Santa Rita Experimental Range (SRR)

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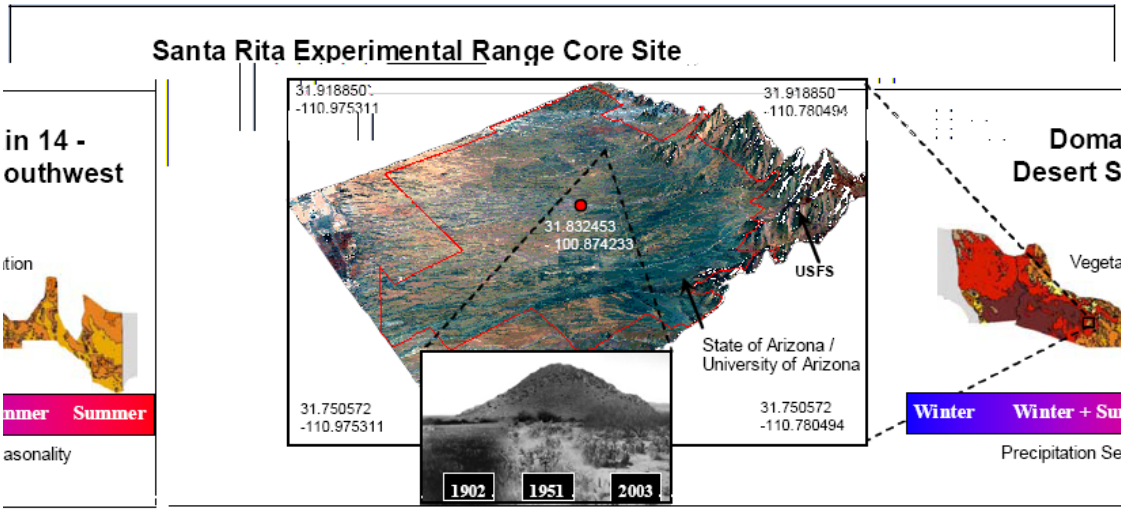

History: Established 1902; first in a series of USDA facilities dedicated to understanding dryland vegetation dynamics and land use impacts such as grazing. Located ca. 40 km south of Tucson, AZ, the 21, 500 ha state-owned site has been managed by University of Arizona since 1988.

Key Characteristics: Representative setting for addressing research themes of climate, land use, and invasive species. Situated on western flank of the Santa Rita Mountains in the Basin and Range Physiographic Province; bordered on the south and east by national forest (with permitted research access). Elevation 889 m (Santa Cruz River) to 2881 m (Mt. Wrightson); riparian woodland-Sonoran desert-scrub, desert grassland/mesquite savanna, evergreen oak woodland and montane conifer forest communities in ascending order. Characterized by even distribution of summer and winter rainfall. Extensive alluvial fans; surface age gradients ranging from early Pleistocene to recent Holocene. Contrasting land use histories (grazing, brush management); grasslands invaded by native shrubs and nonnative perennial grasses.

Existing Infrastructure: Sonoran Desert Biological Core Area; ties to Organization of Biological Field Stations, Arizona Field Station Network, Consortium of Regional Ecological Observatories, SAHRA (SemiArid Hydrology and Riparian Areas) NSF Science & Technology Center; National Phenology Network; and SECA (Southwestern ECohydrology Array). Permanent 8 m flux tower registered with FLUXNET (and associated w/ 7 distributed SECA towers), precipitation manipulation shelters, small watersheds (8) and wind erosion monitoring stations. Remotely-sensed, time-series data since 1936. Legacy of permanent research plots (>70), livestock exclosures (>40), distributed rain gages (24; monthly readings, dating to 1922), repeat ground photography stations (110), and permanent vegetation transects (130). Recent/ongoing research supported by NSF, NOAA, NASA, USDA, and EPA. Digital archive of land use, research documents and data available. Outreach efforts coordinated via Arizona Sonoran Desert Museum, Biosphere2 (> 1 M visitors/y), UA Agricultural Extension Program. UA has a high proportion of Hispanic students (>25%) and active Native American programs.

Facilities: On-site housing, laboratory space, equipment fabrication, maintenance, repair, and storage, and logistical support. Full-time manager, 2 on-site caretaker families; ~15 community relations/patrol volunteers; year-round road access (controlled). Electric power (240 v) & water available; satellite high speed internet connectivity. Service stations, restaurants, motels, etc. within 8 km of headquarters.