



# Restoring the Burnt Mill Creek Watershed through Stormwater Management & Community Involvement

## FUNDING SOURCE & AMOUNT

EPA 319 Grant  
\$608,014 million  
\$15,240 in-kind match from City of Wilmington

## TIMEFRAME

Awarded 2004  
2004 - 2008

## GRANT ADMINISTRATOR

NC State University

## IN-KIND PARTNERS

City of Wilmington, NC  
UNC-Wilmington  
Center for Watershed Protection  
WRRRI  
Sea Grant  
Nat. Resources Leadership Institute  
Ecosystem Enhancement Program  
Cape Fear River Watch

## SUMMARY / DESCRIPTION

The Burnt Mill Creek Watershed contains 38 acres of creek and 4,223 acres of land which drains into the Cape Fear River (City of Wilmington, NC). Burnt Mill Creek is a well-developed watershed with almost no agriculture or forest land use, but is dominated by industrial, commercial, and residential land uses. Burnt Mill Creek has >20% impervious cover and this level of concrete, roofs, and roads is known to correlate with environmental degradation and poor water quality. The University of North Carolina-Wilmington (UNCW) sampled sites in the watershed and found the percent impervious cover was strongly correlated to poor water quality (orthophosphate, biological oxygen demand, and surfactants) (Mallin et al., 2009).

Burnt Mill Creek has water quality problems including low dissolved oxygen, fecal bacteria contamination, algal blooms, and sediment plumes (Mallin et al., 2009). In addition, the Creek is on the state's impaired water body list (known as the 303d list) for aquatic life and secondary recreation from the impacts of urban stormwater runoff including polycyclic aromatic hydrocarbons (PAHs).

Community stakeholders have worked together since 2001 to plan and implement watershed improvements that will lead to better water quality in the Burnt Mill Creek. The NC Ecosystem Enhancement Program (NCEEP) sponsored the first watershed plan that identified the following two action items to improve water quality:

- Low-impact development retrofit techniques (for stormwater management and pollution prevention)
- Stream restoration

## GRANT GOAL(S)

- Install stormwater low impact development retrofits and engage in community development to restore Burnt Mill Creek.
- Approach businesses and neighborhoods to identify common goals and determine private property owner's willingness to retrofit the sites with grant-funded BMPs.
- Partner with local champions to build trust, make connections, and leverage resources.
- Practice flexibility and innovation to address land owner needs and site constraints.
- Engage in outreach, education, and community involvement to promote major components of this project.
- Reach the general public through the media, public meetings, workshops, websites, newsletters, and educational signage.









