Clean-up and monitor RTP's Northeast Creek with BSFL

Our project is about conservation and care we hope to keep America green. Our projects are a partnership of volunteers from STEM backgrounds and agencies or companies involved with STEM. A major part of the budget has to do with transportation to and from STEM based field trips. Roughly 70% goes to paying for certified transportation the rest is used for snacks and supporting supplies.

This project is meant to help students get hands on learning experiences and inform the youth of places they can be employed after attaining STEM skills. It is also meant to assist our local government with maintaining healthy natural resources and build stronger community bonds. The Northeast creek location was picked because of its importance and ability to show several differing ways pollution effects our environment it is a very important watershed and wetland. A watershed is the land area that drains water and the pollution it carries to a specific water body. Most of the creeks in Durham begin within the city. Because of this, the everyday activities of residents and businesses play an important role in how clean our creeks are.

Since Durham sits on top of a ridge, storm water runs down either side of the ridge into a major river basin. Waters in the southwest of Durham generally flow to Jordan Lake (a potential source for our drinking water), then Cape Fear River, and then into the Atlantic Ocean. Land that drains into Northeast Creek is known as its watershed. The Northeast Creek watershed includes a large portion of Research Triangle Park and neighborhoods such as Parkwood, Oakmont Circle, and Robinwood. The lower part of the watershed contains large natural areas like the game lands associated with Jordan Lake.

The water from Northeast Creek flows into Jordan Lake. From there it flows into the Haw River and then to the Cape Fear River. This river is the only one in North Carolina that empties directly into the Atlantic Ocean. Storm water Services staff tracks water quality at four sites in Northeast Creek. The health and cleanliness of the watershed is reported in Durham’s annual State of Our Streams Report. In years when staff is able to take a wide variety of tests, the watershed is also given a score. Northeast Creek was last given a score of 77 in 2014. This compares to a "C" letter grade. This low grade was given because of high fecal coliform (a bacteria associated with raw sewage) levels, high turbidity, and poor aquatic life. Jordan Lake has recently had problems with algae caused by extra nutrients (such as nitrogen and phosphorus). The state has created guidelines, also called a Total Maximum Daily Load (TMDL) (PDF), to help reduce the nutrients in the lake. Because of this, the city also carefully tracks nutrients in Northeast Creek.

The state decided that these water quality concerns keep Northeast Creek from its intended uses by people and wildlife. The state added the creek to a list of impaired water bodies, also known as the 303(d) list. This means the city will need to take steps to find and reduce sources of pollution in the creek. The state also created guidelines, or a TMDL (PDF), to help reduce the fecal coliform in the creek.