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ANNUAL REPORT
VAN ARSDALE FISHERIES STATION, 1991-92

by

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Region 3, Inland Fisheries

Inland Fisheries
Administrative Report No. 93-6

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ABSTRACT

This report describes the operation of Van Arsdale Fisheries Station (Snow Mountain Station), Mendocino County, California for the 1991-92 season. Chinook salmon, Oncorhynchus tshawytscha, and steelhead trout, O. mykiss, counts have been made at this Station since 1933.

During the season, a total of 5 chinook salmon and 60 steelhead was trapped.

Numbers of fish trapped, Eel River morning water temperatures, Eel River flows, and weather conditions were recorded (Appendix Table 1).

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INTRODUCTION

Van Arsdale Fisheries Station is located approximately 25 miles northeast of the town of Ukiah, in Mendocino County, California. It is on the Eel River at Capehorn Dam, which impounds Van Arsdale Reservoir. The Station was constructed by Snow Mountain Light and Power Company in 1907 and subsequently sold to Pacific Gas and Electric Company (PG&E) in 1930. A fish ladder located on Capehorn Dam is maintained by PG&E; the Station, grounds, and facilities are maintained by the Department of Fish and Game.

METHODS OF OPERATION

The upstream migrant fish trap was placed into operation on November 27, 1991 and remained in continuous operation until May 1, 1992. The trap was checked daily, usually between 0700 and 0900 hours. Eel River flow was measured at a PG&E gauging station (E-11) located immediately downstream of Capehorn Dam, and Eel River water temperature and general weather conditions were also recorded (Appendix Tables 1).

1991-92 CHINOOK SALMON TRAPPING

Five chinook (all males) were trapped in the 1991-92 season. The first fish entered the trap on December 30, 1991 and the last on January 7, 1992. All chinook were released upstream on the day they were trapped.

Lack of rain during the early winter and resulting low river flow conditions prevented fish from reaching the upper river. Surveys done in the lower river recorded very low fish numbers.

1991-92 STEELHEAD TRAPPING

The first steelhead was trapped on December 30, 1991 and the last on April 29, 1992. A total of 60 steelhead (24 males, 29 females, and 7 sub-adults) was trapped.

No fish were spawned at the Station this season. All trapped steelhead were released upstream after data on species, sex, fork length, and hatchery fin clips were collected.

Additional information concerning steelhead movements, tagging, and fin clips may be found in a report by Steiner Environmental Consultants entitled: Potter Valley Project, Effects of Operations on Anadromous Salmonids.

APPENDIX TABLE 1. Date of Chinook Salmon and Steelhead Arrivals, Eel River Flow and Weather Conditions at Van Arsdale Fisheries Station, 1991-92.

Date	Chinook		Steelhead			Flows (cfs)	Weather	
	Male	Female	Male	Female	Sub-adults			
Nov.								
27	Station Unattended							
28						10	Clear	
29						10	Clear	
30	Station Unattended							
Monthly total	0	0	0	0	0			
Dec.								
1							Clouds	
2						57	Clear	
3	Station Unattended							
4	Station Unattended							
5	Station Unattended							
6						57	Clouds	
7						65	Rain	
8						57	Clear	
9						57	Clear	
10	Station Unattended							
11	Station Unattended							
12	Station Unattended							
13						57	Clear	
14						57	Clear	
15						57	Clear	
16						57	clear	
17						57	Clouds	
18						80	Rain	
19						76	Clear	
20						57	Clear	
21						57	Overcast	
22						57	Overcast	
23						57	Clear	
24						57	Clear	
25						57	Overcast	
26						57	Overcast	
27						66	Rain	
28						119	Rain	
29						139	Rain	
30	1		1			50	Overcast	
31						50	Clear	
Monthly totals	3	0	1	0	0			

APPENDIX TABLE 1. (continued)

Date	Chinook		Steelhead			Flows (cfs)	Weather
	Male	Female	Male	Female	Sub-adults		
Previous totals	0	0	0	0	0		
Season totals	3	0	1	0	0		
Jan.							
1						54	Clear
2						52	Clear
3						6	Overcast
4						6	Rain
5	1		1	6	2	205	Rain
6						105	Overcast
7	1			2	1	21	Clear
8						5	Clear
9						5	Clear
10						5	Clear
11						5	Clear
12	Station Unattended						
13						5	Clear
14						5	Clear
15						5	Clear
16						5	Clear
17						5	Clear
18	Station Unattended						
19						5	Clear
20						5	Clear
21						5	Clear
22						5	Clear
23						5	Clear
24						5	Clear
25	Station Unattended						
26	Station Unattended						
27						5	Overcast
28						76	Rain
29				5	1	6	Clear
30						6	Overcast
31						10	Clouds
Monthly totals	<u>2</u>		<u>0</u>	<u>1</u>	<u>13</u>	<u>4</u>	
Previous totals	3		0	1	0	0	
Season totals	5		0	2	13	4	

APPENDIX TABLE 1. (continued)

Date	Chinook		Steelhead			Flows (cfs)	Weather
	Male	Female	Male	Female	Sub-adults		
Feb.							
1						41	Rain
2				1		5	Clear
3						5	Clear
4						5	Clear
5						5	Clear
6						5	Clear
7						5	Clear
8	Station Unattended						
9						5	Rain
10						82	Rain
11			1	7		781	Rain
12				1		1,225	Rain
13				1	1	242	Clouds
14						55	Rain
15						409	Overcast
16						403	Rain
17						403	Rain
18						162	Rair
19						950	Rain
20						8,115	Clouds
21						4,112	Rain
22	Station Unattended						
23						1,468	Clear
24						950	Clear
25						741	Clear
26				1		718	Clear
27						945	Clear
28						724	Clear
29	Station Unattended						
Monthly totals	0	0	1	11	1		
Previous totals	5	0	2	13	4		
Season totals	5	0	3	24	5		

APPENDIX TABLE 1. (continued)

Date	Chinook		Steelhead			Flows (cfs)	Weather
	Male	Female	Male	Female	Sub-adults		
Mar.							
1						528	Overcast
2				1		478	Rain
3						457	Clear
4						386	Clear
5			2	2		457	Rain
6			3			631	Rain
7						841	Overcast
8						581	Clear
9						476	Clear
10						347	Clear
11						272	Clear
12						208	Clear
13						112	Clouds
14						132	Rain
15			2	2		753	Rain
16						993	Rain
17						555	Rain
18			3			1,443	Clear
19						1,225	Clear
20						777	Clear
21						560	Clear
22						197	Rain
23						182	Overcast
24						169	Overcast
25						154	Overcast
26						124	Clear
27						99	Clear
28						89	Overcast
29						87	Overcast
30			1			89	Rain
31						89	Clear
Monthly totals	0	0	11	5	0		
Previous totals	5	0	3	24	5		
Season totals	5	0	14	29	5		

APPENDIX TABLE 1. (continued)

Date	Chinook		Steelhead			Flows (cfs)	Weather
	Male	Female	Male	Female	Sub-adults		
Apr.							
1			3			89	Clear
2						89	Clear
3			1			88	Clear
4						89	Clear
5			2			78	Clear
6						77	Clear
7						74	Clear
8						77	Clear
9			1			77	Overcast
10			1			78	Rain
11						94	Rain
12						116	Rain
13			3			106	Rain
14						88	Overcast
15						85	Rain
16						83	Rain
17						90	Clear
18						87	Clear
19						75	Overcast
20						70	Overcast
21						60	Clear
22						50	Clear
23	Station Unattended						
24						45	Clear
25						45	Clear
26						46	Clear
27						46	Clouds
28	Station Unattended						
29					2	40	Rain
30						41	Clear
May							
1							
Monthly totals	0	0	10	0	2		
Previous totals	5	0	14	29	5		
Season totals	5	0	24	29	7		

APPENDIX TABLE 2. Annual Steelhead and Chinook Counts, Van Arsdale Fisheries Station, 1933-34 to 1991-92.

<u>Season</u>	<u>Chinook</u>	<u>Steelhead</u>
1933-34		3,247
1934-35		2,225
1935-36		6,310
1936-37		6,861
1937-38		3,413
1938-39		4,786
1939-40		3,990
1940-41		2,228
1941-42	No record	
1942-43	No record	
1943-44	No record	
1944-45		9,528
1945-46		5,054
1946-47*	917	4,409
1947-48		178
1948-49		2,433
1949-50	No record	
1950-51	55	1,091
1951-52		5,444
1952-53		2,197
1953-54		2,590
1954-55		6,131
1955-56		3,719
1956-57		4,109
1957-58		5,151
1958-59		3,335
1959-60		2,206
1960-61		1,130
1961-62		1,693
1962-63	9	2,030
1963-64	3	846
1964-65	108	921
1965-66	94	423
1966-67	119	534
1967-68		531
1968-69		340
1969-70	15	719
1970-71	47	1,863
1971-72		696
1972-73		586
1973-74	12	1,040
1974-75	1	1,126
1975-76	2	1,077
1976-77		39

APPENDIX TABLE 2. (continued)

<u>Season</u>	<u>Chinook</u>	<u>Steelhead</u>
1977-78	23	590
1978-79	5	106
1979-80		87
1980-81		1,966
1981-82	175	646
1982-83	9	369
1983-84	26	1,534
1984-85	153	1,980
1985-86	961	1,196
1986-87	1,754	1,952
1987-88	1,080	2,206
1988-89	328	331
1989-90	6	691
1990-91	0	31
1991-92	5	60

* Forty-seven coho salmon were recorded this season.