

## VEGETATION

**Analytical Environmental Services. Mechoopda Indian Tribe: Chico Casino Fee-to-Trust Acquisition Environmental Assessment. Analytical Environmental Services: December 2003.**<sup>21</sup>

Based upon the review of federally listed and other sensitive species and the results of the field assessments, the site and surrounding areas provide potential habitat for nine sensitive plant species and nineteen sensitive animal species.

Vernal pools: Numerous vernal pools are present as inclusions within the annual grassland habitats. The pools form in shallow depressions within the low-lying grasslands, upland terraces, and mima-mound formations found on the site. Vernal pools on the site are characterized as relatively shallow, seasonally inundated basins, which support a typical vernal pool plant community.

Seasonal wetland: Seasonal wetlands are present on the site and occur primarily in association with vernal pools. These features are characterized as shallow depressions that remain saturated for a sufficient period of time to seasonally support wetland vegetation, but not the vegetation community typically associated with vernal pools.

Annual grassland: A majority of the site consists of annual grassland habitat. The annual grassland plant community is characterized by a dense to sparse cover of non-native and native grasses and forbs. Topographic low spots and swales within this landscape support vernal pools and other seasonal wetland features.

**Bungay, Rod. The Major Native and Introduced Edible Plants of Butte County, California. Thesis. California State University-Chico: Spring, 1981.**<sup>47</sup>

This document studies and illustrates plants and plant communities in areas including the Valley Grassland, the home of a myriad of native and introduced wildflowers and grasses. It also discusses plant dominants found along stream and riverbanks and large areas of standing or slowly moving water along river courses, sloughs, and creeks. Food and medicinal/herbalist uses are briefly discussed.

**California Department of Forestry and Fire Protection Butte Unit. Fire Management Plan 2003. CDF Butte: 2003.**<sup>43</sup>

The effects of logging have changed the once mature forests, dominated by relatively few large conifers and little under-story fuels, with natural surface-fire-regimes into second growth forests where catastrophic fire is more prevalent. Mixed conifers and hardwoods with a relatively heavy accumulation of understory fuels, which make them prone to intense fire behavior, typify these second growth forests. Moreover, environmental and political constraints, including fire suppression, have added to the fuel accumulation; particularly understory fuels, in the second growth forests. The Cherokee area is sparsely populated with large tracts of inaccessible areas.

A chart of the "Fire Threatened Communities in Butte County" shows the Cherokee, Paradise and Pentz communities at Federal Land Threat, Hazard Level 3 (highest). Assets at risk: hydroelectric power, fireflood watersheds, water storage, water supply, scenic, timber, and soil erosion.

Battalions 1, 3 and 6 serve the subject area. Battalion 1 covers the Paradise Ridge, with the main fire danger coming from an East Wind driven fire that blows downhill through developed areas. Battalion 3 includes Butte Valley, situated between the urban areas of Oroville, Chico and Paradise. The area east of Highway 99 has extensive large fire history. Battalion personnel are concentrating on pre fire hazard, fuel reduction, community defense, and fire suppression water sources.

Battalion 6 includes Cherokee, an area sparsely populated with large tracts of inaccessible areas. Fire management objectives include inspections, fire permit issuance along with educational talk, participation in school programs and public displace, public education, and arson fire reduction. Fires in the 25 acre to 150 acre size are much more common than large fires (over 1,000 acres), which are very rare.

**Butte County Resource Conservation District. Long Range Plan. July 2003.<sup>4</sup>**

One of the plan's priority objectives is fire fuel load management and fire safe education.

**California State University-Chico Research Foundation. Butte Creek Watershed Existing Conditions Report. Chico: April 2000.<sup>29</sup>**

Although the canyon and valley sections of the Butte Creek watershed include the Cherokee watershed, the geographic distribution of the Butte Creek watershed is much wider. Thus, the following information from this report describes the whole of the Butte Creek watershed rather than the area contained within the Cherokee watershed. This report suggests that the canyon section of the Butte Creek watershed has been impacted less than other areas of the watershed due to remoteness and inaccessibility. Some of the impacts from the early 1900's did include mining, cattle grazing, and firewood cutting. Canyon sections include mixed oak, blue oak, foothill pine, and chaparral habitats that may have burned as often as every 7 years. The Blue Oak-Foothill Pine Woodlands of the Butte Creek watershed is described as lacking a significant component of younger age classes. This is typical of oak habitat statewide and is often seen as a result of past management practices (i.e., grazing, fire suppression) which limited the potential for regeneration.

The valley section of the Butte Creek watershed is described as having once contained vast acres of riparian, upland, and grassland habitat. Despite this earlier abundance of habitat, only a few wildlife corridors containing mixed and valley oak riparian forest remain. Mature valley oaks mixed with cottonwood occur in the lower canyon adjacent to or overlapping with the riparian corridor. The area's proximity to water supports dense undergrowth of willow, wild grape, blackberry, and elderberry.

**Miller, Michael. The Butte College Wildlife Refuge. Butte College Facilities and Management. Oroville: June 1991.<sup>27</sup>**

Two major habitats on the campus are identified. (1) Blue Oak-Digger Pine Woodland encompassing 320 acres of the campus with interspersed annual grasses and remnants of perennial grassland and (2) annual grasslands that are represented on approximately 220 acres of the campus with the dominant grasses being introduced varieties, however small stands of native perennial bunchgrasses are noted. The Valley Foothill Riparian habitat occurs within the Annual Grasslands habitat and occupies 2.25

miles and is the dominant habit feature of the lower refuge area. It is described in the report as “a healthy, mature and expanding zone exhibiting a high level of succession.” Clear Creek and its tributaries are noted as supporting a canopy of Valley Oak, Sycamore, and Cottonwood trees with sub canopy components and ground covers described. Approximately 65 acres of the campus refuge are considered wetlands, and vernal areas on the campus support a variety of hydrophilic plants that are listed in the report.

**Nelson, James Russell. The Assessment and Protection of Rare and Endangered Plants of Butte County, California. Thesis. California State University-Chico: Fall, 1979.<sup>48</sup>**

This document describes uses and potential uses of rare plants in the area as well as human and/or environmental dangers to the plants and strategies to protect the plants. It includes an inventory of rare plants of Butte County including name, official status, description, distribution, habitat, predicted occurrence and rarity. It also includes a list of plants removed from the Butte County rare plant list.

Maps show the known locations, associated plant communities, and associated geology for each plant listed. The document states that rare plants are not concentrated in any one geographical area in Butte County.

**Oswald, Vernon H. and Lowell Ahart. Manual of the Vascular Plants of Butte County, California. California Native Plant Society: 1994.<sup>49</sup>**

Plants found in Butte County in order of genus and with a brief description of each are listed. Several, such as *limnanthes loccosa* (meadow foam) are described as uncommon but locally abundant along vernal wet drainages and Tuscan outcroppings and intermittent streams.

**Camp Dresser & McKee, Inc. County Department of Water and Resource Conservation. Integrated Water Resources Plan, Volumes I, II and Executive Summary. Report. Butte County: June 2004. 275 pp.<sup>10</sup>**

The sustaining of natural vegetation above recharge zones is important to manage groundwater levels because natural vegetation enhances riparian areas and wetlands that recharge the aquifer. When vegetation dies, water runs more quickly off the wetland and vegetation, reducing recharge. The County encourages groundwater management units participating in the Basin Management Objective (BMO) development process to consider groundwater levels that locally support vegetation, and to establish BMOs that maintain vegetation.