

DRAFT

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To: Files

From: Ronald W. Schlorff

Subject: 2006 Bank Swallow population survey, Sacramento River

On June 13, 2006, staffs of the Resource Assessment Program of the Habitat Conservation Division of the California Department of Fish and Game, Sacramento, and the U.S. Fish and Wildlife Service, Sacramento National Wildlife Refuge, conducted breeding surveys on the Sacramento River for the State threatened bank swallow. The survey employed a jet boat owned and operated by the Refuge. All colonies were located and the total burrow numbers at each colony were double tally counted and averaged for a 10% allowable difference during the two days of survey. The GPS locations of colonies, at the downstream base, also were recorded. Field data were recorded on paper forms. The survey started at a point just below the Red Bluff Diversion Dam at River Mile (RM) 243.0 and was to continue southward toward the last known colony in the vicinity of RM 145.5 Left (L). As in previous surveys, the reach from Redding to Red Bluff was estimated based on results of an earlier survey. For the fifth survey year, the reach from Colusa (RM 144.0) to the confluence with the Feather River (RM 80.0) will be based on estimates provided in 2000 by Mr. Craig Swolgaard, an independent researcher (this reach has extensive riprap from Colusa to Knights Landing to a point about 54 miles downstream). 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. Average total burrow count is rounded to nearest tenth. After recording the 6th colony location, our jet boat was disabled after an accident and the 2006 survey had to be canceled. The following data are for those 6 colonies.

<u>River Mile*</u>	<u>Side</u>	<u>GPS reading (utm)*</u>	<u>No. Burrows</u>	<u>NWR Units</u>
236.4	L	573565-4440300	40	
235.5	R	573463-4439595	200	Moony Island Unit
234.4	R	574710-4437710	540	Ohm Unit
233.9	L	575397-4437194	110	
232.8	R	574613-4435942	110	Flynn Unit
230.5	L	575897-4434783	340	"Falling House"

-----Further survey canceled due to boat accident-----

RESULTS SUMMARY (incomplete survey)

Total Colonies counted = **6** Total burrows counted = **1,340**

Estimated Cols. Redding to Red Bluff = **5** Est. Burrows = **1,290**

Estimated Cols. Colusa to Feather R. Confluence = **8** Est. Burrows = **1,060**

Survey Total Cols. = **19** Survey Total Burrows = **3,690**

Average Burrows per Colony = **190** (rounded to nearest 10)

Summary of 10 years of Bank Swallow Survey Data, 1996-2005

Year	Burrow Count	Pair estimate	Number cols.	Ave. Col. Size
1996	12,820	5,770	52	250
1997	11,540	5,190	52	220
1998	11,090	4,990	42	260
1999	18,250	8,210	57	320
2000	20,470	9,210	46	450
2001	21,520	9,680	51	420
2002	18,500	8,330	57	320
2003	21,300	9,590	61	350
2004	19,410	8,730	56	350
2005	16,390	7,380	52	300

SUMMARY AND DATA INTERPRETATION

Results of the 2006 bank swallow population survey on the Sacramento River were incomplete due to an accident with the jet boat and inability to re-schedule the effort. Only 6 colonies were recorded, thus no analysis of the incomplete results is warranted. See the 2005 report for a detailed discussion of that year's results and the general population trend analysis, 1986-2005 (also see year to year summary above).

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