# Clayton Road Blocks Project

## *Pocosin Lakes National Wildlife Refuge*

## Good Neighboring in a Nutshell

We've been restoring hydrology in severely ditched/drained pocosin habitat on Pocosin Lakes National Wildlife Refuge by stopping the artificial drainage of the peat soil through the ditch system.

This work has been done primarily to improve habitat, reduce the frequency and intensity of wildfire and conserve soil.

With only the current infrastructure in place, we can't rewet the soil within 1/2 mile of our boundary because it could cause the adjacent private land to become wetter due to seepage. This might impact our neighbors.

So this project will install a second dike and canal system just inside some of the existing dikes and canals located at the Refuge boundary, so any seepage would still remain on Refuge land.

Approximately 2.5 miles of new dike will be built allowing us to rewet the soil in approximately 1,325 acres of Refuge lands without making the adjacent land wetter.

*Water control structures and raised roads that serve as levees are used to rewet historically drained peatlands, credit USFWS/Sara Ward.*

*North Carolina's Albemarle-Pamlico peninsula is the site of the greatest pocosin acreage in the U.S.; however, since the 1960's, 70% of pocosin habitat in North Carolina has been lost. Consequently, in the early 1990's, the 110,000-acre Pocosin Lakes National Wildlife Refuge was established to conserve pocosins, a unique forested wetland formed on a "dome" of deep organic peat soils. To fulfill the Refuge's purpose, managers aim to rewet a total of approximately 35,000 acres of these drained soils and restore their natural hydrology. This particular project will restore 1325 acres and allow the water to mimic the natural seasonal hydrology here while maintaining adequate road accessibility and avoiding impacts on adjacent private land.*

### What We're Doing

*Project Description*

Generally, Refuge lands within 1/2 mile of our boundary with adjacent private lands are managed as a buffer; rain water is not held to rewet the peat soils in order to assure no off site impacts. The Clayton Blocks' project will restore approximately 1,325 acres within part of that buffer.

The Clayton Block project area has been managed as a buffer zone because it is bounded to the west and south by privately owned land. In order to allow the Refuge to rewet the soils in most of this area, without affecting water conditions on adjacent private properties, a new berm will be constructed just inside of the existing berm and canals on the south and west sides of the project area. The new berm is designed to prevent hydrologic impacts to offsite areas. The project will allow us to mimic the natural seasonal hydrology on these Refuge wetlands while maintaining adequate road accessibility and avoiding impacts on adjacent private lands.

The project will consist of several steps:

- Build a new berm approximately 30 feet inwards from the existing canal.

This berm will be constructed using material excavated from a new canal inside the new berm.

- The new berm will have a "core" of mineral soil extending through the organic soil layer to the mineral soil layer beneath to minimize or eliminate seepage from the restored area.
- Install three new water control structures inside the new canal system.
- Set boards in the water control structures at planned levels to gradually allow rainfall to rewet drained peat soils.

## Expected Results

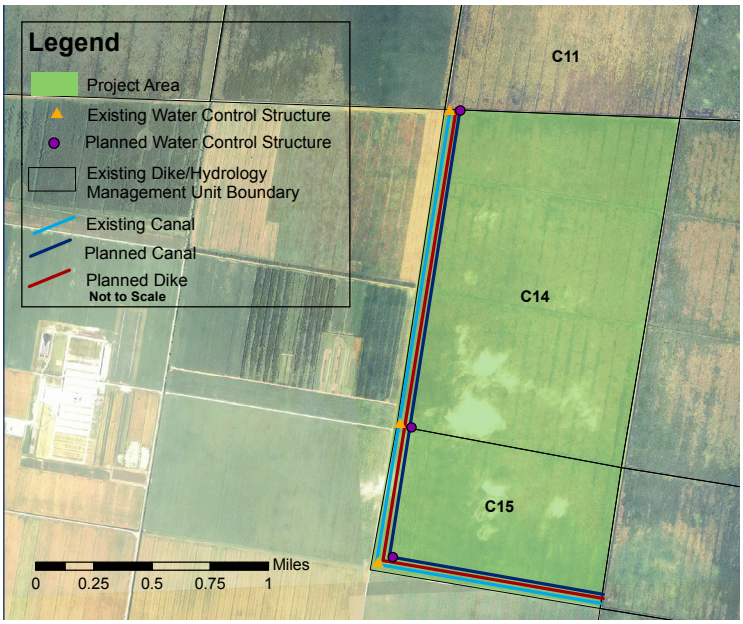
The project will allow the Refuge to return lands to a seasonally-saturated condition and manage according to its purpose without impacting adjacent private land. The new berm and canal system will provide separation from neighboring private lands, and any wetter conditions resulting from the restoration will be isolated to an approximate 30-foot buffer strip on the Refuge lands. In combination with previous hydrology restoration projects, this project will aid in providing important benefits to terrestrial and aquatic ecosystems and human communities:

- Provides wildlife habitat for native species.
- Conserves peat soils.
- Protects water quality by retaining soil-associated pollutants before they reach important estuarine waters downstream.
- Lessens the frequency and severity of wildfires.
- Aids fire suppression by providing water management capability.
- Provides some storm water retention capability.

The Service is committed to preventing water impacts associated with our management and welcomes opportunities to help alleviate the concerns of adjacent landowners while still achieving our goal of pocosin habitat restoration.

## For More Information

Visit www.fws.gov/refuge/pocosin_lakes or call Howard Phillips at 252/796 3004.




**Clayton Road Blocks Project Area**

*Black bear and her cubs, credit Jackie Orsulak.*