

Carrizo Plain National Monument Vegetation Mapping Project California Native Plant Society – Annual Progress Report – 2010

Baseline vegetation surveys were conducted at the Carrizo Plain National Monument (NM) across more than 247,000 acres of area. These surveys represent a joint effort by the California Native Plant Society (CNPS) and Department of Fish and Game (DFG) with funding from the DFG and the Bureau of Land Management. In total, 1019 surveys were conducted (638 in 2010, 267 in 2008, and 114 in 2005-07) to evaluate vegetation resources and establish a comprehensive floristic classification and map.

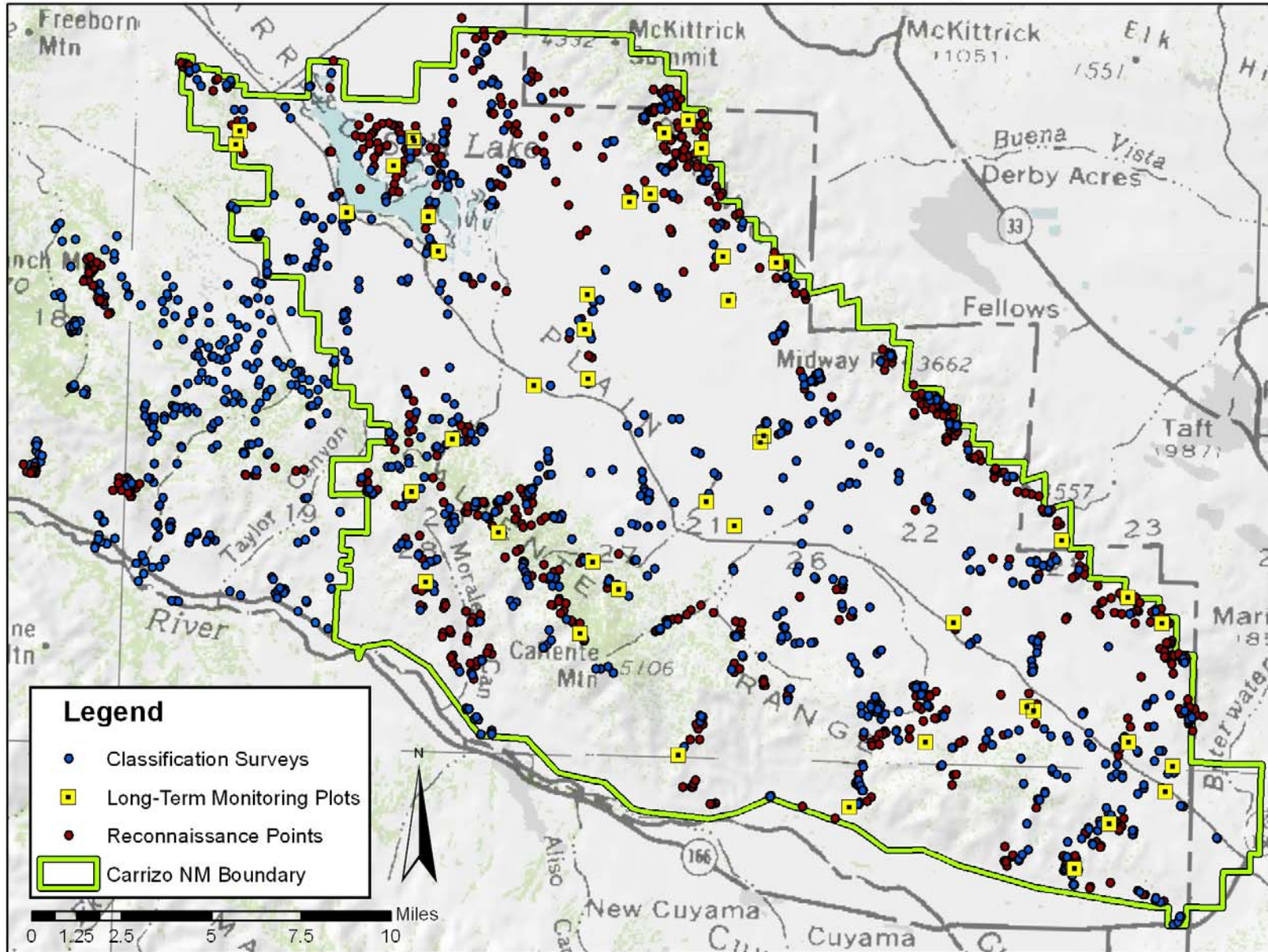
The CNPS-CDFG Combined Vegetation Rapid Assessment and Relevé protocol was used for all field surveys. Additionally, detailed monitoring plots were established at 45 locations (with 400 m² macro-plots and 100 and 1 m² subplots) to detect long-term change over time, and more than 1000 reconnaissance points were also recorded to inform the mapping stage of this project. Our goal was to representatively sample the floristic variation in the region (partly through a gradsect sampling method using climatic, topographic and lithological characteristics). Staff visually determined homogeneous stands of repeating vegetation patterns, and sampled these repeated patterns across the ecological variation in the region.

To classify the vegetation types, the field survey data were analyzed using a multivariate software package (cluster and indicator species analyses in PCOrd). The result is a hierarchical classification of vegetation alliances and associations, based on consistent patterns of dominant and characteristic/indicator plant species. Four tree alliances were identified including juniper and oak as well as riparian woodlands. The majority of the vegetation types (more than 30) were shrub-dominated, including several chaparral and semi-desert scrubs. Thirteen herbaceous alliances were defined including wetland and perennial types as well as numerous showy annual forblands and grasslands. Of the 51 vegetation alliances currently identified within the Carrizo National Monument, four are newly described (with at least 10 samples) and two are new provisional types (with less than 10 samples), and many new associations of these and other alliances have been identified.

This classification has been translated into a mapping classification, so that a fine-scale map of the natural vegetation features can be produced. This map will serve as a basis for future climate-change monitoring, environmental assessment, fire/fuels modeling, rare and invasive species management, and a host of other valuable conservation and management efforts in the region.

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Location of CNPS and DFG Field Surveys



Photos of New Vegetation Types Described at Carrizo Plain by CNPS 2010



Ericameria linearifolia–*Isomeris arborea*
Shrubland Alliance



Monolopia (lanceolata)–*Coreopsis (calliopsidea)*
Herbaceous Alliance



Isocoma acradenia Provisional Shrubland Alliance



Salvia carduacea Herbaceous Alliance



Corethrogyne filaginifolia Provisional Herbaceous Alliance



Atriplex vallicola–*Lasthenia ferrisiae*–*Lepidium jaredii*
Herbaceous Association (of *Lasthenia-Distichlis* Alliance)



Eriogonum (*elongatum*, *nudum*) Herbaceous Alliance