

Burnt Mill Creek Street Retrofit Grant Project

NC STATE UNIVERSITY



Name of Grant Project	Implementing innovative street retrofits to reduce stormwater runoff volumes and pollutants in the Burnt Mill Creek Watershed
Funding source	EPA 319 Grant
Grant Administrator	NCSU
Timeframe	2 year project starting in January 2010
Amount Awarded	\$375,066 Total (\$81,518 in-kind match from City Departments)

Burnt Mill Creek is on North Carolina's 303(d) List of Impaired Waters due to the impacts of polluted stormwater runoff, including toxic impacts from polycyclic aromatic hydrocarbons (PAHs). PAHs are chemicals produced by burning fossil fuels, which can be toxic to humans and aquatic life and can persist in the environment for many years. Sources of PAHs include auto exhaust, parking lot sealcoats, roofing tars, coal power plants, cigarette smoke.

A new project, funded by the EPA 319 grant program, will continue implementation of the Burnt Mill Creek watershed restoration plan with lead partners, North Carolina State University (NCSU) and City of Wilmington. The project will install stormwater best management practices (BMPs) at the intersection of 12th & Dock Streets and 10th & Ann Streets. BMPs to be installed include permeable parking materials, bioretention bump-outs, tree filter boxes, and native plantings. In addition to stormwater benefits, the bioretention bump-outs on Dock St. and Ann St. will also provide traffic calming benefits.

The project team will engage the Bottom Neighborhood Empowerment Association, Gregory Elementary School, Williston Middle School, and other watershed residents in finalizing the innovative street retrofit designs, constructing the BMPs, and developing and implementing a long-term outreach and maintenance plan as part of the project.

The street project will be monitored to quantify runoff volume and pollutant removal capabilities, and will serve as a model for future street improvement projects that can meet multiple benefits of stormwater runoff reduction, flooding reduction, pollution removal, and pedestrian safety within the City of Wilmington. Water quality monitoring devices will be temporarily installed at 8th and Orange Streets (control intersection) and 12th & Dock Streets (project intersection).

This is the first project of its kind in North Carolina and provides a strong example of local government initiative, public partnerships, and community collaboration in watershed restoration. In addition, a newly developed fact sheet, *Polycyclic Aromatic Hydrocarbons (PAHs) in Urban Waterways*, will be published and printed as a NC Cooperative Extension document and distributed widely throughout Wilmington to provide residents, organizations, and businesses information about BMPs to reduce PAH pollution flowing into Burnt Mill Creek.

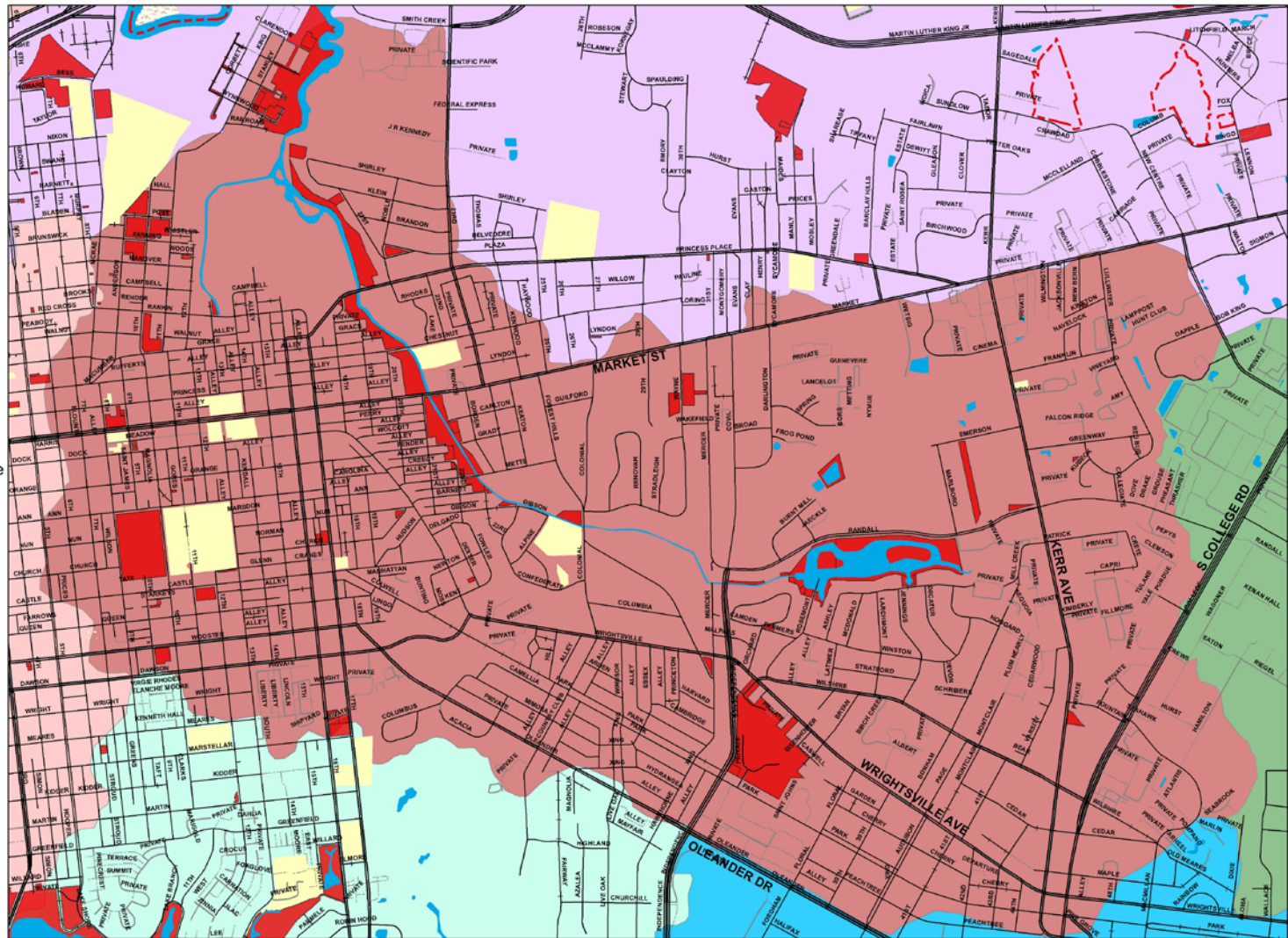
The following project partners are collaborating on the 319 grant project:

- Watershed Education for Communities and Officials (WECO)
- NCSU Dept. Agricultural and Resource Economics
- NCSU Dept. Biological and Agricultural Engineering (BAE)
- City of Wilmington Stormwater Services, Streets, Traffic, Planning, and WMPO

Burnt Mill Creek Watershed

28 Acres of Creek
4,223 Acres of Land

- Burnt Mill Creek
- Smith Creek
- Bradley Creek
- Hewletts Creek
- Greenfield Lake
- Drains directly to Cape Fear
- City Maintenance
- State Maintenance
- Private Maintenance
- Not open or no maintenance
- Outside City limits
- City Limits
- Water
- Marsh
- City Properties
- County Properties



Public Services
Stormwater Services
209 Coleman Drive
PO Box 1810
Wilmington, NC 28402-1810
910 343-4777
910 341-0099 fax
wilmingtonnc.gov
Dial 711 TTY/Voice



existing plaza

bioretention cell

planting bed

Jasmine Street

Dock Street - looking west



pervious paving area

Filterra

existing inlet

S. 12th Street - looking south



planting beds

bioretention cells

existing plaza

Ann Street - looking east



bioretention cells

Ann Street - looking west