



Stream Mitigation Program



Reed Creek Stream Restoration Asheville, NC

What is the Department of Transportation's Stream Mitigation Program?

The North Carolina Department of Transportation (NCDOT) constructs many miles of highway each year. Although the NCDOT is dedicated to preserving North Carolina's natural resources, impacts to streams and other valuable natural areas are sometimes unavoidable. When a project does impact a stream, North Carolina General Statutes require that the NCDOT compensate for these impacts through a process known as mitigation.

What is Mitigation?

- **Restoration** The NCDOT may find a previously damaged stream channel, such as one that has been channelized or straightened for drainage and restore the channel to a more natural condition to replace the values of the stream being impacted. The stream will typically be monitored for a period of time to ensure that mitigation was successful.
- **Enhancement** The NCDOT may locate a section of stream that is functional but would benefit from enhancement. (Cont. on page 2)

(Cont. from Page 1)

For example, the NCDOT may enlarge an existing buffer zone, or diversify the vegetative community, thereby increasing the streams value as fish and wildlife habitat.

- **Preservation** The NCDOT may acquire a conservation easement, purchase, or in other ways protect a stream to prevent future damage.
- **Any combination of these activities.**



How Does the NCDOT Locate Streams for Mitigation?

Most often an environmental consulting firm is contracted by the NCDOT to identify sites for mitigation. The consulting firm will use a variety of tools such as soil and vegetation maps and satellite imagery to identify land ideal for such activities.

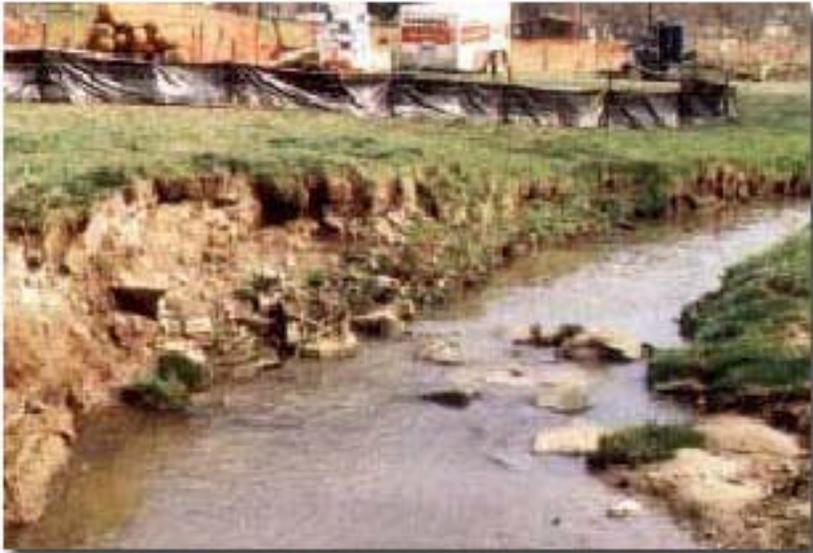
What Type of Streams are Useful as a Mitigation Site?

Typical streams are those that:

- have been straightened or chanelized in the past to improve land drainage for farming, pasture, or timber.
- are adjacent to lands that contribute significantly to riparian buffer function and values.
- have been formerly restored and need protection.
- are restorable and have riparian habitat corridors that connect protected resource areas.

What Happens Once a Potential Site Has Been Located?

Once the consulting firm has identified a potential site it will contact the landowner on behalf of the NCDOT to see if the landowner is willing to participate in the Stream Mitigation Program. Participation is entirely voluntary and the NCDOT will offer compensation for the land through a conservation easement, as well as pay for the mitigation. No landowner is pressured or forced to participate in the program.



What is a Conservation Easement?

If the landowner is willing, a conservation easement may be acquired by the NCDOT. This places mutually agreed to restrictions on the property deed that guide the use and management of the stream and its buffer area. After the signing of the easement, the landowner retains ownership, but agrees to manage the property according to the restrictions. The easement remains with the property if it is sold or transferred and the new owner is required to honor the provisions of the conservation easement. All restoration work is paid for by the NCDOT.

How does the landowner benefit from participation?

In addition to being paid for the conservation easement there are other benefits for participating:

- **Reduction in Property Tax**
With a conservation easement, the ownership of the property does not change. In addition, there are property tax deductions that may be available.
- **Reduce Flooding**
Streams and their natural floodplains contain and move water during flooding, allowing the water to percolate into the ground or flow slowly downstream. This temporary storage, especially in the floodplain, reduces the (Cont. on Page4)

(Cont. from Page 3) peak water flow after a storm and helps to prevent the flooding of adjacent property.

- **Water Quality Improvement**

Stream restoration through stabilization and re-introduction of vegetation improves stream water quality. In addition to removing and collecting sediment, many of the plants that grow along streams contribute to cleaner water by removing and breaking down pollutants.

- **Repair of Erosion Problems**

If a stream is currently exhibiting accelerated and or excessive erosion, mitigation will likely include bank stabilization and repair, thereby reducing or preventing further erosion. These improvements are paid for by the NCDOT.

- **Habitat For Fish and Wildlife**

Healthy streams provide migration, breeding, spawning, and feeding habitat for thousands of species of fish, amphibians, invertebrates, and other wildlife. Riparian buffer zones are also home to many different plant and animal species, some of which are endangered.

- **Water Supply**

Streams are a source of water for wildlife as well as livestock and humans. They also replenish groundwater supplies. Depending on location, streams may provide a direct source of water.

- **Education and Research**

Streams and riparian ecosystems are often used as 'outdoor classrooms', teaching children about ecology and the natural environment.

- **Recreation**

Many individuals and organizations are interested in, and sometimes willing to pay for, stream and riparian recreational activities such as hiking, fishing, and wildlife observation.

- **Scenery**

Additionally, the ecological diversity of streams, with their meandering channels and riparian vegetation, offers a beautiful and aesthetically pleasing feature to any landscape.

What Should I Do If I am Interested in Participating?

When the NCDOT or its environmental consultant contact you, express your willingness to participate in the Stream Mitigation Program. With your support and cooperation, we can create a 'win-win-win' solution that benefits all parties – the landowner, the citizens of North Carolina, and the environment.

For More Information

**Natural Systems Unit
Project Development and Environmental Analysis**

North Carolina Department of Transportation

**P.O. Box 25201
Raleigh, NC 27611
919.733.3141**

<http://www.doh.dot.state.nc.us/preconstruct/pe>

