

June 26, 1998

To: Files

From: Ronald W. Schlorff

Subject: 1998 Bank Swallow population survey, Sacramento River, Red Bluff to Feather River confluence.

On June 17, 18 and 25 surveys for nesting bank swallows were conducted by staffs of the Bird and Mammal Conservation Program, Wildlife Management Division and Inland Fisheries Division using a jet boat belonging to the Inland Fisheries Division. All colonies were located and the total burrow numbers at each colony were counted during the three days of survey. 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 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. Due to flooding and unsuitable erosion pattern (and possible other factors) no colonies were found below RM 154.0. Colonies above RM 243.0 were estimated based on previous year's surveys.

<u>River Mile</u>	<u>Side</u>	<u>Average total burrow count (rounded to nearest 10)</u>
241.8	L	180
239.5	L	280
238.5	R	100
235.3	R	160
232.0	R	20
230.9	L	250
230.1	R	60
231.9	L	340
228.0	L	70
221.5	L	860
219.0	L	310
212.5	L	440
212.0	R	10
210.0	R	1260
209.5	L	140
205.0	R	100
203.0	R	100
202.0	L	260
196.0	L	70
195.5	R	440
193.0	R	90

(Continued)

<u>River Mile</u>	<u>Side</u>	<u>Average burrow count (rounded to nearest 10)</u>
193.5	R	100
191.5	L	100
185.5	R	120
183.0	L	420
181.5	R	160
177.5	L	430
175.5	L	200
173.1	R	750
171.2	R	170
168.5	R	30
168.3	R	110
160.5	R	130
160.0	L	370
157.0	L	870
156.5	R	260
155.0	L	20
154.0	L	20

RESULTS SUMMARY

Total Colonies counted = **37** Total burrows counted = **9,800**
 Estimated Cols. Redding to Red Bluff = **5** Est. Burrows = **1,290**
 Survey total Cols. = **42** Survey total Burrows = **11,090**
 Average Burrows per Colony = **260** (rounded to nearest 10)
 Burrow Occupancy Rate = **0.45**
 Number of Pairs (0.45 x 11,090) = **4,990** (rounded to nearest 10)
 1997 Number of Pairs = **5,190**
 Population trend = down approx. **4** percent over last year; down **61** percent from 1986
 baseline of **13,170** pairs in **72** colonies.
 Average colony size has shrunk from **410** burrows/col. In 1986 to the current **260**
 burrows/col. (63 percent of baseline figure)

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

RM 81-143	0 burrows	0 cols.	Ave. =	0 burrows per col.
RM 144-168	1,810 burrows	7 cols.	Ave. =	260 burrows per col.
RM 169-199	3,050 burrows	12 cols.	Ave. =	250 burrows per col.

(Continued)

RM 200-243	4,940 burrows	18 cols.	Ave. = 270 burrows per col.
RM 244-292	1,290 burrows (est.)	5 cols.	Ave. = 260 burrows per col.
Totals:	11,090 burrows	42 cols.	Ave. = 260 burrows per col.

DATA INTERPRETATION

The population has lost one-third of its linear extent in that no colonies were found in the lower 74.0 river miles of the survey route. The population is now probably a candidate for endangered status and a petition should be prepared at the earliest date in order to get it through the lengthy listing process before the Fish and Game Commission. According to the PVA we have conducted on this species, it is now in grave danger of further declines or disappearing entirely within the next few decades. The trend of privately financed riprapping projects could hasten the extirpation of the bank swallow from its distribution on the Sacramento River.

Ronald W. Schlorff
Endangered Species Biologist