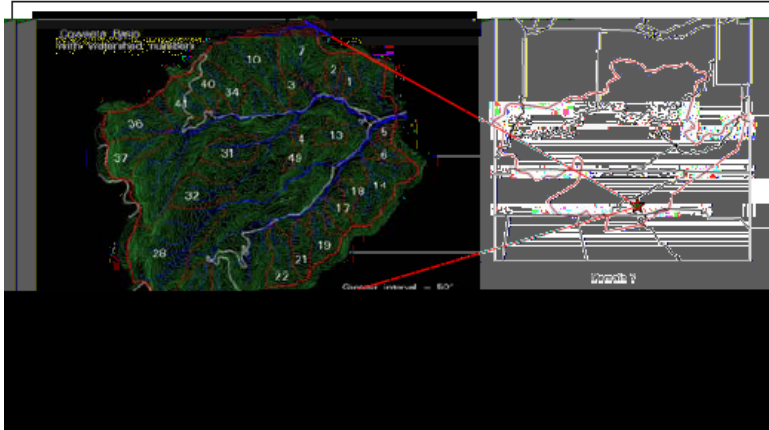


Coweeta Hydrologic Laboratory (COW): Appalachian/Cumberland Plateaus Domain

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Location within Domain:



History: Coweeta Hydrologic Laboratory (COW) was created in 1934 and the watersheds within Coweeta were established for long-term watershed-scale ecological research as part of the US Forest Service Southern Research Station.

(<http://www.srs.fs.usda.gov/coweeta/>). In 1980, Coweeta was designated as one of the first six sites of the LTER

Network that has grown to a network of 26 sites. It is also one of the six units of the Southern Appalachian Biosphere Reserve (<http://samab.org/About/reserve.html>).

Key Characteristics: Current vegetation at Coweeta (2,185 ha) consists of extensive areas of deciduous mixed oak forest, two watersheds planted to white pine in 1957, riparian hemlock and subcanopy rhododendron forests, and more than 73 km of streams. Coweeta is in the Ridge and Valley Geophysical Province and is part of the Little Tennessee River Basin. The climate is representative of the more southerly portion of domain 7 with high annual precipitation ranging from 178 to 234 cm across the elevations ranging from 685 to 1592 m. Comprehensive long-term data on climate, hydrology, biogeochemistry, and forest ecology are available for Coweeta as well as more than 1300 publications online on the Coweeta LTER web site.

Existing Infrastructure: Coweeta has utilized the paired watershed approach to study ecosystem impacts of land-use change, timber management, and long-term changes in vegetation due to insect and disease outbreaks. Watersheds 18 (low elevation) and 27 (high elevation) are long-term reference watersheds (dating from 1936 and 1946, respectively) and have ongoing monitoring of climate, hydrology, input-output chemical budgets, soil chemistry, and vegetation composition and biomass (<http://coweeta.ecology.uga.edu/ecology/cbase.html>). Coweeta is a site in the National Atmospheric Deposition Program network (<http://nadp.sws.uiuc.edu/>) and the HydroDB network (<http://www.fsl.orst.edu/climhy/>). The network of 16 gauged watersheds and 6 climate stations provide an extensive network of microclimate and more than a 34-year record of stream chemistry.

Facilities: Coweeta is open to the public and has an extensive system of roads and watershed access of the Coweeta Basin. Field research facilities for terrestrial and aquatic manipulative experiments complement long-term observational capabilities. Coweeta also has a modern Analytical Laboratory, Conference Center, full T-1 data line access, and electrical power to several watersheds. Modern housing is available for 20 people on site with full data, computer, and wireless access.