediment. Project partners plan to hold an educational wetlands and wet ponds design workshop will be held in Wilson for community members.

Whittington Park Stream Restoration (Grant Award: $50,000; 1/14/21- 6/1/24)

The Piedmont Conservation Council is partnering with local stakeholders to restore Black Creek in Wake County by recreating the natural, meandering stream pattern and profile with riffles and pools that are designed to provide water quality benefits and protect adjacent homes from erosion. Load reductions are estimated to be 78 Tons/Year of soil. Regular maintenance checks, replanting, and repairs will be done throughput the grant duration.

Green Stormwater Infrastructure in Biltmore Hills Park to improve water quality and reduce flooding impacts of Rochester Heights Creek (Grant Award: $197,274; 2/1/21-6/30/23)

Water Resources Research Institute is partnering with local stakeholders to install green stormwater infrastructure (GSI) in the form of several stormwater control measures (SCMs) such as bioretention, swales and rainwater harvesting systems to treat stormwater runoff in Biltmore Hills Park before it enters Rochester Heights Creek in Wake County. The new infrastructure to be implemented is designed to reduce flows and erosion, address the impacts that common rainstorms have on downstream neighbors, and engage the local community in water quality education, project planning, and implementation. Load reductions were estimated to be 10 lbs./Year of Nitrogen, 0.9 lbs./Year of Phosphorous and 2.4 Tons/Year of sedimentation. Project partners will collaborate with the local community center to develop relevant engagement and educational opportunities for the Raleigh community, including water quality education programs, design review, relevant art projects and plantings, presentations and showcase the project on media platforms.