



CONSERVE WILDLIFE  
FOUNDATION OF NEW JERSEY

**Project Summary of the Ballanger Creek Habitat Enhancement Project  
Bass River State Forest, Bass River Township  
Burlington County, New Jersey**

*March 19, 2012*

In late 2009, the Conserve Wildlife Foundation of NJ received notification from the Northeastern Area State and Private Forestry, US Forest Service that it was receiving a grant from the American Recovery and Reinvestment Act of 2009. The funding was intended to help create both jobs and wildlife habitat in New Jersey. The scope of the project included the creation and enhancement of wildlife habitat inside Bass River State Forest. The site is located along Ballanger Creek and is the former site of an old saw mill owned by the French family in the early 1900's.



Ballanger (pronounced Baa-lan'-ger) Creek feeds into the Mullica River and eventually Great Bay, a relatively pristine estuarine system. The surrounding forested habitat is mostly unfragmented and is comprised of mature pine-oak woodlands. This particular site has had a lot of use in its past. Saw mills once operated here in the mid-19th century and in the early 1900's fields along the creek were used for agriculture. It was also used as a dump site for fill and other debris.

A house and several out buildings were demolished when the property was acquired by the Green Acres Program in the mid-1990's. Since its acquisition the site has not been actively managed for wildlife. The purpose of this project is to maximize the site for use by wildlife and to provide wildlife viewing opportunities for people.

In early 2010, we developed a request for proposals and hired Duffield Associates, an environmental consulting firm that assisted us with the project. They helped us develop and apply for state permits to conduct the work in Bass River State Forest. In just over a year in time they helped us carry out the project where we conducted several habitat treatments. We enhanced 5.5 acres of grassland habitat, created .3 acres of scrub-shrub habitat, and the enhanced approximately 2 acres of freshwater wetland edge habitat. This report summarizes our work at this site from April 2010 to June 2011.

## Meadow Enhancement

Work first began at Ballanger Creek in early 2009 with the introduction of fire as a habitat management tool. To further enhance this fallow field for butterflies and songbirds, in the summer of 2011 sections of the fallow field were tilled and native wild flower seeds were broadcast to help provide seeds and nectar. We also removed several hazard and non-native trees that remained from the previous landowner to help create more suitable habitat for grassland birds. Since the first prescribed burn many species of warm-season grasses have begun to flourish and wildflowers are beginning to grow in the field. Some of the seeds used included butterfly weed, goldenrod, asters, and coreopsis.

## Scrub-Shrub Habitat Enhancement

In the second phase of the project we created scrub-shrub or “early-successional” habitat by planting shrubs along an existing hedgerow of eastern red cedars along Route 9. With help from many volunteers we planted over 1,000 shrubs in April and again in October 2010. Species planted include: Sweet pepperbush, Northern bayberry, Beach Plum, Low-Bush Blueberry, Silky



Dogwood, Hornbeam, Winterberry, Spicebush, Dwarf winged sumac, Steeplebush, Arrowwood viburnum, Nannyberry viburnum, and Blackhaw viburnum; all provide fruit for migratory birds. The area was fenced to reduce the amount of damage from deer browse. Larger plant stock was used so plants would provide fruit to migratory birds sooner.

Temperatures in the spring and summer of 2010 were the warmest on record in New Jersey. It was also the 6th driest on record. It was most certainly a challenging year to start off a habitat enhancement project with planting shrubs. Since we used native species, many were drought tolerant. Others, like arrowwood viburnum do not do as well in upland areas. However, the majority of shrubs planted survived. Many went into dormancy early where the plant requires a lot less water to survive. Even with such harsh



conditions, many shrubs have survived and done very well. Bass River State Forest will continue to manage this area as scrub-shrub habitat in the future.

## Freshwater Wetland Enhancement

In the third phase of the project, fill (asphalt, concrete, wood, tires, and other debris) was removed from the edge of the wetlands.

Common Reed (*Phragmites australis*), a highly invasive plant, had colonized these disturbed areas.

It has little value to wildlife and was removed to help control its spread into the surrounding area. After some delays we received our GP16 Permit from NJDEP on April 27, 2011. Site work began in June and over two weeks a large amount of milled asphalt, concrete and other debris was mechanically removed using an excavator from the edge of the freshwater wetlands on site using an excavator. A total of 1,240 cubic yards of fill was removed. Some of the debris removed included:

- Trees and stumps for access to designated removal areas: 75 cu yds
- Concrete: 45 cu yds
- Miscellaneous materials/construction debris (wood planks, metal, etc.): 20 cu yds
- Asphalt millings mixed with soil: 1,100 cu yds

We removed as much fill as possible that was within our budget. After completion 160 native shrubs and trees were planted. Species include: Red maple, Smooth alder, Buttonbush, Sweet pepperbush, Persimmon, Witch-hazel, Winterberry holly, Soft rush, Virginia creeper, Ninebark, Swamp white oak, Swamp rose, Elderberry, Nannyberry viburnum, and Cranberry viburnum. During the late summer and early fall we monitored the site frequently and observed a small resurgence of phragmites in some areas. We are currently working with the NJ Forest Service to treat these areas and hope to incorporate prescribed burning into the management and control of phragmites on site.

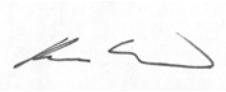


Finally, in late 2011 we enhanced a 1.5 mile loop trail along the property boundary of the site with Bass River State Forest staff and volunteers. The new hiking trail will be complemented by a series of interpretive signs that explain the background, purpose, and results of the project to site visitors in the future.

In conclusion, this project successfully created and enhanced wildlife habitat and created jobs to help boost the local economy in southern New Jersey. The quality of the environment has been improved by several factors. The removal of debris and invasive species from the edge of freshwater wetlands and the planting of native tree species has improved wildlife habitat on site. It has also improved the health of the forest and its ability to retain stormwater, reduce erosion, filter pollutants, and sequester carbon dioxide. The creation of a hiking trail and interpretive signs on site has created recreational and educational opportunities that promote environmental stewardship. Jobs created and/or retained from this work include many from different industries. A private consulting firm employed 3 research scientists throughout the project. We used a private tree expert to remove hazard and non-native trees. During the restoration of the freshwater wetlands a team of 4-5 excavating crew members were involved in the project.

Conserve Wildlife Foundation of NJ employed the project manager to carry out this project. Finally we hired an interpretive sign company to design and fabricate a series of interpretive signs for the site. A total of 8 jobs were created or retained during this project.

Sincerely,



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