

Frequently Asked Questions

What is stream restoration?

A process for repairing a damaged stream so that it can perform positive functions for water quality. Restoration generally involves construction and/or planting new vegetation.

What are the natural functions of a stream?

Streams move rainwater to rivers, lakes and – ultimately – to oceans. Streams provide fish and other aquatic animals and plants a place to live, and they serve to transport sediment and nutrients downstream. Streams also provide a “roadway” for fish and other aquatic life to move from one place to another.

How are streams damaged?

Streams are damaged or degraded in various ways. Livestock can damage stream banks by trampling the vegetation that holds the banks in place, causing the banks to collapse into the water. Increased runoff can cause a small stream to swell and force it to move a lot more water, resulting in flooding, degrading the banks, and destroying vegetation. Runoff may also contain pollutants such as oils and other automotive fluid, or chemicals such as fertilizer. Too little water going through the stream will also cause habitat problems.

Too much sediment (dirt and debris) in a stream can clog the stream bed and degrade water quality for fish and other wildlife in the stream. Also, past human practices can damage streams, such as removing trees and bank-stabilizing vegetation, filling in wetlands that previously held floodwater or slowed runoff, or straightening a stream so that the land drains more quickly.

How long does this restoration take?

Stream restoration is a complicated process and involves many phases. First, streams needing restoration must be identified, either through a planning process (Local Watershed Planning) or by local professionals (Soil and Water Conservation field agents, Natural Resource Conservation Corps field staff, and others).

Next, projects are developed to meet minimum size requirements, willing landowners are identified, and property is acquired (either purchased outright in a fee-simple transaction or through a conservation easement). The state process for purchasing property, or obtaining an easement, generally takes two to eight months.

Once the property is acquired, engineers design the work to be done on the stream. The design work generally takes eight months to two years. Design can be as simple as creating a plan for replanting vegetation and fencing out livestock, or as complicated as re-routing the waterway to form a more natural curve and pattern, creating pools and drops for water, introducing stone and wood structures to guide water as it flows downstream, or creating floodplains for high water to move to during flooding.

Once the design is completed and approved, construction can begin. Construction permits and requirements for the construction are monitored by various state agencies, and with EEP oversight.

When construction is complete, the project is planted with native vegetation that will help maintain the banks and the newly built stream. These plants and the other stream-design features are monitored to ensure that everything is working and growing to stabilize the project. Monitoring continues for five years so that any problems that arise can be fixed to ensure the stream restoration project is a success.



Frequently Asked Questions

How long does each phase of restoration take?

Stream restoration will vary due to complexity of the project. Identifying a project can take several months to years, depending on the planning process. Streams that are identified in Local Watershed Plans as potential projects are highlighted and may move quickly toward project development, while a stream in an isolated area may take longer to identify and investigate for its restoration potential.

Identifying willing landowners can take additional time. Multiple landowners with a stream on their property must be willing to participate in a restoration project. For example, if a potential stream project is 1,500-feet long, and travels through six families' properties (three on each side) all six families would need to commit to the project in order to proceed. Without the cooperation of all property owners, EEP cannot restore the stream.

Project design is also a complicated process. While private consultants perform this work, EEP hires a competent firm, reviews plans, obtains permits, and approves the final design. This process can take a year to complete.

Once the design is complete, construction can begin. The advertising, bidding, reviewing, and awarding of a construction contract can take about three months, depending on the complexity of the project. Construction then can begin.

Depending on the complexity of the project, and the time of year, construction can take anywhere from three to six months. Projects can involve a variety of construction equipment, from backhoes to bulldozers (moving rocks and dirt, widening or moving stream channels, and other techniques), and may include a great deal of manual labor (such as planting vegetation or installing erosion-control matting).

What does EEP do about beavers on project sites?

Beavers present a unique problem for our projects. Sometimes beavers have created wetlands that are a permanent part of the ecosystem, and have actually helped improve water quality by slowing down runoff, trapping debris, and providing habitat for fish and other wildlife. In other instances, beavers can create flood hazards that damage roads, houses, and restored streams. It is difficult to have a single strategy for beavers. In general, if beavers have created an environment that has existed for 20 years, EEP tries to leave it as it is. If the project site is located in an urban setting, EEP may try to relocate the beavers.

What does EEP do about kudzu?

Kudzu and other intruding plants are not desirable on any of our project sites. These plants are removed from the site during restoration and periodically for about five years after the restoration work is completed.

Can landowners be "forced" to give up land or a stream to EEP?

No. EEP is a non-regulatory state agency that seeks mutually beneficial solutions for the landowner, the state, and the environment. EEP does not have eminent-domain authority and cannot condemn property. The decision to donate or sell land or to sell a conservation easement is a voluntary decision of the landowner.

Frequently Asked Questions

What's the difference between selling a "conservation easement" and selling a piece of land to EEP?

When a landowner sells someone a conservation easement, they are selling some of the rights that come with the property they own. For instance, if EEP wants to purchase a conservation easement on a property along a creek, it purchases the rights to the area alongside the creek in order to preserve the stream bank and surrounding land (sometime 50-100 feet wide). In this example, the landowner still holds the title to the property, but is limited in privileges in the easement area. For example, landowners may still walk through the area, or hunt or fish if it was previously allowed. However, landowners are not allowed to build even small structures in the easement like sheds, playhouses or bike paths. This ensures that the vegetation thrives, which protects the creek banks and preserves, improves, and maintains the health of the creek. The conservation easement remains attached to the property even if the property changes ownership.

If the landowner is not interested in owning land that has development restrictions on it, EEP may buy portions of the land outright for those areas of the property that need restoration. EEP then surveys the parcels and records as two (or more) separate parcels, and the landowner sells all interest in the properties the state purchases.

Either type of transaction is completely voluntary. Landowners are compensated at fair market value, as determined by the State Property Office or a state-certified, third-party appraiser.

Many landowners wish to donate the property. Donation may offer tax benefits. Landowners may have different financial requirements and tax burdens, so it is up to individual landowners to determine which situation best fits their needs. Landowners are advised to consult a trusted professional prior to making property-related decisions.

How does an easement affect the value of my land?

That depends on the property and the county where the easement agreement is located. Usually, land purchased by EEP for conservation easements are wetlands, stream corridors, floodplains, or high-quality preservation sites. These sites usually have limited development potential, but may have been in agricultural use. If the land has been valued at a "resource" rate, such as for farm use, the value shouldn't be reduced for the overall parcel. If the property is assessed for tax purposes at a residential or other "non-resource" tax rate, the value of the overall property could be decreased, depending on how county tax offices assess the parcel, since less of the property would be available for development.

It's best to check with the local tax office, an accountant, or a tax attorney when considering the best financial interests concerning conservation easements. Tax benefits may be available depending on whether an easement is donated, how much is donated, and what benefits are obtained from the donation or sale of a conservation easement.

For more information on the N.C. Ecosystem Enhancement Program, visit the EEP Web site at www.nceep.net or call (919) 715-0476 to speak with a property specialist.