

Title of Project: Restoration of the Bayou Bartholomew Thalweg through Logjam Removal

Project Summary: We propose to modify over 200 logjams currently blocking the Bayou Bartholomew main channel. These logjams currently block fish passage as well as recreational watercraft passage. More importantly they have been identified as a major source of erosion and resulting siltation and turbidity in the stream.

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Project Partners: Bayou Bartholomew Alliance

Total project cost: \$201,800

Total SWG money requested: \$98,400

Amount and Source of Matching Funds: \$103,400

The Bayou Bartholomew is a stream which forms the dividing boundary between two ecoregions: the Gulf Coastal Plain and the Mississippi River Alluvial Ecoregion. The stream flows for a total of 359 miles of which the upper 269 miles occur in Arkansas. The stream is one of the most aquatically diverse streams in North America with over 117 species of fishes and over 30 species of mollusks occurring in its waters.

Layher BioLogics RTEC, Inc. has performed many faunal surveys over the past decade in the Bayou. They have also mapped logjams and other features of the Bayou. Volunteers have helped build nature trails, planted 27 square miles in new riparian forests, cleaned up trash dumps, and performed other notable tasks. To date volunteers have helped to open some 69 logjams on the Bayou.

The logjams currently in the Bayou come from natural blow downs, silviculture practices in the past, and the clearing of meander bends during the 1960 soybean boom. These logjams have been documented to slow waters behind the jams resulting in siltation, however at the logjams sever bank erosion occurs as the stream cuts new channels. This results in increased turbidity and supplies materials for siltation to occur at the next logjam downstream.

The Bayou Bartholomew Alliance has used volunteers and the Arkansas Stream Team Program to open some 69 logjams to date leaving some 200 yet to be modified. We propose to open the logjams in the area of the thawleg to prevent further erosion, facilitate fish passage, reduce turbidity and siltation and thereby improve and restore aquatic in channel habitat. Removed materials would either be moved to backwaters where decay will occur shortly during low flow periods or use the materials where appropriate to stabilize eroding areas.

This action would improve habitat for a large number of aquatic species and insure the continued existence of the diverse aquatic community by restoring a heterogeneous habitat in channel rather than the homogeneous channel conditions currently being formed through siltation.

We would work with the Bayou Bartholomew Alliance and cooperating organizations to provide volunteer help in accomplishing the modification of remaining logjams. We estimate that two logjams per work day (10 hour days) could be modified to prevent further erosion.

The project would begin September 1, 2009 and continue until completed at the latest by August 31, 2011. If stream conditions are favorable the completion date could be much earlier. Additionally, SEAARK Marine is providing a barge with electric winches for logjam work. The craft is valued at \$30,000.00. We did not list this in the match table but if we did it would make the project even more favorable.

Budget:

<b>Salaries field:</b>					<b>SWG</b>	<b>Matching</b>
PI	100 days	10 hours/day	\$40/hr	\$40,000	\$40,000	\$0
Biologist I	100 days	10 hours/day	\$20/hr	\$20,000	\$20,000	0
Technician	100 days	10 hrs/day	\$20/hr	\$10,000	\$20,000	0
Average of 4 volunteers /day	100 days	10 hrs/day	\$40/h chain saw work	\$40,000		\$40,000
PI –report	120 hours		\$40/hr	\$4,800	\$2,400	\$2,400
Operating Expenses						
Mileage 4 vehicles	80,000miles	.50/mile		\$40,000	\$20,000	\$20,000
Per diem	\$20/dayx3	100 days		\$6,000		\$6,000
Lodging	\$60/dayx3	100 days		\$18,000	\$9,000	\$9,000
Boat gas/oil				\$3,000	\$2,000	\$1,000
Preservative/jars						
Field materials: gear/boat/chain saws, repairs				\$10,000	\$5,000	\$5,000
Overhead9.9%				\$20,000		\$20,000
Totals				\$201,800	\$98,400	\$103,400

Matching 51.2% by Bayou Bartholomew Alliance and Layher BioLogics RTEC, Inc.