

Managing Arkansas's Greentree Reservoirs for the Future

For centuries, the Arkansas Delta and other river floodplains have been bountiful sources of food and habitat for migrating ducks. Greentree reservoirs on public and private land are a crucial component of this habitat.

Greentree reservoirs, largely developed in the 1950s, are bottomland forests that are artificially flooded by land managers to provide duck habitat and duck-hunting opportunities. These reservoirs offer red oak acorns and invertebrates for food as well as thermal cover and pair isolation – nearly everything ducks need during mid- to late-winter stopovers.

AGFC manages nearly 50GTRs across the state, providing more than 50,000 acres of flooded forests for waterfowl habitat and world-renowned public hunting opportunities. AGFC staff, along with other expert habitat managers, began a formal assessment of forest health conditions within these GTRs in 2014.

Forest health data indicate the composition and health of these forests have gradually changed and declined, leaving these habitats less valuable to ducks. The most beneficial red oaks have proven especially susceptible to years of prolonged and growing season flooding, but even more water-tolerant species are showing stress.

“Many years of artificial water management that differs substantially from natural conditions have stressed many tree species in these sites,” said Luke Naylor, AGFC waterfowl program coordinator.

Scientific information gathered during the last few decades calls for a more natural and sustainable management philosophy for these habitats. For the last several years, AGFC has started to deploy different strategies to provide high-quality waterfowl habitat, and hunting, for the long term. Delaying intentional artificial flooding to a more beneficial time of year, the adoption of new management plans and infrastructure renovation are all geared to reduce stressors on water-intolerant trees and improve management capacity.

Additional forest health assessments have been initiated as well as detailed reviews to evaluate hydrology, identify

needed infrastructure changes and develop restoration plans for each GTR. To date, GTR reviews have been conducted on 12 WMAs resulting in preliminary restoration plans and infrastructure modifications.

“These renovations will not be cheap,” Naylor said. “Many GTRs have a large amount of infrastructure installed over many decades. Much of this infrastructure is in poor condition and in need of major repair.”

More than 300 miles of levees and more than 400 water-control structures regulate the water on public GTRs in Arkansas, and most of this infrastructure is now 50-60 years old. Current GTR restoration plans are identifying the most critical renovations needed to better manage the flow of water through these habitats.

The AGFC and partners must be creative in funding these vital projects. Luckily for the Commission, the hunters and the ducks, help is available. In addition to traditional wildlife management funding streams, competitive grants are available through programs like the North American Wetlands Conservation Act.

The act, created in 1989, conserves North America's waterfowl, fish and wildlife resources while producing a variety of environmental and economic benefits. Its success is driven by partnerships involving federal, state and local governments, nonprofit organizations such as The Nature Conservancy, Ducks Unlimited, and community groups.

AGFC has partnered with Ducks Unlimited to submit the first two of many expected NAWCA grant proposals to help fund GTR renovation projects. The first two proposals are linked to GTR projects on Earl Buss Bayou DeView WMA, and Ducks Unlimited has stepped up to administer these grants and provide engineering design support. AGFC expects the next set of NAWCA grant proposals will be for GTR projects on Henry Hurricane Lake WMA.

“Securing external funding takes time, and necessary changes won't happen overnight,” Naylor said. “We're in this for the long haul and there are no quick fixes.”



Greentree Reservoir that has died due to stress from trees due to flooding in Henry Hurricane Lake.



Hunting in a Greentree Reservoir in Arkansas.

BY THE NUMBERS

49

Public Greentree Reservoirs in Arkansas

More than

50,000

acres of flooded forests for waterfowl habitat and world-renowned public hunting opportunities

More than 300 miles of levees and more than 400 water-control structures regulate the water on public GTRs in Arkansas

Visit AGFC.com for more information about Greentree Reservoir Management in Arkansas

