

1 **A.2 YELLOW-BREASTED CHAT**  
 2 **(ICTERIA VIRENS)**

3 **A.2.1 Legal and Other Status**

4 The yellow-breasted chat is designated as a state Bird  
 5 Species of Special Concern by the California Department of  
 6 Fish and Game (DFG). Nest sites are protected in California  
 7 under Fish and Game Code Section 3503.

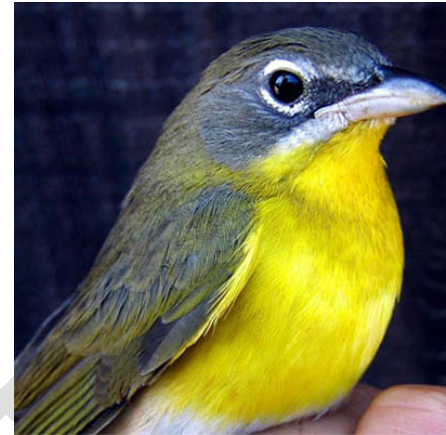


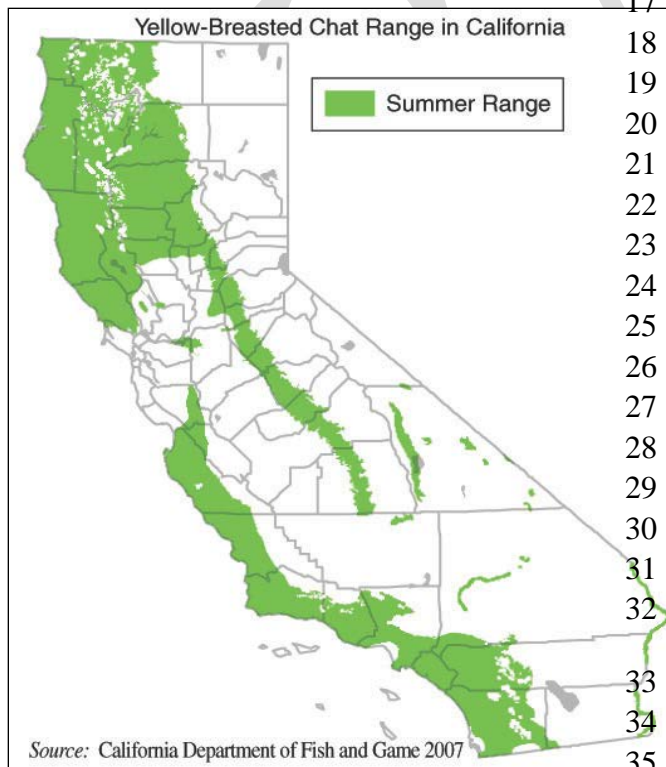
photo courtesy Ventana Wildlife Society

8 The yellow-breasted chat has no federal regulatory status;  
 9 however, the species is protected under the federal Migratory  
 10 Bird Treaty Act.

11 **A.2.2 Species Distribution and Status**

12 **A.2.2.1 Range and Status**

13 The yellow-breasted chat is a neotropical migrant songbird. It breeds in North America and  
 14 winters in Central America, primarily in Mexico and Guatemala; although a few birds have been  
 15 observed wintering in southern California (Small 1994). Yellow-breasted chat range includes  
 16 most of the continental United States and Mexico.



17 In 1944, Grinnell and Miller reported that  
 18 chats bred over the entire length and  
 19 breadth of California, exclusive of higher  
 20 mountains and coastal islands, and were  
 21 more numerous towards the interior of the  
 22 state. Chats were similarly widespread  
 23 during migration, with less restriction as  
 24 to habitat (typically, dense riparian  
 25 vegetation). The current range of the  
 26 yellow-breasted chat in California is not  
 27 completely known because of population  
 28 declines (Small 1994); however, the  
 29 species is thought to potentially occur in  
 30 suitable habitats throughout most of the  
 31 state with the exception of most of the  
 32 Central Valley and southwest deserts.

33 Formerly a common summer resident in  
 34 coastal southern and central California,  
 35 along the Colorado River, and throughout

1 the Central Valley (Grinnell and Miller 1944), the yellow-breasted chat is currently reported as  
2 an uncommon resident in riparian habitats on the Modoc Plateau, along the north and south  
3 Coast Ranges, in the Sierra Nevada foothills, and in the Transverse and Peninsular ranges. In  
4 terms of altitude, they can occur up to 1,463 meters (4,800 feet) in valley foothill riparian  
5 habitats and up to 1,981 meters (6,499 feet) in desert riparian habitats east of the Sierra Nevada  
6 (DeSante and Ainley 1980, Garrett and Dunn 1981, Gaines 1992). The yellow-breasted chat  
7 appears to have been extirpated from the San Joaquin and Sacramento valleys, but still occurs  
8 along some foothill tributaries. It has been described as uncommon in the north coast mountains  
9 (Small 1994), even though population declines have not been as dramatic in that area as in other  
10 provinces (Remsen 1978).

11 Population status and trends are largely unknown in the state. Ricketts and Kus (2000)  
12 summarized Breeding Bird Surveys (BBS) data (Sauer et al. 1999) and reported that BBS data  
13 from 1966 to 1988 showed a nonsignificant increasing trend of 1.1 percent per year ( $P = 0.27$ ),  
14 along with subinterval trends of +4.7 percent ( $P = 0.18$ ) from 1966 to 1979 and +0.4 percent ( $P =$   
15  $0.61$ ) from 1980 to 1999. They noted, however, that these data exhibit several deficiencies,  
16 including low abundance (less than 1.0 birds/route), low sample size (less than 14 routes),  
17 imprecision (3 percent-year change would not be detected over the long term), and possible  
18 inconsistency in trend over time (subinterval trends were significantly different [ $P < 0.05$ ] from  
19 each other). They concluded that the BBS data should, therefore, be interpreted with extreme  
20 caution. In general, western populations are considered to be generally stable, but some local  
21 declines have occurred recently in California (Dunn and Garrett 1997).

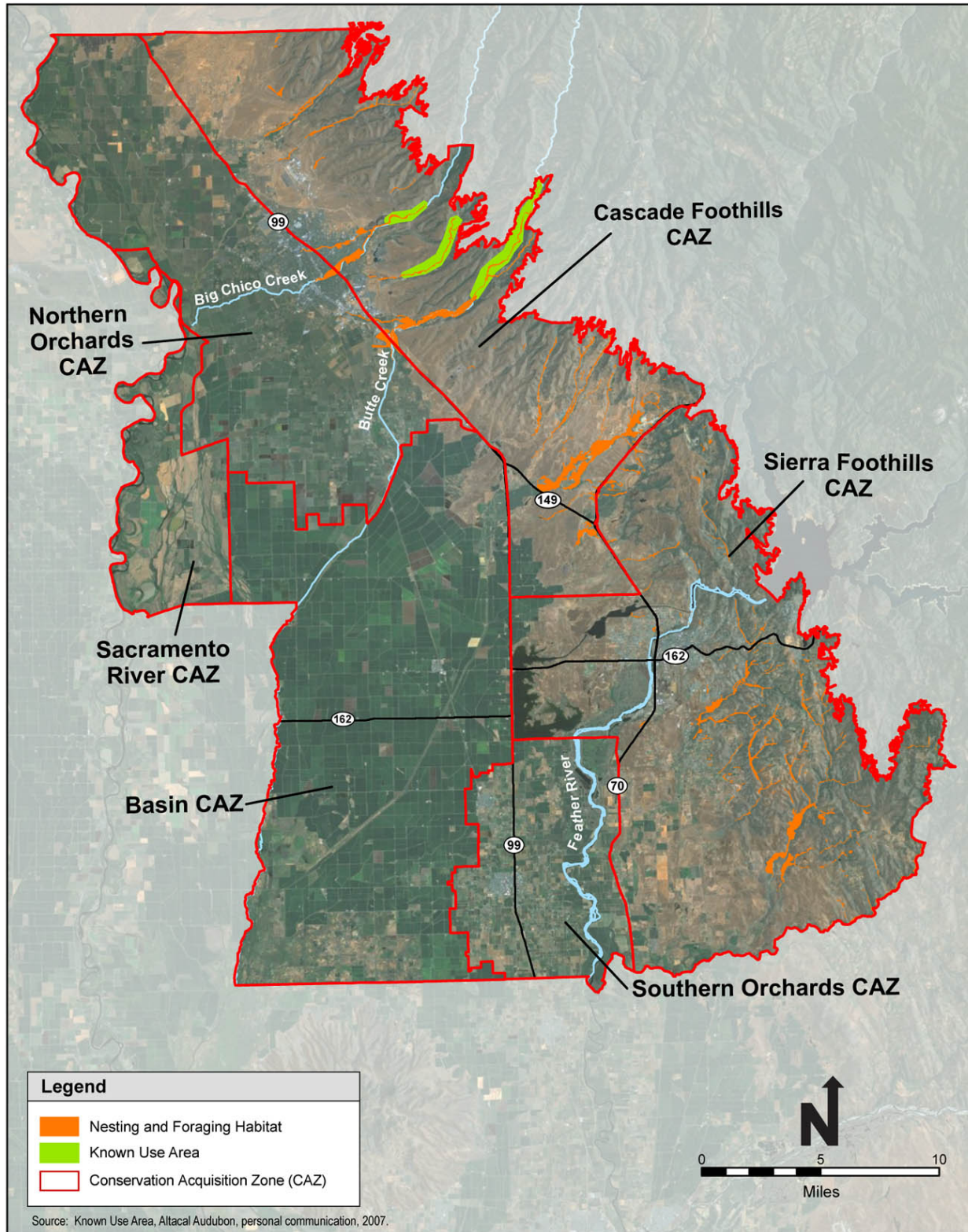
### 22 **A.2.2.2 Distribution and Status in the Plan Area**

23 There is little historical or current information regarding the distribution of yellow-breasted chats  
24 in Butte County. While none are reported in the California Natural Diversity Database, recent  
25 detections have been made along Big Chico Creek, east of Chico (Kemper 1999) and in other  
26 foothill canyons within the Plan Area (see Figure A-2). In addition to detections in the Upper  
27 Park area of Big Chico Creek, the species has been detected in Lower Butte Creek Canyon and  
28 Little Chico Creek (Phil Johnson and Scott Huber, Altacal Audubon, pers. comm.). Dawn  
29 Garcia of California State University, Chico has detected several yellow-breasted chats during  
30 banding and point count surveys conducted at the Butte Creek Ecological Preserve. While there  
31 may be some potential for occurrence along portions of the Sacramento and Feather rivers, these  
32 riparian corridors generally do not support the dense riparian shrub layer necessary for chat  
33 breeding; thus, occurrence is less likely than along the creeks associated with foothill canyons  
34 along the eastern edge of the Plan Area.

### 35 **A.2.3 Habitat Requirements and Special Considerations**

36 Yellow-breasted chats nest and forage in dense riparian thickets of willows, vines, and brush  
37 associated with streams and other wetland habitats (Small 1994). Some taller trees are also  
38 required for song perches (Dunn and Garrett 1997).

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Figure A-2. Yellow-Breasted Chat Modeled Habitat and Known Use Areas

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1 Several studies indicate a strong association with early successional vegetation including clearcut  
2 areas and powerline corridors with dense shrubby vegetation with sapling-sized trees as opposed  
3 to mature riparian forest (Kroodsma 1982, Melhop and Lynch 1986, Annand and Thompson  
4 1997). Kroodsma (1982) also reported a preference for blackberry (*Rubus* spp.) thickets.

5 Yellow-breasted chats typically nest in loose colonies, although males usually defend distinct  
6 territories (Ehrlich et al. 1988). Territory size ranges from 0.30 to 3.21 acres (0.12 to 1.3  
7 hectares [ha]) (Zeiner et al. 1990). Gaines (1974) reported a breeding density from the  
8 Sacramento Valley of one chat per 10 acres (4 ha). Although some known breeding sites are  
9 consistently active each year, there is some data that suggests low site fidelity (Thompson and  
10 Nolan 1973).

11 Nests are usually constructed low to the ground (usually within 3 feet [1 meter (m)]) in dense  
12 shrubs (Barber and Martin 1997, Ricketts 1999). A variety of trees and shrubs are used as  
13 nesting substrate, including willow (*Salix* spp.), alder (*Alnus* spp.), and several shrub species,  
14 including blackberry. At the Lower Clear Creek Floodway in Shasta County, Burnett and  
15 DeStaebler (2003) report that most chat nests are found in Himalayan blackberry (*Rubus*  
16 *discolor*). Other plant species used for nesting include California blackberry (*Rubus ursinus*),  
17 California wild rose (*Rosa californica*), and pipevine (*Aristolochia macrophylla*).

## 18 **A.2.4 Life History**

### 19 **A.2.4.1 Seasonal Patterns**

20 Yellow-breasted chats breed from April to August. In northern California, breeding birds may  
21 begin arriving on territories in April and May; and departure from breeding grounds occurs  
22 during August-September (Ricketts and Kus 2000). Fall migration extends to approximately  
23 October. Birds are on their wintering grounds until February-March; and spring migration  
24 occurs from March to May (Dunn and Garrett 1997).

### 25 **A.2.4.2 Reproduction**

26 Following arrival onto the breeding territory, nests are constructed and eggs are laid from mid-  
27 May to mid-July (Thompson and Nolan 1973). Clutch size is usually three to four and  
28 sometimes five eggs. The female incubates the eggs exclusively. The incubation period is 11 to  
29 15 days (Green 2005), and young begin to fledge eight days following hatching (Petrides 1938).  
30 Both the male and female tend to and provision the young.

### 31 **A.2.4.3 Foraging Behavior and Diet**

32 Chats forage by foliage gleaning, consuming insects and berries about equally (Ehrlich et al.  
33 1988). Nestlings are typically fed a diet of soft-bodied orthopterans (e.g., grasshoppers) and  
34 larval lepidopterans (moths and butterflies) (Petrides 1938). In late summer and fall, chats feed

1 to a large extent on small fruits, such as the fruits of honeysuckle, wild strawberry, blackberry,  
2 mulberry, chokecherry, sumac, and nightshade (Dunn and Garrett 1997).

### 3 **A.2.5 Threats**

#### 4 **A.2.5.1 Habitat Loss and Alteration**

5 One major factor leading to declines of yellow-breasted chat populations is the loss and  
6 degradation of riparian woodland habitat throughout its range (Remsen 1978, Rosenberg et al.  
7 1991). Habitat loss and degradation can occur through the clearing of vegetation for purposes of  
8 agriculture, timber harvest, land development, or flood control.

9 Flood control and river channelization eliminate the early successional riparian habitat of willow  
10 and alder shrub habitats with a dense understory, which chats and many other riparian species  
11 use for breeding.

12 Timber harvest impacts are not quite as clear. Timber harvest may have initial negative impacts  
13 on chats currently nesting in the impacted area; however, Annand and Thompson (1997) noted  
14 that chats preferred clearcut areas. This suggests that timber harvest impacts on the yellow-  
15 breasted chat may be temporary, and timber harvest could ultimately have a beneficial impact for  
16 this species in some situations.

17 Grazing can also have a significant effect on riparian vegetation (Sedgwick and Knopf 1987).  
18 Cattle and other livestock can trample vegetation and eat seedlings, saplings, shrubs, and  
19 herbaceous plants. This could lead to a reduction in cover and nesting sites, and negatively  
20 affect insect populations that the yellow-breasted chat utilizes as a food source.

#### 21 **A.2.5.2 Cowbird Parasitism**

22 While the destruction of riparian woodland has likely played a significant role, the absence of  
23 chats from some areas that still retain intact riparian woodland habitat indicates that some other  
24 factor may be involved in the decline of yellow-breasted chat populations, such as cowbird  
25 parasitism. While data are limited on the extent of cowbird parasitism on yellow-breasted chats,  
26 it could have a significant impact on the local reproductive performance of chats.

#### 27 **A.2.5.3 Predation**

28 Yellow-breasted chats are also subject to occasional predation by accipiters (e.g., goshawks),  
29 small mammals, and snakes (Green 2005). Potential nest predators in California include western  
30 scrub-jays (*Aphelocoma californica*), American crows (*Corvus brachyrhynchos*), common  
31 ravens (*Corvus corax*), black rats (*Rattus rattus*), dusky-footed woodrats (*Neotoma fuscipes*),  
32 raccoons (*Procyon lotor*), and several species of snakes (Ricketts and Kus 2000). Predation of  
33 nests may intensify where insufficient riparian scrub cover or insufficient riparian width occurs,  
34 potentially reducing reproduction and recruitment.

## 1 **A.2.6 Relevant Conservation Efforts**

2 Few conservation efforts have been directed towards the yellow-breasted chat in California.  
3 Protection and restoration of riparian systems can potentially preserve or create habitat for this  
4 species. Regional habitat conservation planning efforts may also protect the species, primarily  
5 through the preservation of existing occupied habitat. Several regional conservation plans in the  
6 Central Valley region of California already include or have proposed to include the yellow-  
7 breasted chat as a covered species: Placer County Conservation Plan, Yolo County Natural  
8 Heritage Program Plan, Solano County Multispecies Habitat Conservation Plan, San Joaquin  
9 County Multi-Species Habitat Conservation and Open Space Plan, the Bay-Delta Conservation  
10 Plan, and the South Sacramento County Habitat Conservation Plan.

## 11 **A.2.7 Species Habitat Suitability Model**

### 12 ***A.2.7.1 Nesting and Foraging Habitat***

13 Yellow-breasted chat nesting and foraging habitat includes willow scrub, cottonwood willow  
14 riparian forest, valley oak riparian forest and dredger tailings with riparian above the 200-foot  
15 elevational contour.

### 16 ***A.2.7.2 Assumptions***

17 Yellow-breasted chat meets all of its life requirements for breeding, food, and cover within  
18 riparian habitat (Ricketts and Kus 2000). While the species is generally associated with a  
19 relatively dense riparian shrub layer (Small 1994), this microhabitat is not differentiated by the  
20 mapped land cover types. Thus, it is acknowledged that willow scrub, cottonwood-willow  
21 riparian forest, and valley oak riparian forest include but likely overestimate the extent of  
22 available habitat for chats. Though yellow-breasted chat has been seen in valley floor riparian  
23 habitat (e.g., along the Sacramento River), these areas are assumed to be used primarily as  
24 migratory corridors. The majority of occurrences of chats in the Plan Area occur along foothill  
25 streams and because the specific habitat requirements for breeding are less likely to be met in  
26 riparian habitats on the valley floor – including the Sacramento and Feather Rivers – the 200-  
27 foot elevational contour was used to establish the lower elevational extent of chat nesting and  
28 foraging habitat within the Plan Area.

### 29 ***A.2.7.3 Nesting and Foraging Habitat (Known Use Area)***

30 This habitat sub-type consists of suitable riparian habitat (discussed above) within which yellow-  
31 breasted chat has been observed. As noted above, portions of Big Chico Creek, Little Chico  
32 Creek, and Butte Creek have been used by yellow-breasted chat (Kemper 1999, Phil Johnson and  
33 Scott Huber, Altacal Audubon, pers. comm.), and are thus considered nesting and foraging  
34 habitat known to be used by the species.

#### 1 **A.2.7.4 Assumptions**

2 As supported by previous observations discussed above, yellow-breasted chat have used and  
3 continue to use the areas of nesting and foraging riparian habitat designated as known use areas  
4 for the species.

#### 5 **A.2.8 Recovery Plan Goals**

6 Currently, there is no recovery plan for the yellow-breasted chat.

#### 7 **A.2.9 References**

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