

OCONEE RIVERS STREAM IMPROVEMENT DEMONSTRATION PROJECTS

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REFERENCES: *Proceedings of the 2003 Georgia Water Resources Conference*, held April 23-24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia.

Abstract. Two stream improvement projects were completed along the Middle and North Oconee Rivers in local parks in Athens, Georgia. Both projects were facilitated by the Upper Oconee Watershed Network (UOWN) through a challenge grant received from the National Fish and Wildlife Foundation and with the help and support of various local businesses, community groups, and local government departments. The projects were designed to serve as demonstration projects for simple stream restoration and enhancement techniques.

INTRODUCTION

The Upper Oconee Watershed Network (UOWN), in cooperation with various partners and with support from the National Fish and Wildlife Foundation, recently completed two stream improvement projects in Athens, Georgia. Project objectives were to stabilize an eroded section of riverbank and to restore and enhance a small, channelized stream. Project goals include:

- Creating community awareness of the relationship between water quality, stream health and riparian habitat condition,
- Providing accessible demonstration areas for citizens to learn about techniques to help restore, enhance, and protect, urban streams and riparian areas, and
- Creating a public-private partnership between local government, businesses, and the community.

METHODS

Two sites were selected in Athens-Clarke County area parks to illustrate simple stream improve-



Figure 1. Middle Oconee River at Ben Burton Park, Athens, GA, March 2002.

ment techniques. Plans were developed for the two sites and submitted to the various permitting agencies for approval and to obtain the necessary permits and variances prior to implementation. The first project involved stabilization of a severely eroded reach of streambank on the Middle Oconee River in Ben Burton Park. A 150-foot section of streambank in the park was heavily gullied and unstable due to impacts of regular power line maintenance (elimination of vegetation) and disturbance from people and dog traffic in the park (Figure 1).

The streambank was graded to a stable (3:1) slope configuration. Upon final grade, the slope was stabilized using compost, erosion control matting, and native vegetation. Live stakes were installed at the base of the slope, and containerized native shrubs and herbaceous species were installed further upslope. Grass seed was spread over the project site for temporary stabilization. Steps were built adjacent to the project to direct and concentrate access to the river in this area of the park.

RESULTS AND CONCLUSIONS

Since the Ben Burton project was installed in late January 2003, several floods have occurred, including an event in early March estimated to be a 10-year flood event. The entire site and park were under several feet of water. The river deposited several feet of sediment on the middle and lower slope area. Although the fence was partially damaged, all erosion control materials and plants remained in place, and stakes and shrubs are sprouting. The Johnson's Meadow site was only recently completed in March 2003.

The project sites will be monitored until permanently stabilized and will be useful as demonstration sites for educational tours.

ACKNOWLEDGEMENTS

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Figure 2. Ben Burton Site. March 2003.

A wooden fence was erected upslope of the project area (Figure 2).

The second project involved restoring a very small, unnamed perennial stream that flows through an area of the North Oconee Greenway known as "Johnson's Meadow." The stream was historically channelized and closely paralleled a sewer line whose right-of-way is regularly cleared of vegetation. Project activities included

- Exotic species (privet and kudzu) control,
- Re-routing the stream away from the sewer line in a newly-created meandering channel pattern through the adjacent floodplain area, and
- Stabilizing and re-vegetating the channel area with native vegetation (Figure 3).

Both projects were accomplished with volunteer labor and donated and purchased materials.



Figure 3. Johnson's Meadow along the North Oconee River Greenway, March 2003.