



San Joaquin Freshwater Marsh Reserve

University of California

Site Specs



Administering
Campus
UC Irvine

Established
1969

Location

City of Irvine, Orange County; 75 km (45 mi) southeast of Los Angeles, 30 km (20 mi) west of the Santa Ana Mountains; 2 km (1.25 mi) upstream from Upper Newport Bay, adjacent to the Irvine campus.

Size

82 ha (202 acres)

Elevation

2 to 3 m (7 to 10 ft)

Average Precipitation

30 cm (12 in) per year

Average Temperatures

September maximum: 29°C (86°F)

January minimum: 4°C (40°F)

Annual mean: 17°C (62°F)

Facilities

Observation blinds, electrical service, aluminum skiff; no on-site housing or laboratory facilities.

Databases

Collections of representative plants and insects; publications of reserve-based research; geographic information system (GIS) created to aid restoration, management, research, and instruction.

Personnel

Staff reserve manager on campus; no on-site personnel.

NRS Publications

Reserve brochure published 1984.

Contact Information

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NRS Website

<<http://nrs.ucop.edu>>

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The San Joaquin Freshwater Marsh Reserve represents one of the last remnants of freshwater wetlands that once covered much of Orange County's flood plain. Located in an ancient river-cut channel at the head of Newport Bay, the reserve supports a variety of wetland habitats, including freshwater marshlands, shallow ponds, and channels confined by earthen dikes. Dry upland habitats with a remnant coastal sage scrub community rise on the margins of the reserve. The marsh is a critical stopping place for 100 migratory bird species using the Pacific Flyway. Altogether, more than 200 bird species (20 nesting) have been sighted in the reserve, including two resident endangered bird species: the light-footed clapper rail (*Rallus longirostris levipes*) and the California least tern (*Sterna albifrons*). The marsh is located within a ten-minute walk from UC Irvine, making it convenient for day use by faculty and numerous students.

Selected Research

Habitat use and movements of coyotes in a Southern California urban environment.

Effects of black sage (*Salvia mellifera*) on herbivore predation of purple needlegrass (*Nassella pulchra*).

Parasitoids and population ecology of the harlequin bug.

Wetlands production and fluxes of methane and other gases.

Pollen analysis of San Joaquin Marsh Holocene sediment.

Special Programs

Ongoing ecological projects: Vector control, water quality improvement, and restoration of coastal sage scrub and wetland habitats.

Field courses: Each year hundreds of university students in conservation biology, freshwater biology, environmental ethics, and other disciplines visit the reserve on class field trips; dozens more use the site for field studies and independent study projects.

Public outreach: Environmental education programs for local elementary/secondary schools; regional hiking and bike trail along the southern edge of the reserve; public tours of the reserve.