

Soil Climate Monitoring at Cal Poly Swanton Pacific Ranch, Santa Cruz County, California

Beverly Harben¹, Philip Smith¹, Ronald Taskey²

[1] USDA-NRCS, Templeton MLRA Soil Survey Office, Templeton, CA; [2] California Polytechnic State University, San Luis Obispo, CA

In late 2011, the Templeton MLRA Soil Survey Office, responsible for soil survey activities for two-thirds of California's coastline, installed six soil climate monitoring stations at the Cal Poly Swanton Pacific Ranch in coastal Santa Cruz County. Monitoring at the selected locations will help characterize ecosystem air/soil temperature and moisture baselines and dynamics in forest, range, and agronomic systems. Data from this project will help establish and/or verify temperature and moisture relationships and regimes for soil taxonomy within the study area that can be extrapolated into surrounding areas with similar geology and topography.

Each soil climate monitoring station collects data on rainfall, air temperature, soil temperature and soil moisture at 5 depths (usually at 2, 4, 8, 20, and 40 inches.) All sites were sampled for full lab characterization. This study also will aid various research projects undertaken by Cal Poly graduate students studying forest, range, agronomic, and hydrological sciences.