

News Room
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Enhanced Stormwater Management at Glenstal Apartments in Jacksonville, NC

...first of its kind at an affordable housing development in eastern NC...

Jacksonville, NC - An enhanced storm water management system is currently under construction at East Carolina Community Development's Glenstal Apartments in Jacksonville, NC. The design of the stormwater management system is a hybrid that consists of conventional BMP's (Best Management Practices) for stormwater permitting purposes along with LID (Low-Impact Development) components which provide enhance treatment. In addition, a 3,000 gallon cistern will collect rainwater from the community building roof to assist in the irrigation of community gardens.

Visitors to the site will see shallow vegetated swales and planted bio-retention cells that are designed to mimic the natural hydrology within the site. These LID features serve to convey stormwater through the site and into the conventional stormwater treatment system, which is made up of a larger retention pond and two fore bay ponds. The swales and bio-cells offer additional benefits in that they are designed to enable infiltration of the stormwater back into the ground and provide a source of "cleaning" of the stormwater along the route to the treatment pond. The vegetation and grass within these areas act as scrubbers as the water moves through and filters out nutrients, contaminants and debris. The landscaping within the LID components and other areas through the site consist of approximately 2,500 plantings comprised of over 70 different species ranging from ground cover and shrubs to large trees. The conventional stormwater system components are still evident and serve an invaluable and important purpose in detaining large amounts of stormwater during significant rain events; however, it is the LID swales and bio-cells with the enhanced landscaping that provides added "green" features to the site design.

Additionally, several community garden areas will be constructed at the apartment site near the community building. Through a \$6,000 grant from The Conservation Fund's Resourceful Communities' Program - Creating New Economies Fund (CNEF) and the Z. Smith Reynolds Foundation, a rainwater harvesting system will be installed to be used to irrigate the gardens. Technical assistance with regard to the cistern design and installation will be provided by the North Carolina Cooperative Extension and North Carolina State University - Biological and Agricultural Engineering Department.

Environmentally friendly practices such as these are a way to manage our water resources in a sustainable manner. This stormwater management plan is the first of its kind at an affordable housing development in eastern North Carolina.

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