Talladega National Forest (TAL)

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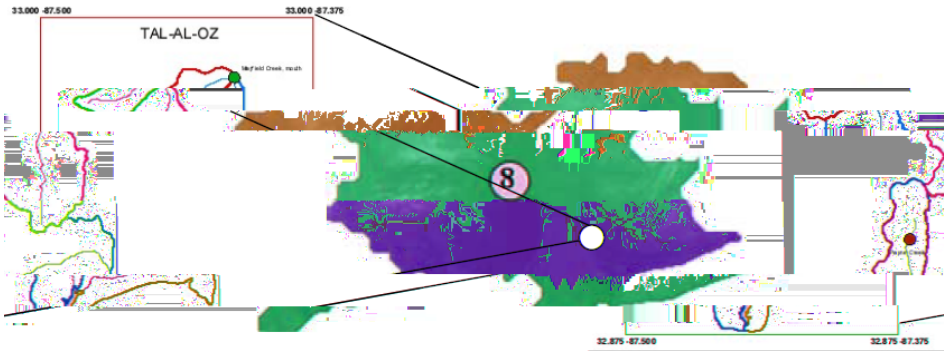
Website pending
Location within Domain: 32.9339N, -87.4352 W



History: The Oakmulgee District of the Talladega National Forest (TAL) covers 18,000 ha in west-central Alabama. Prior to its purchase by the US Forest Service in the 1930s, the area was logged, but now mature 50-80 yr old pine and deciduous hardwood forest regrowth hosts a diverse ecosystem.

Key Characteristics: The proposed site within the district covers 5300 ha of the Fall Line Hills physiographic region of the upper Eastern Gulf Coastal Plain. This physiography (level to moderately sloping, broad ridges with stream terraces and broad floodplains) is representative of a wide swath of Domain #8 from the Gulf of Mexico to the Mississippi River alluvial valley. This setting can be used to address climate, land use change, invasive species, and coastal instability (hurricane inland effects) and other NEON response themes. Like much of the Coastal Plain, this area is lightly populated, rural and dominated by forest cover, primarily pine (longleaf, loblolly, shortleaf, yellow) and oaks, tulip poplar, and sweetgum. Soils are sandy with no near-surface bedrock. The TAL is distinguished from northern areas in Domain #8 by the geology, soil, water chemistry, and vegetative differences and its closer proximity to the Gulf of Mexico. This site sustained tree damage from Hurricanes Ivan, Dennis, and Katrina, and from drought in 2000 and 2006. Issues of invasive species, warming and pollution are important here. The site currently receives little N deposition (it is a useful control site), but is surrounded by higher deposition to the north and south. This site will also be proposed as a core site and as a site for the stream N fertilization experiment.

Existing Infrastructure: Under cooperative agreement with the USFS, ecologists from the University of Alabama (UA) and other institutions have conducted ecosystem studies in the area since 1992. Currently installed infrastructure includes a meteorological platform, evaporation pan, dataloggers, boardwalks over wetlands, gaging stations, and a flux tower for measuring ET. Data sets acquired over 5-10 yrs are available from this instrumentation. The TAL has been the focus of numerous projects funded by NSF, EPA, DOE, and USFS. Over 100 publications, dissertations, theses, and undergraduate research projects have been completed from research at this site. If this site is not chosen as a core site, then it will require a relocatable with advanced met instruments, radiometric measurements, soil sensors, flux instrumentation as needed to best serve ecological research.

Facilities: A 0.8 ha USFS service center is within 6.4 km of the west edge of the research area where storage buildings and line power are available. Payne Lake Recreation Area provides access on the southern border. Hard-surface county roads and USFS roads provide all-weather access to the research area. Accommodations are available in nearby Moundville and Mound State Park, a UA facility.