

## Abstract

Urban areas have been identified as one source of nonpoint pollution that contributes sediment, nutrients, organic material, oil and grease and bacteria to the state's water bodies. The pollutants within urban storm water can be retained on-site during construction and reduced through urban detention areas and other types of best management practices (BMPs). Each urban area within the state will need to find the types of practices that will work for them. The City of West Monroe requested federal funds to build an urban wetland detention area at a site that was an abandoned sand and gravel mine pit. The city purchased the 70.11 acre site and provided local match, engineering, planning and implementation for the project. This wetland basin receives storm water runoff from residential, commercial and light industrial areas within the city and retains them for slow release to the Black Bayou and the Ouachita River. The wetland basin also functions as a passive recreational area for students, urban developers, builders and the public to learn more about wetlands, wildlife habitat, urban nonpoint source pollution and BMPs.

The project involved pre and post construction water quality data collection to determine the effectiveness of the wetland system in retaining urban pollutants. The pre-construction stage of the project involved approximately 2 years of data collection prior to the construction of the dam at the wetland site. The post-construction sampling stage involved 1.5 years of data collection to determine whether the wetland system retained pollutants. Unfortunately, the post-construction stage of the project was hampered by drought so there were not a sufficient number of rainfall events to quantify the effectiveness of the basin. However the data that was collected indicated that non-soluble pollutants were retained within the wetland system.

The project has been an excellent educational program for students, developers and the general public that visit the site. There are extensive boardwalks for the visitors to walk through the wetland, and educational signage about how wetland systems work. A website was developed to provide historical information on the site, inventories of flora and fauna and a photographic tour of the project. The website for the project is: <http://www.ulm.edu/~stringer/restorationpark>. The project has been successful with extensive participation of school children at the wetland site throughout the year to learn more about water quality, wildlife and wetlands.