



Big Thicket National Preserve, Texas

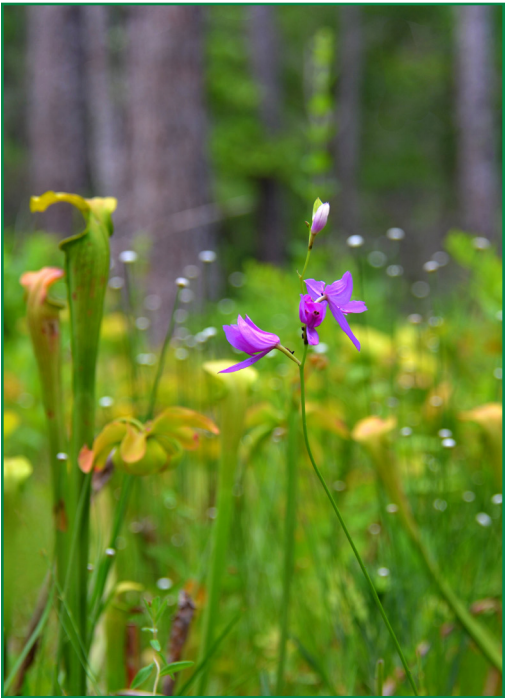
Project Descriptions

The Gulf Coast Network (GULN) conducts long-term ecological monitoring on three indicators of ecosystem health –called vital signs– in Big Thicket National Preserve. The network’s 94 permanent sampling locations are shown on the map on the next page. Each sampling location is associated with one of the following vital signs.

Water quality is measured at six permanent sites at the park. From west to east there is Menard Creek, followed by Big Sandy Creek, Little Pine Island Bayou in the Lance Rosier Unit, Turkey Creek, Village Creek at McNeely Road and Village Creek State Park. Field data are collected in alternate months, and measurements include water temperature, specific conductance (SpC), pH, dissolved oxygen (DO) and turbidity. Samples are collected for *Escherichia coli* (E. coli), calcium, magnesium, nitrate, nitrite and phosphorous.

Breeding landbirds are sampled from fixed point locations using an established point-count method, which documents every individual seen or heard during a ten minute period. Thirty-two points are sampled twice during the summer breeding season, close in time as repeat visits.

Terrestrial vegetation is sampled within fixed 20 meter x 20 meter plots to determine the composition and condition of vascular plant communities over time. All plant species are identified, and in nested subplots the relative frequency and percent cover of each species are recorded. Data are also collected on tree growth, recruitment and mortality. All plots are sampled once every three years, and all are located within 10 meters of a bird monitoring point.



Plant communities like this one, with grass pink orchids, pitcher plants and bog buttons, are monitored through the terrestrial vegetation protocol.

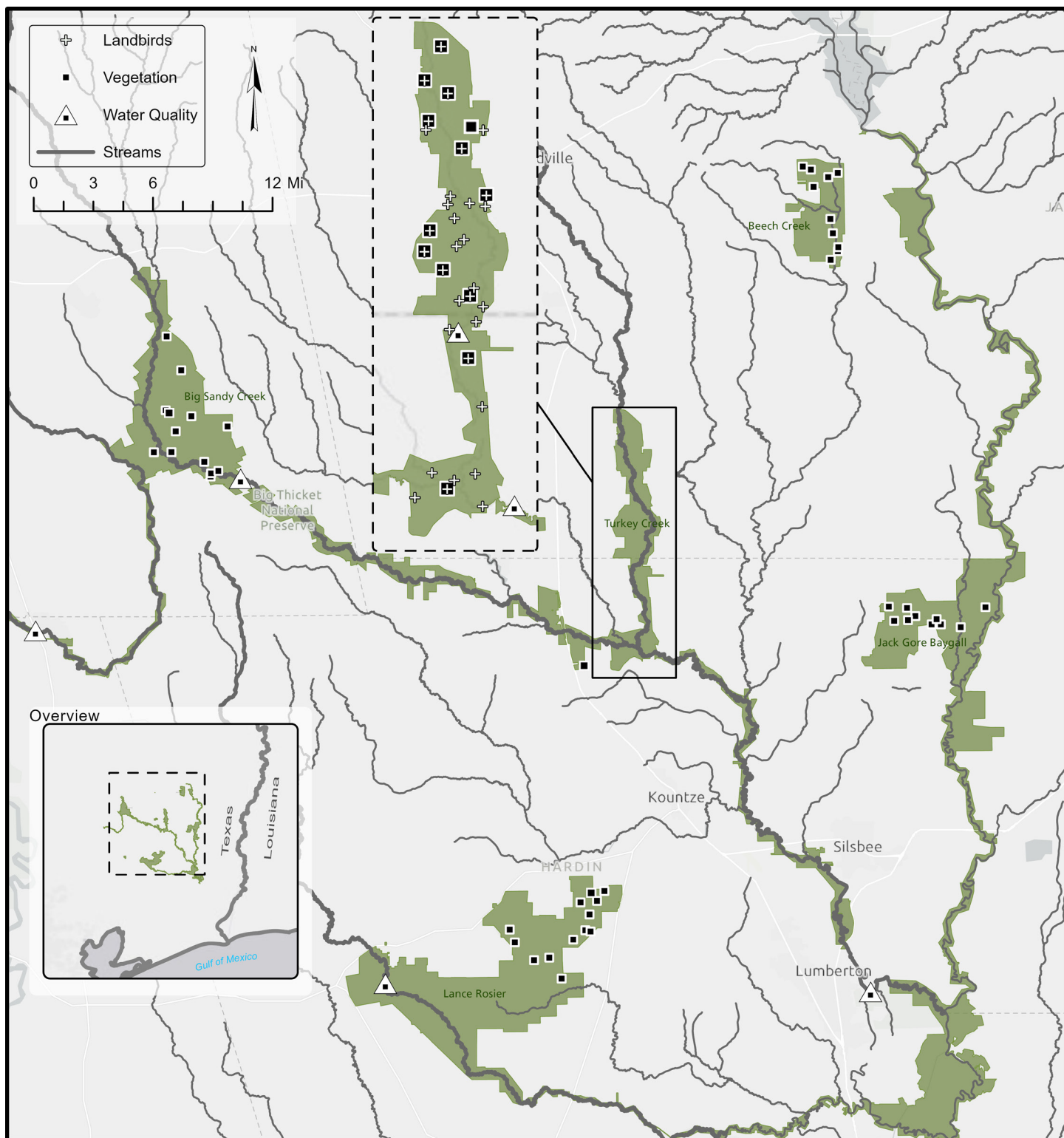
GULN Vital Sign	Number of Sampling Points	Sampling Frequency	Monitoring Start Year
Water Quality	6	Alternate Months	2007
Breeding Landbirds	32	Annually	2014
Terrestrial Vegetation	60	Every 4 Years	2022



Gulf Coast Network

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Inventory and Monitoring Division
National Park Service
U.S. Department of the Interior



For more information, visit <https://www.nps.gov/im/guln/index.htm>

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Nov. 2022