

Memorandum

To : Mr. Robert R. Treanor
Executive Director
Fish and Game Commission

Date : March 20, 1998

From : Department of Fish and Game

Subject : Agenda Item for the Fish and Game Commission's April 1-2, 1998 Meeting Regarding Receipt of the Department of Fish and Game's Annual Report on the Status of Recovery of the Threatened Bank Swallow (*Riparia riparia*)

On March 3, 1989, the Commission listed the bank swallow as a threatened bird species in accordance with the California Endangered Species Act (CESA) and pursuant to Section 2070, Fish and Game Code, and Section 670.1, Title 14, California Code of Regulations. This action occurred based on a Department petition that documented that the species had declined throughout its range within California, was extirpated from approximately 50 percent of its historic range (primarily in the southern part of the State), and faced further reduction in populations and habitat due to proposed bank protection projects of the State Reclamation Board and the U.S. Army Corps of Engineers (Corps) on the Sacramento River, Feather River, and major tributaries. Sacramento Valley riparian systems provide habitat for over 70 percent of the remaining population.

A recovery plan for the bank swallow was completed and presented to the Commission for adoption in 1993. It was the first such plan for a species that is State listed only and not also federally listed. A recovery team consisting of representatives of the Department, State Reclamation Board, Corps, State Lands Commission, and members of the public, was formed prior to the completion of the recovery plan in the same year as the listing became final, 1989. Some of the issues discussed at team meetings since 1989 included the development of the recovery plan, mitigation experiments at bank protection projects, and annual population surveys. The recovery team did not meet during 1997. Monitoring surveys since the study in 1986 have included biologists and/or engineers from the various agencies and groups that make up the recovery team. The 1997 population survey was conducted by staff of the Department's Wildlife Management and Inland Fisheries divisions. Inland Fisheries provided the jet-powered boat necessary to conduct the surveys.

The results of the 1997 survey indicated an estimated population on the Sacramento River of 5,190 pairs, which is slightly lower than the 1996 estimate of 5,770 pairs. Please refer to Table 1 (attached) for a summary of bank swallow population information and bank swallow population survey results for 1986 through 1997. Breeding pair estimates were derived by multiplying the total burrow count figures (an index of population trend) by an objective estimate of burrow occupancy (45 percent) derived from field studies. Between 1986 and 1997 an average of 8,490 pairs of bank swallows in an average 56 colonies nested on the Sacramento

Mr. Robert R. Treanor
March 20, 1998
Page Two

River. The population in 1998 represents a decline of 61 percent during the past 12 years from a 1986 baseline estimate of 13,170 pairs.

A five-year review of the status of the bank swallow was reported to the Commission in early 1994. That report stated that should the results of annual population monitoring show continued declines on the Sacramento River, which is the core of the remaining population in the State, then the Department may consider recommending endangered status for the species in the future. However, since the population showed a status similar to that found in 1995 and 1996, additional monitoring may be necessary to more completely document this trend.

The Department is reviewing projects which may result in the take of the bank swallow or the loss of its habitat, and is using appropriate means (CEQA or CESA, as applicable) to encourage avoiding negative impacts on the species. In addition, the Department's staff will be developing potential issues and actions for the Recovery Team and cooperative agencies to consider, to assist in the future recovery of this species.

A copy of the recovery plan is enclosed for the Commission's reference. If you have any questions regarding the matter, please contact Mr. Terry M. Mansfield, Chief of the Department's Wildlife Management Division, at (916) 653-7203. Department staff will be available at the April meeting to respond to questions or comments from the Commission.

COPY Original Signed by:
Jacqueline E. Schafer

Jacqueline E. Schafer
Director

Attachment: Table 1

TABLE 1
BANK SWALLOW POPULATION INFORMATION
by River Reach on the Sacramento River, California
1986-1997

RIVER REACH	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Avg.
RM 81-143 Verona to Colusa													
Number of Colonies	13	12	9 ^a	6	6	6	9	8	6	4	5	7	8 ^b
Total Burrows	2,480 ^c	3,720	1,870	750	980	1,870	1,650	1,610	2,470	540	700	730	1,610
Avg. Burrows/Colonies	190 ^c	310	210	130	160	310	180	200	410	140	140	100	200
RM 144-168 Colusa to Butte City													
Number of Colonies	15	13	18	14 ^a	15	9	14	15	11	12	12	14	14
Total Burrows	6,060	6,600	7,790	6,580	7,440	6,110	6,840	5,230	4,870	2,080	2,690	2,150	5,370
Avg. Burrows/Colonies	400	510	430	470	500	680	490	350	440	170	120	150	390
RM 169-199 Butte City to Hamilton City													
Number of Colonies	15	16	28	21	15	14	15	11	10	11	11	14	15
Total Burrows	7,530	5,070	9,570	6,970	4,850	3,960	4,500	1,950	3,400	2,510	2,490	2,600	4,620
Avg. Burrows/Colonies	500	320	340	330	320	280	300	180	340	230	230	190	300
RM 200-243 Hamilton City to Red Bluff													
Number of Colonies	23	20	16 ^a	16 ^a	15	13	14	10	10	15	19	12	15
Total Burrows	11,530	8,540	6,520	6,520	6,880	4,300	4,050	3,820	4,440	4,660	5,650	4,770	5,970
Avg. Burrows/Colonies	500	430	400	400	460	330	290	380	440	310	300	400	390
RM 243-292 Red Bluff to Redding													
Number of Colonies	6	5	5 ^a	5 ^a	3	5 ^a	5 ^a	5 ^a	5 ^a	5	5 ^a	5 ^a	5
Total Burrows	1,660	1,400	1,290	1,290	820	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290
Avg. Burrows/Colonies	280	280	260	260	270	260	260	260	260	260	260	260	260
Survey Total - RM 81-292 Verona to Redding													
Number of Colonies	72 ^d	66	76	62	54	47	57	49	42	47	52	52	56 ^e
Total Burrows	29,260	25,330	27,040	22,110	20,970	17,530	18,330	13,900	16,470	11,080	12,820	11,540	18,870
Avg. Burrows/Colonies	410	380	360	360	390	370	320	280	390	240	250	220	330 ^e
Total Breeding Pairs ^f	13,170	11,400	12,170	9,950	9,440	7,890	8,250	6,260	7,410	4,990	5,770	5,190	8,490
% of Baseline Population	100	87	92	76	72	60	63	48	56	38	44	39	64
% of Population Decline	0.00	13	8	24	28	40	37	52	44	62	56	61	36

a Averages based on survey information were included as an estimate for years without surveys.

b Reach averages based on available survey data for that Reach; these data are the most illustrative of population trends within the Reach.

c Burrow numbers rounded to nearest 10 burrows.

d Annual survey totals include Reach averages for years without surveys; yearly totals are not as accurate for inferring population trends as Reach averages.

e Includes annual totals that have estimates based on Reach averages.

f Total burrows X average burrow occupancy rate (0.45) = total breeding pairs.