

**A.38 CALIFORNIA BEAKED-RUSH  
(*RHYNCHOSPORA CALIFORNICA*)**

**A.38.1 Legal and Other Status**

California beaked-rush (*Rhynchospora californica*) currently has no status under the federal or the California Endangered Species Act (DFG 2011).

The California Native Plant Society (CNPS) includes California beaked-rush on List 1B.1, rare and endangered in California and elsewhere (CNPS 2008). CNPS gives it a state ranking of S1.1, meaning there are less than six occurrences or less than 1,000 individuals or it is known to occupy less than 2,000 acres (CNPS 2008).

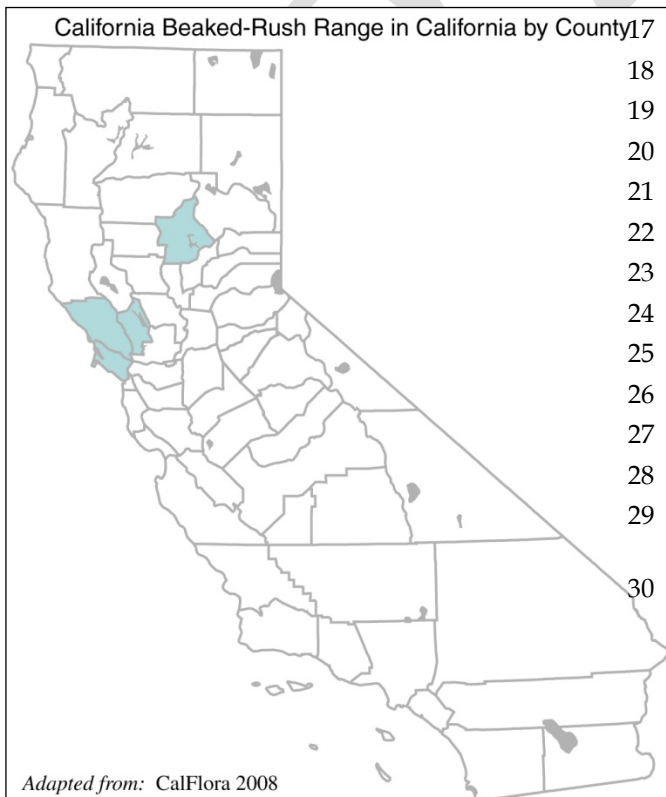


photo courtesy Steve Maston

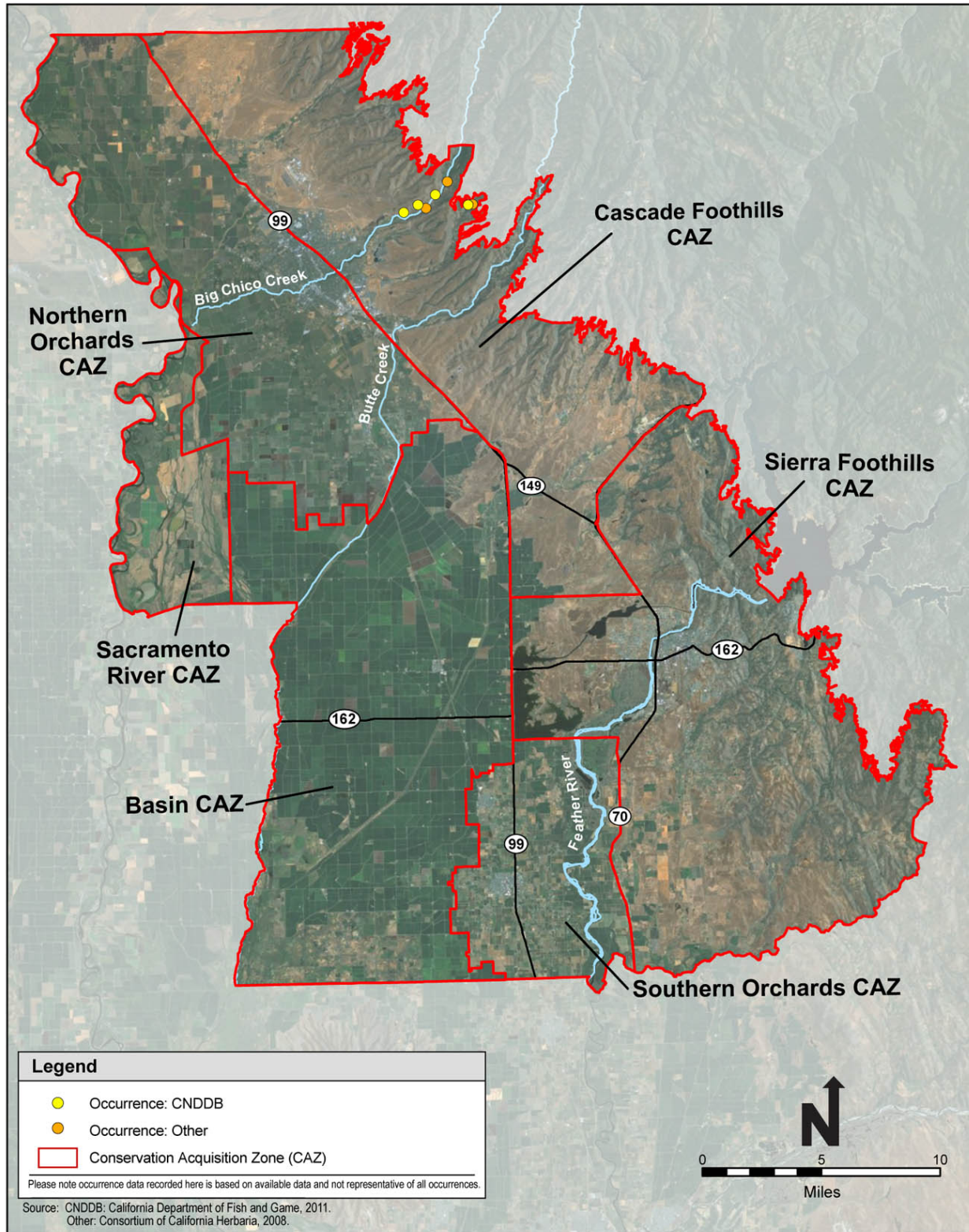
**A.38.2 Species Distribution and Status**

**A.38.2.1 Range and Status**

California beaked-rush is endemic to California, where it is known from Marin, Sonoma, Napa, and Butte counties. The species ranges in elevation from 148 to 3,280 feet (45 to 1,000 meters) (CNPS 2008).



According to the California Native Diversity Database (CNDDDB), California beaked-rush is known from a total of 10 occurrences state-wide (CNDDDB 2008). Of the five occurrences located in Sonoma, Napa, and Marin counties, one is considered extirpated (Occurrence No. 3). The four presumed extant occurrences were last seen in 1945, 1961, 1977, and 2003. At each occurrence, the size of the population is described as a few clumps of plants, with the exception of one population described as containing 18 plants (Occurrence No. 10) (CNDDDB 2008).



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**Figure A-38. California Beaked-Rush Recorded Occurrences**

### 1 **A.38.2.2 Distribution and Status in the Plan Area**

2 In Butte County, the California beaked-rush is known from five occurrences, found in the  
3 Paradise West and Richardson Springs quadrangles (CNDDDB 2008) (see Figure A-38). Four of  
4 these are in the Plan Area, of which three are located in Upper Bidwell Park and one just south of  
5 the park, near the Plan Area boundary (see Figure A-38). The occurrences located within the  
6 Plan Area range from 385 to 850 feet in elevation (CNDDDB 2008).

7 The sizes of the populations vary widely. The largest population in Butte County, located in  
8 Upper Bidwell Park, numbered 1,060 plants in 2002 (Occurrence No. 5). Two other populations,  
9 both located on the north side of Big Chico Creek in Upper Bidwell Park, consisted of 34 and 11  
10 plants, respectively, in 2002 when visits to the populations were last recorded (Occurrence No. 9,  
11 Occurrence No. 8). Population sizes for Occurrence Nos. 7 and 6 (located on the south side of  
12 Honey Run Road southwest of the Skyway, and northwest of Little Chico Creek just south of  
13 Ten Mile Home, respectively) were not quantified but were described as scattered small clumps  
14 of small numbers of plants.

### 15 **A.38.3 Habitat Requirements and Special Considerations**

16 The California beaked-rush is known to occupy freshwater marshes, bogs, and seeps (Hickman  
17 1993). Friends of Bidwell Park (2008) describes habitat as bogs, fens, meadows, and seeps in lower  
18 montane coniferous forest. One population in Marin County occupies the margins of a coastal marsh  
19 at Point Reyes National Seashore (CNDDDB 2008).

20 In Butte County, California beaked-rush inhabit hillside seeps within annual grassland or oak  
21 savanna (CNDDDB 2008). In Bidwell Park, habitat is described as the outer edge of seeps, and  
22 often in close association with deer grass (*Muhlenbergia rigens*) (Stuart Consulting 2002). In  
23 Butte County, all occurrences are found on Tuscan Formation soils (CNDDDB 2008).

24 Native plant associates of California beaked-rush include deer grass, dense sedge (*Carex densa*),  
25 spike rush (*Eleocharis* spp.), common blackseed (*Cyperus niger*), shortspike hedgenettle  
26 (*Stachys pycnantha*), Tinker's penny (*Hypericum anagalloides*), and arroyo willow (*Salix*  
27 *lasiolepis*). Common nonnative plant associates include little quaking grass (*Briza minor*),  
28 Italian ryegrass (*Lolium multiflorum*), Himalayan blackberry (*Rubus discolor*), and larger  
29 periwinkle (*Vinca major*) (CNDDDB 2008).

### 30 **A.38.4 Life History**

31 The life history of California beaked-rush has not been studied in detail. The plant is a  
32 rhizomatous perennial herb in the Cyperaceae (sedge) family. It flowers from May through July  
33 (CNPS 2008). Little is known about its reproductive biology, though it may be wind-pollinated  
34 as are most species within the Cyperaceae family.

1 Fruiting takes place in the summer and fall (Hickman 1993). Seed dispersal in the plant has not  
2 been studied, though the ascending barbs at the seed tips (which give the species its common  
3 name) are thought to be a special morphological adaptation for dispersal.

#### 4 **A.38.5 Threats**

5 Threats to California beaked-rush include marsh habitat loss and fragmentation, competitive  
6 exclusion by nonnative annual grasses, and possibly fire suppression and overgrazing. In Butte  
7 County, populations are reported to be threatened by development and heavy cattle grazing  
8 (CNDDDB 2008). A population located in Napa is threatened by overgrowth of Himalayan  
9 blackberry and larger periwinkle, with a minor threat listed as human foot traffic (CNDDDB  
10 2008).

11 In Butte County, the very limited geographic distribution of the California beaked-rush makes  
12 the plant particularly vulnerable to local extinction. Impacts associated with urban expansion are  
13 increasing rapidly in blue oak savanna, blue oak woodland, foothill woodland, and chaparral  
14 (Shevock 1996), the same ecosystems to which the beaked-rush is endemic within the county.

#### 15 **A.38.6 Relevant Conservation Efforts**

16 No specific conservation efforts for this species are known at this time.

#### 17 **A.38.7 Species Habitat Suitability Model**

18 A habitat suitability model has not been developed for California beaked-rush because there is  
19 insufficient information regarding its habitat requirements and the distribution of the physical  
20 attributes that support its habitat in the Plan Area (e.g., the location of seeps).

#### 21 **A.38.8 Recovery Plan Goals**

22 A recovery plan and recovery goals have not been prepared for this species.

#### 23 **A.38.9 References**

##### 24 **Literature Cited**

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