

Case Study

TOWN CREEK, JASPER, AL

Category Stream Restoration/Stream Restoration Workshops

Location Town Creek, Jasper, AL

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Synopsis The City of Jasper, AL and the Black Warrior Clean Water Partnership worked with Auburn University and North Carolina State University partners to implement a stream enhancement and stormwater demonstration project with associated stakeholder education on water quality focused on Town Creek at Maddox Middle School. The Universities are part of the Southeastern Regional Water Quality Assistance Network (SERWQAN), a network of southeastern organizations that are committed to strengthening the capacity of communities to develop and successfully implement watershed protection efforts.

Town Creek flows directly through the downtown portion of the City of Jasper. A significant portion, in front of Maddox Middle School, was channelized. The channelized portion increased the volume and velocity of stormwater and there was no cover for habitat. The lack of buffer contributed stormwater pollutants from various impermeable surfaces. The increased stormwater then immediately flowed through the most constricted portion of the stream through downtown Jasper, creating a public hazard by undercutting buildings and roads.

The City of Jasper won the 2009 Alabama League of Municipalities Award (12,001 and over population category) for quality of life improvements. In addition to the facilities and amenities provided by the City, the Town Creek Stream Restoration was featured as component of the overall quality of life improvements for the City of Jasper. (*The Alabama Municipal Journal*, March 2009, Page 20-21.)

A 319 grant in the amount of \$302,193 was provided by the Alabama Department of Environmental Management. Grant match of \$259,505 was provided by the project partners which included the City of Jasper, Black Warrior Clean Water Partnership, Cawaco Resource Conservation & Development Council, Inc., Alabama Cooperative



*Top: Stormwater Wetland, Maddox Elementary Workshop
Bottom: Town Creek and Stormwater Wetland, two years post-construction*

Extension System, Jennings Environmental, North State Environmental, Alabama Department of Transportation and the Walker County Soil & Water Conservation District.

Approach Goals for this project included improvement of water quality and habitat in Town Creek and a demonstration of urban natural channel design and innovative stormwater management techniques. Auburn University and North Carolina State Cooperative Extension System provided technical assistance for natural channel restoration of approximately 1,100 linear feet, floodplain enhancements of approximately one acre, and installation of a stormwater wetland. Additionally, Extension staff developed two workshops focusing on natural channel design and selection of streambank vegetation.

Results/Impacts One very positive outcome from these projects is the documented improved habitat in Town Creek by the Geological Survey of Alabama conducting a Fish Index of Biotic Integrity (IBI). The IBI evaluates environmental conditions based on assessments of fish populations. The restored stream and wetland are available for the local middle school teachers and students to use for outdoor education and may be used by the community for years to come as a demonstration project for urban stream enhancement. Other specific project outcomes include the following:

- 1,100 linear feet of streambank restored
 - Approximately 1 acre of floodplain enhanced
 - Construction of a two-celled wetland to filter stormwater runoff from the teacher's parking lot and school roof.
 - Stream Restoration Using Natural Channel Design Workshop.
 - Vegetation for Stream Restoration Workshop.
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Partners City of Jasper, Black Warrior Clean Water Partnership, Cawaco Resource Conservation & Development Council, Inc., Alabama Cooperative Extension System, Jennings Environmental, North State Environmental, Alabama Department of Transportation and the Walker County Soil & Water Conservation District..

Funding The Jasper Town Creek Enhancement project was funded by a Section 319 grant from the Alabama Department of Environmental Management in the amount of \$302,193 which was matched by project partners in the amount of \$259,505.

Keys to Success The partnerships on this project to implement a large scale urban stream and stormwater project were excellent. The local sponsors (Black Warrior Clean Water Partnership, City of Jasper, Cawaco RC&D Council) were able to find funding to implement a project. Their efficiency and enthusiasm was shared among all involved in the project.

SOUTHEASTERN REGIONAL WATER QUALITY ASSISTANCE NETWORK

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