The Bois d'Arc Lake Mitigation Project: A Watershed Scale Ecological Restoration

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In 2022, the North Texas Municipal Water District completed the construction of a new surface water reservoir in Fannin County, Texas, to supply a growing regional population; the first reservoir in Texas in approximately 30 years. Environmental impacts from the resulting Bois d'Arc Lake are being mitigated by restoring, enhancing, and preserving ~15,000 acres of wetland and upland habitats and 69 miles of ephemeral, intermittent, and perennial streams within the same watershed on three Permittee Responsible Mitigation (PRM) sites. Much of this restoration takes place on Riverby Ranch, formerly used for agriculture and livestock production for over 100 years. The project includes ~8,500 acres of forested, emergent, and scrub-shrub wetlands, ~2,600 acres of upland forest and riparian woodlands, and ~3,300 acres of native grassland restoration and enhancement, as well as ~24 miles of Priority 1 stream restoration and ~45 miles of stream enhancement. Restoration and perpetual protection of these habitats will decrease erosion, sedimentation, and nutrient loads in a significant portion of the Bois d'Arc Creek watershed that drains into the Red River between Texas and Oklahoma. This presentation will provide background on the development of the Bois d'Arc Lake Mitigation Project as well as the status of construction, monitoring, and maintenance, including a discussion of the project's cornerstone Willow Branch stream and floodplain restoration, which resurrected over two miles of abandoned stream channel and adjacent wetlands. We will discuss the variety of habitats on-site, restoration techniques employed, and lessons learned to date on ecological restoration at this scale.

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