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June 17, 1999

**To:** Files

**From:** Ronald W. Schlorff

**Subject:** 1999 Bank Swallow population survey, Sacramento River, Red Bluff to Feather River confluence.

On June 9, 10 and 11 surveys for nesting bank swallows were conducted by staffs of the CEQA/CESA Program of the Habitat Conservation Planning Branch and the U.S. Fish and Wildlife Service, Sacramento National Wildlife Refuge using a jet boat belonging to the Service. All colonies were located and the total burrow numbers at each colony were double counted and averaged during the three days of survey. The GPS locations also were recorded. The survey started at a point just below the Red Bluff Diversion Dam at River Mile (RM) 243.0 and proceeded southward to the confluence of the Feather River at about RM 80.00. The following are the results of counts indexed by RM; left bank side (L) and right bank side (R), traveling southward with the current of the river. Unlike last year when none were found, a few colonies were active below the town of Colusa. As in previous years, the colonies above RM 243.0 were estimated based on earlier year's survey results.

<u>River Mile</u>	<u>Side</u>	<u>Average total burrow count (rounded to nearest 10)</u>
241.6	L	330
239.5	L	300
239.2	R	30
237.2	R	10
236.6	R	380
234.9	R	250
233.8	L	180
232.8	R	930
232.0	L	330
228.0	L	400
226.2	R	580
226.2	L	50
226.0	L	110
221.8	L	1540
216.4	L	390
212.0	L	510
211.9	R	850
210.6	L	30
205.8	L	110

(Continued)

<u>River Mile</u>	<u>Side</u>	<u>Average burrow count (rounded to nearest 10)</u>
205.7	R	50
201.0	R	60
200.8	L	180
195.6	L	770
193.1	R	100
192.4	L	870
189.7	R	540
184.8	R	360
182.5	L	930
179.0	R	770
177.6	L	290
175.0	L	90
174.4	L	160
173.0	R	1350
171.8	L	190
171.2	R	50
167.2	L	60
167.0	L	80
164.8	L	110
162.7	L	160
162.0	R	170
161.6	L	40
156.6	L	1100
156.4	R	510
155.0	L	30
154.6	L	190
150.8	R	60
145.7	L	10
131.5	R	150
129.3	L	40
100.8	L	50
83.3	L	80
83.0	R	50

### RESULTS SUMMARY

Total Colonies counted = **52**      Total burrows counted = **16,960**  
Estimated Cols. Redding to Red Bluff = **5**      Est. Burrows = **1,290**  
Survey total Cols. = **57**      Survey total Burrows = **18,250**  
Average Burrows per Colony = **320** (rounded to nearest 10)  
Burrow Occupancy Rate = **0.45**

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Number of Pairs (0.45 x 18,250) = **8,210** ( rounded to nearest 10)

1998 Number of Pairs = **4,990**

Population trend = up approx. **39** percent over last year; down **38** percent from 1986 baseline of **13,170** pairs in **72** colonies.

Average colony size has declined from **410** burrows/col. In 1986 to the current **320** burrows/col. (78 percent of baseline figure)

**River Reach summary ( ave. figures rounded to nearest 10):**

<b>RM 81-143</b>	370 burrows	5 cols.	Ave. =	74 burrows per col.
<b>RM 144-168</b>	2,520 burrows	12 cols.	Ave. =	210 burrows per col.
<b>RM 169-199</b>	6,470 burrows	13 cols.	Ave. =	500 burrows per col.
<b>RM 200-243</b>	7,600 burrows	22 cols.	Ave. =	340 burrows per col.
<b>RM 244-292</b>	1,290 burrows (est.)	5 cols.	Ave. =	260 burrows per col.
<b>Totals:</b>	<b>18,250 burrows</b>	<b>57 cols.</b>	<b>Ave. =</b>	<b>320 burrows per col.</b>

**DATA INTERPRETATION**

The population has rebounded dramatically over last year but is still threatened by activities that will reduce its habitat. The largest documented colony in this year's survey is slated for bank protection measures as are many others. If all proposed sites were rip-rapped then the habitat for the population could be severely affected resulting in further declines in the future. Despite the one year increase to levels not seen for nearly a decade, I believe that the population remains a candidate for endangered status and a petition should be prepared at the earliest date in order to get it through the sometimes lengthy listing process before the Fish and Game Commission. According to the Population Viability Analysis we have conducted on this species, it is now in grave danger of further declines or disappearing entirely within the next few decades because it is below a threshold of risk level of 10,000 pairs. The trend of government and privately financed riprapping projects could hasten the extirpation of the bank swallow from its distribution on the Sacramento River.

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