

To: Office of Planning and Research
PO Box 3044, Room 212
Sacramento, CA 95812-3044

From: University of California
Santa Barbara
Office of Campus Planning and Design
Santa Barbara, CA 93106-1030

Project Title: Valentine Reserve Weather Station Project

Project Location – Specific: Valentine Reserve, Mammoth Lakes, CA

Project Location – City: Mammoth Lakes **Project Location – County:** Mono

Description of Nature, Purpose and Beneficiaries of the Project: The UC Santa Barbara Valentine Reserve is proposing to install a research grade, fully automated meteorological station capable of collecting aerial, terrestrial and aquatic environmental data within the Valentine Reserve from a key research location within the Reserve. All sensor equipment will be installed upon a free-standing aluminum tripod, which stands at a maximum height of 30 feet. The meteorological station consists of various sensors to measure: wind speed and direction, air and sea water temperature, rainfall, barometric pressure, sea-level height and other environmental parameters. The weather station is anchored to the ground on a concrete pad (3'x 3'x4'). The site is located immediately behind the Education Center and can be accessed from the main road currently used by researchers and classes to access the Valentine facilities. There will be no lights on the weather station and the station will be solar powered. The project site area is located in a forest gap, and vegetation and soil disturbance will be limited to the area of the concrete pad. Data from this and other UCNRS weather stations are used in operational climate monitoring activities.

Name of Public or Agency Approving Project: University of California, Santa Barbara

Name of Person or Agency Carrying Out Project: UCSB Campus Planning and Design

Exempt Status: (check one)

- ☐ Ministerial (Sec. 21080 (b)(1); 15268);
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a);
☐ Emergency Project (Se. 21080(b)(4); 15269 (b) (c));
☒ Categorical Exemption. State type and section number: Section 15301, Class 1, Existing Facilities
☐ Statutory Exemptions. State code number:

Reason why project is exempt:

There would be minimal ground disturbance for the proposed project and the project would have a beneficial outcome in facilitating the research and education mission of the Valentine Reserve.

Lead Agency

Contact Person: Shari Hammond Area Code/Telephone/Extension: 805 893-3796

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☒ Yes ☐ No

Signature: Shari Hammond Date: 8.14.2020

Title: Principal Planner

Dept Name: Campus Planning and Design

☒ Signed by Lead Agency

Date received for filing at OPR: _____

☐ Signed by Applicant

Governor's Office of Planning & Research

Revised 2005

cc: Michael Kisgen, UCOP Natural Reserve System

SEP 08 2020

STATE CLEARINGHOUSE

**UNIVERSITY OF CALIFORNIA
PRELIMINARY ENVIRONMENTAL ASSESSMENT**

DATE: August 14, 2020

CAMPUS: Santa Barbara

PROJECT TITLE: Valentine Reserve Weather Station

PROJECT LOCATION: University of California, Santa Barbara, Valentine Reserve (see attached site maps)

PROJECT DESCRIPTION:

The UC Santa Barbara Natural Reserve System is proposing to install a weather station at the Valentine Reserve as part of a large network of stations across the UC Natural Reserve System that will gather data about global climate change in USA. The weather station is a research grade, fully automated weather station capable of measuring wind speed and direction, temperature and relative humidity, precipitation, barometric pressure, solar radiation, soil temperature and other environmental parameters within the Valentine Reserve, from a key research location within the Reserve.

Background: The University of California (UC) Natural Reserve System (NRS) maintains a system of weather stations at most of its 41 locations across the state of California. These weather stations are part of a Natural Reserve System-wide cyberinfrastructure project for real-time sensor data storage, retrieval, management, and curation. The UC NRS partners with other climate monitoring organizations such as U.S. Climate Reference Network (USCRN), a network of climate stations which are a part of a National Oceanic and Atmospheric Administration (NOAA) initiative, to support environmental monitoring and data collection to provide future long-term homogeneous observations of temperature and precipitation that can be coupled to historical observations for the detection and attribution of present and future climate change. Data from these weather stations are used in operational climate monitoring activities.

Purpose and Need: Installation of the weather station supports the Reserve's research mission and one of the Natural Reserve System's priorities is to obtain accurate climate data that is networked with other sites throughout the State of California. The information gathered from the weather station will directly contribute to prediction and planning associated with the impacts of California's changing climate on goods and services provided by the state's natural areas and resources. The accurate climate data collected from the proposed weather station will contribute to the pre-existing sensor network on a statewide scale, but also will also produce information useful to land managers and planners at the local scale, in Mammoth Lakes and Mono County. The proposed meteorological station will fill the critical need for accurate environmental data to quantify current base-line environmental conditions and provide the data needed to document long-term environmental trends.

Setting and Program:

The Valentine Reserve is located at latitude 37°37'45.42"N and longitude 118°59'44.44"W, in the town of Mammoth Lakes, in Mono County, California (Figure 1). The 154-acre Reserve sits below the Mammoth Lakes Basin at an elevation of approximately 8,000-ft (2,400-m) and contains an unusually diverse sample of Eastern Sierran habitats on the climatic ecotone between the sagebrush desert of the Great Basin and the coniferous forests of the Sierra Nevada. Mammoth Creek flows through the property, and numerous springs arise within its boundaries. The terrain includes a variety of elevations, slopes, and aspects. Plant communities include Great Basin Sagebrush, Montane Chaparral, Sierran Upper Montane Forest, Meadow Vegetation, and Montane Riparian Vegetation. The facilities are open, as weather permits, from around the first of June through the middle of October, and on a limited basis for winter day use. Housing consists of three large cabins, which can accommodate a total of 16 persons. A system of foot trails provides access to all of the site's major habitats.

The weather station is a research grade, fully automated weather station capable of measuring wind speed and direction, temperature and relative humidity, precipitation, barometric pressure, solar radiation, soil temperature and other environmental parameters within the Valentine Reserve, from a key research location within the Reserve. The Reserve Director has chosen a site at the Reserve that is already disturbed such that potential environmental impacts and ground disturbance will be minimized. Brush and tall weeds need to be removed. Otherwise, the natural vegetation and ground surface should be disturbed as little as possible. No additional road will be needed. Engineers will visit the station twice a year, park near the Education Center and walk to the weather station.

The main tower frame is built from 2.5 cm (1 in) OD (outside diameter) corrosion-resistant aluminum tubing. It includes an adjustable mast, a hinged base, anchor bolts, lightning rod, ground rod, and cable tie kit. Specifically, the various sensors to be utilized in this application include measurements of wind speed and direction, temperature and relative humidity, precipitation, barometric pressure, solar radiation, soil temperature and other environmental parameters. All sensor equipment will be installed upon the free-standing aluminum tower. The weather station is anchored to the ground on a 3' x 3' x 4' pad. A set of 3 guy lines will support the tower that are anchored to the ground using duckbill anchors hammered into the ground in a radius approximately 17' surrounding the central tower. The instruments will be solar powered, and will communicate with the nearby Education Center over wifi. The site is accessible via the main road currently used by researchers and classes to access the Reserve facilities (Figure 2).

Demolition and Construction: No trees will be removed. There will be minimal ground disturbance. There will be no lights on the weather station and the station will be solar powered.

Schedule: The proposed project is expected to begin in late September 2020 and will take approximately one week to complete.

ENVIRONMENTAL ISSUES:

This project is considered Categorically Exempt under CEQA Section 15303, New Construction or Conversion of Small Structures and Section 15304, Minor Alternations to Land as supported

by the discussion below. There are no unusual circumstances which would create an exception to the Exemption.

Aesthetics: The weather station is relatively small in scale and would be located in a disturbed area of the Reserve. The weather station would not obstruct views of the mountains and would not significantly change the visual character of the project area.

Agricultural Resources: There are no agricultural resources on the Reserve or at the University.

Air Quality: Site preparation is minimal to install the weather station and would not cause an air quality impact. The weather station would not have emissions during operation.

Biological Resources: No biological resources would be impacted from installation of the weather station. The site is accessed from a dirt road and no biological resources on the Reserve would be impacted.

Cultural Resources: There are no cultural resources identified in the proposed project area. The proposed project does not involve significant ground disturbance and no cultural resources would be impacted.

Geology: The proposed project does not involve major grading or excavation and would not impact geological resources. The weather station would not be located within 50 feet of a known earthquake fault.

Hazards and Hazardous Materials: There are no hazardous materials associated with the installation or operation of the weather station.

Hydrology/Water Quality: There would be no impact to hydrology or water quality from the installation of the weather station. Impervious area and surface water runoff quantities would be the same before and after construction.

Land Use: The proposed project is located in an area designated as *Natural Reserve Area*. The weather station would be consistent with this land use as its purpose is for research and instruction and is in alignment with the Reserve's mission.

Mineral Resources: There would be no impact to mineral resources as a result of the proposed project.

Noise: Site preparation would create minimal noise and there are no sensitive receptors in the project area. Operation of the weather station would not create a noise impact.

Population and Housing: There would be no impact to population and housing from the proposed project.

Public Services: The proposed project would not increase the need for public services at the University. There would be no impact to public services as a result of the proposed project.

Recreation: There would be no impact to recreational resources as a result of the proposed project.

Traffic: There would not be an increase of traffic or the need for parking from the proposed project. The site would be accessed through the dirt road for occasional maintenance.

Utilities: The weather station is wholly operated utilizing solar power. All necessary utilities are available via a localized solar array.

DETERMINATION: Based on the above project assessment, the proposed project is classified as exempt from the provisions of CEQA under Section 15303 Class 3, New Construction or Conversion of Small Structures and 15304, Minor Alterations to Land. None of the exceptions cited in Section 15300.2 apply to this project.



Shari Hammond
Principal Planner



Date

Figure 1. Location of Valentine Reserve

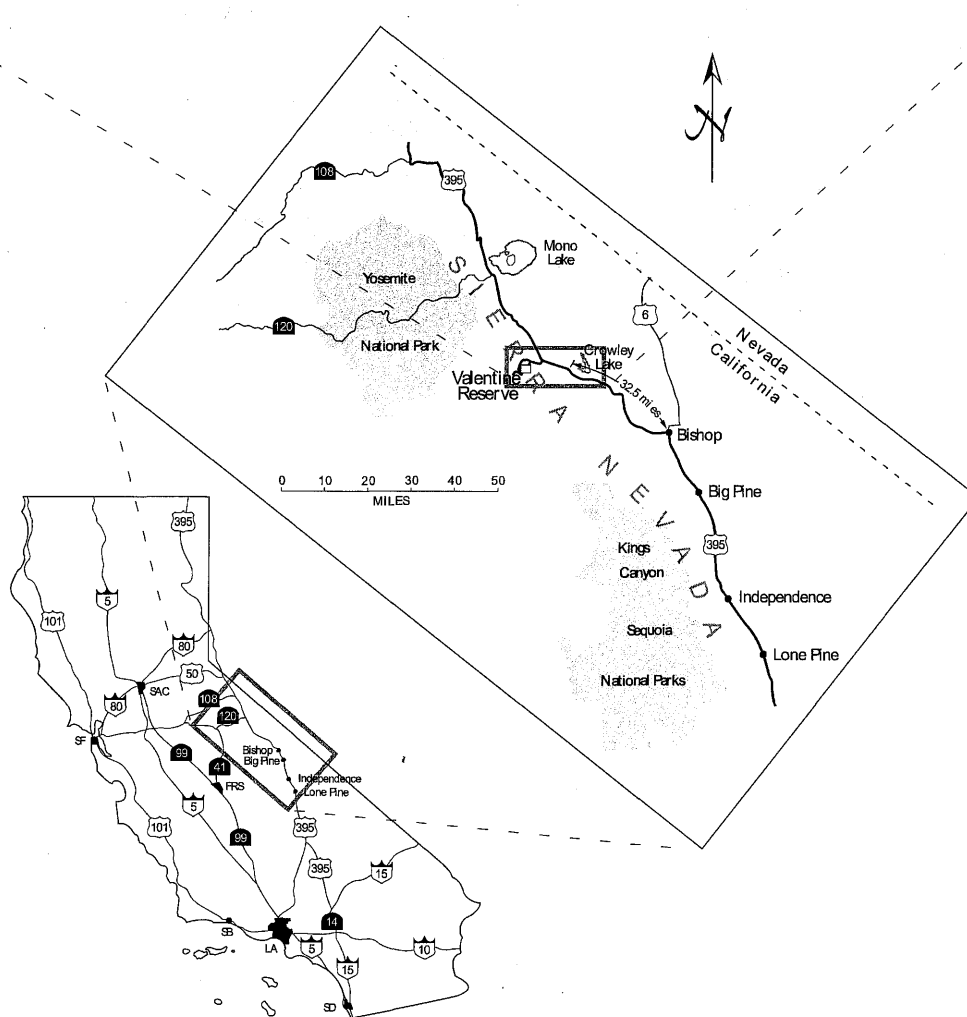
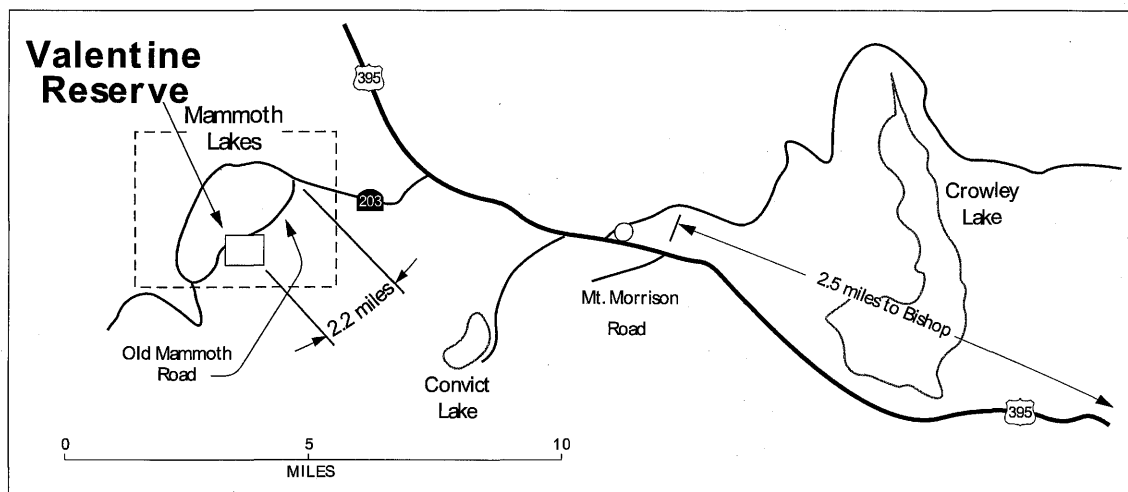


Figure 2. Proposed location for weather station at the Valentine Reserve.

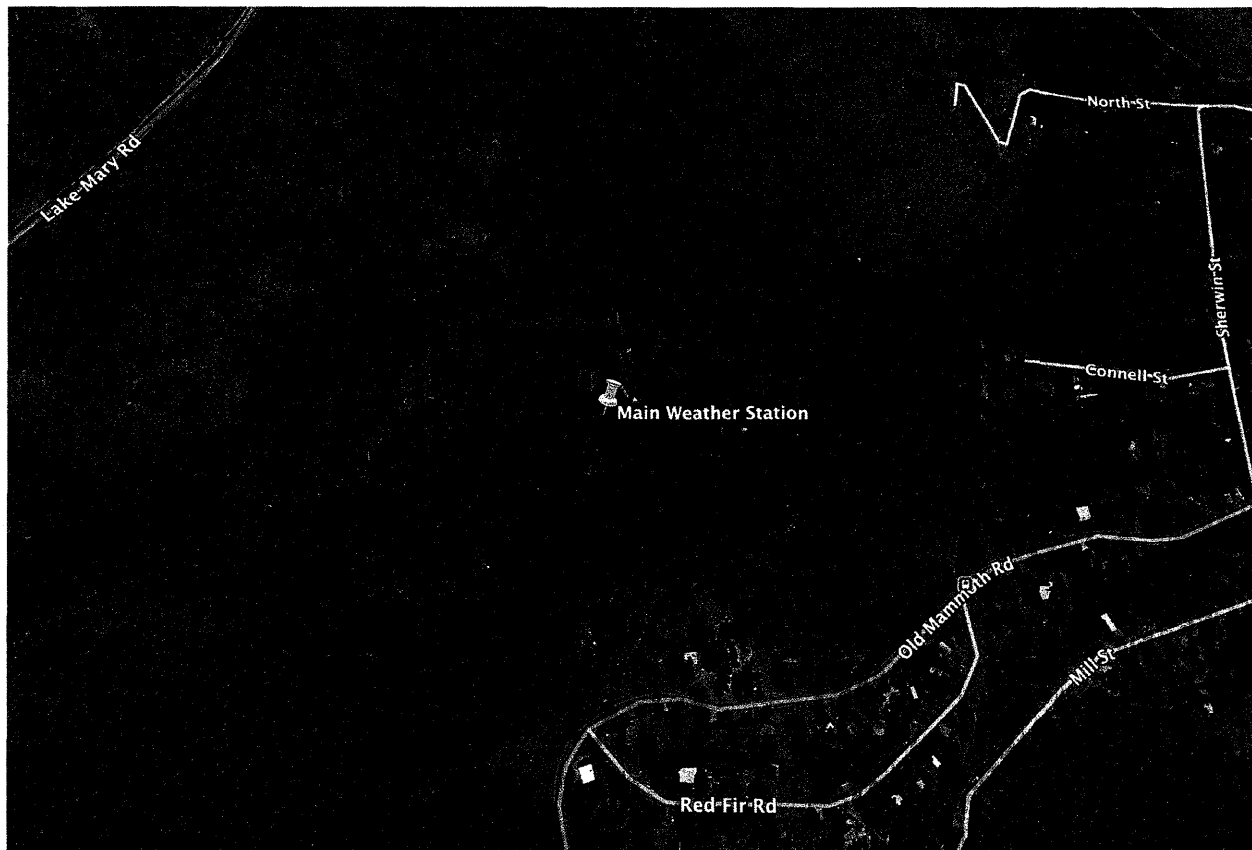


Figure 1: Image of 30' Aluminum tower which supports the proposed weather station at the Valentine Reserve. The tower is secured to the ground using bolts attached to a concrete pad.

