

System Indicators

Agricultural Lands and Ranches



Area and Size of Working Landscapes (2007)

December 2013

Area and Size of Working Landscapes

The area and size of working landscapes are examined here using two different sources of information. The first is the acreage of potential agriculture and ranches derived from vegetation mapping from CalVeg (United States Department of Agriculture (USDA), Forest Service, Pacific Southwest Region, 2010)¹. The CalVeg data provides an estimate of the total acreage of working landscapes in the Region since datasets for working landscapes specific to the SNC's boundary are not available. Lands identified as ranches should be considered only as potential ranch lands since the vegetation classes include grass and oak woodlands that may not be grazed. Agriculture (farms) is probably under-represented as the mapping likely does not include smaller croplands and animal production facilities.

The second source of information used to determine the area and size of working landscapes is the USDA's 2007 Census of Agriculture². The 2007 Census of Agriculture data is available by county. Therefore, the comparisons made in this report are between the counties fully within the Region versus the counties that are partly within the Region. Detailed information on the potential acres of agriculture and ranches, area in agriculture and ranches, and number of acres by common crop types found in the Sierra are available in [Appendix A](#).

Based on the Census data, there were over 1.4 million acres in agriculture and ranches in the counties fully within the Region and over 8.4 million acres in the counties partly within the Region in 2007 ([see Figure 1](#)). Since the total number of acres of working landscapes in 2007 statewide was over 25.3 million,³ the 22 counties fully or partly in the Region accounted for 39 percent of the State's working landscapes. However, most of the acres of working landscapes within these 22 counties were outside the SNC boundary as indicated by the fact that only 4.7 million acres of potential working landscapes were identified using the vegetation mapping, which only includes the portion of each county within the Region⁴.

Of the counties fully or partly in the Region, Madera, Fresno, and Tulare Counties have the highest percent of private land in working landscapes, exceeding 70 percent in all three counties. In contrast, the percent of private lands in working landscapes was the least in the central Sierra in Nevada, Placer and El Dorado Counties. These counties have the largest populations and highest densities (185 people per square mile of private land) and have more residential, commercial and urban development. Between the 2000 and 2010, Placer County's population increased by 40 percent, El Dorado County's population grew by 15 percent and Nevada County's population went up by 8 percent.

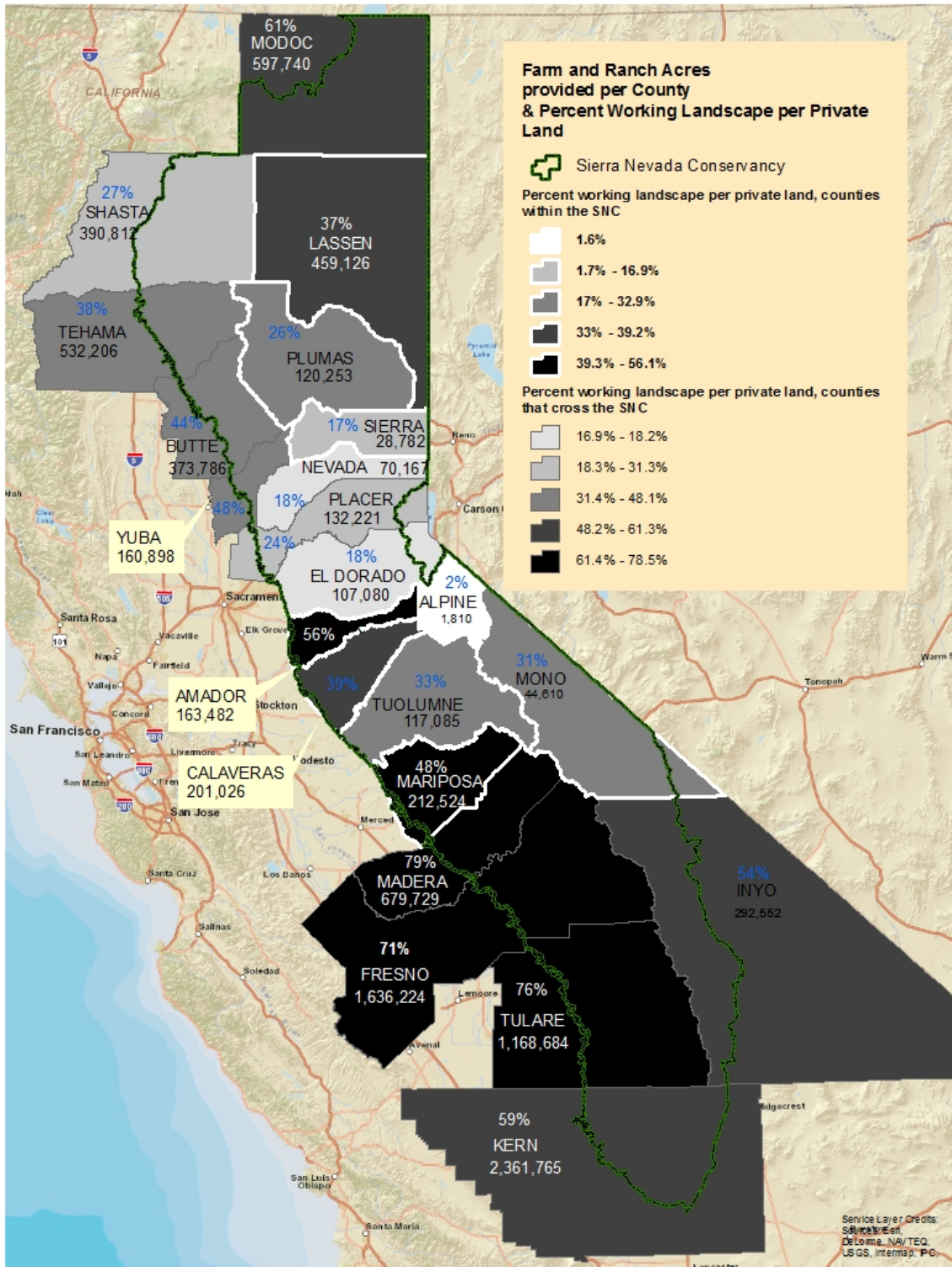
¹ Lands classified by CalVeg as grain and crop agriculture were identified as agriculture in this report. Ranches were identified as lands classified by CalVeg as annual grasses and forbs, perennial grasses and forbs, and oak woodlands, which is inclusive of native rangelands and irrigated pasture lands.

² The USDA requires all agriculture and ranch operators, regardless of the scale of operation, to complete an agricultural census every five years. Data are made available by State, County and Zip Code .

³ According to CDFA crop report figures, there were 25.4 million acres in agriculture and rangeland in 2012, indicating there were no changes in the number of acres in California since the 2007 Census.

⁴ Although only the South Central Subregion may be compared with the potential working landscapes acreages since these counties are fully within the Region, the two datasets appear to be fairly consistent. The potential or mapped acres of working landscapes in the South Central Subregion were 775,792 acres compared to the 694,117 acres reported by the respondents of the 2007 Census of Agriculture. These figures are fairly close when considering the majority of oak woodland occurring on private land is categorized as potential rangeland and that the total number of acres in working landscapes reported by respondents of the Census can vary significantly between years.

Figure 1. Acres of land in Agriculture and Ranches, 2007 Census of Agriculture



As shown in Figure 2, potential ranch land dominates in the Sierra. A total of 4,309,764 acres were identified as potential ranch lands in the Region, which is 46 percent of the private land in the Region⁵ (GreenInfo Network, 2013). There were approximately 16 million acres of ranch lands in California in 2007.

While the vegetation mapping only identified potential ranch land, the census data confirm that ranches were the dominant working landscape in the Sierra in 2007. Amador County had 51 percent of private land in ranches while Mariposa County had 47 percent, which were the highest percentages for counties fully within the Region. For counties that are partly within the Region, Inyo had the greatest proportion of private land in ranches at 53 percent followed by Modoc at 46 percent.

A total of 363,379-acres were identified as potential agriculture (farms) in the Region, which represents 4 percent of all private lands in the Region. Statewide there were over 8 million acres in agriculture in 2007. Figure 2 shows that areas of potential agriculture within the Sierra are concentrated in the North and North Central Subregions, which account for 88 percent of the total potential agriculture in the Region. Sixteen percent of the private land in these Subregions is potential agriculture. To corroborate these findings, we looked at the 15 counties where zoning data was available and found a high degree of agreement between the areas we identified as potential agriculture and those zoned for agriculture. Based on the available data, the zoning information demonstrates that areas identified as potential agriculture are generally zoned for this use. Although a small percentage of acres identified as potential agriculture were zoned for other land uses, none of the lands were zoned residential.

From the Central Subregion south along the foothills of the western Sierra, there is less than one percent of private land in potential agriculture. This area has less suitable conditions for agriculture due to the topography, soil conditions and availability of water. The East Subregion has four percent or 9,549-acres in potential agriculture, which can be attributed to the Subregion's flatter valleys and access to water.

Looking at the census data, Lassen County had the leading number of acres in agriculture for the counties fully within the Region at 82,567-acres in 2007. The acres of land in agriculture showed a trend of largest to smallest from north to south. After Lassen County, the greatest number of acres in agriculture was in Plumas County at 18,487. Agriculture is more uncommon in the Sierra due to the more rugged terrain, rockier soil conditions, colder winter conditions and lack of access to irrigated water (Kenny, Barber, Hutson, Linsey, Lovelace, & Maupin, 2009) in comparison with the Sacramento and San Joaquin Valleys.

⁵ The California Protected Areas Database version 1.9 was used to calculate the total acres of private land in each County

Figure 2. Location of potential agriculture and ranches in the SNC Region

