DEPARTMENT OF FISH AND GAME
North Central Region

Lower Yuba River Chinook Salmon Escapement Survey

September – December 2006

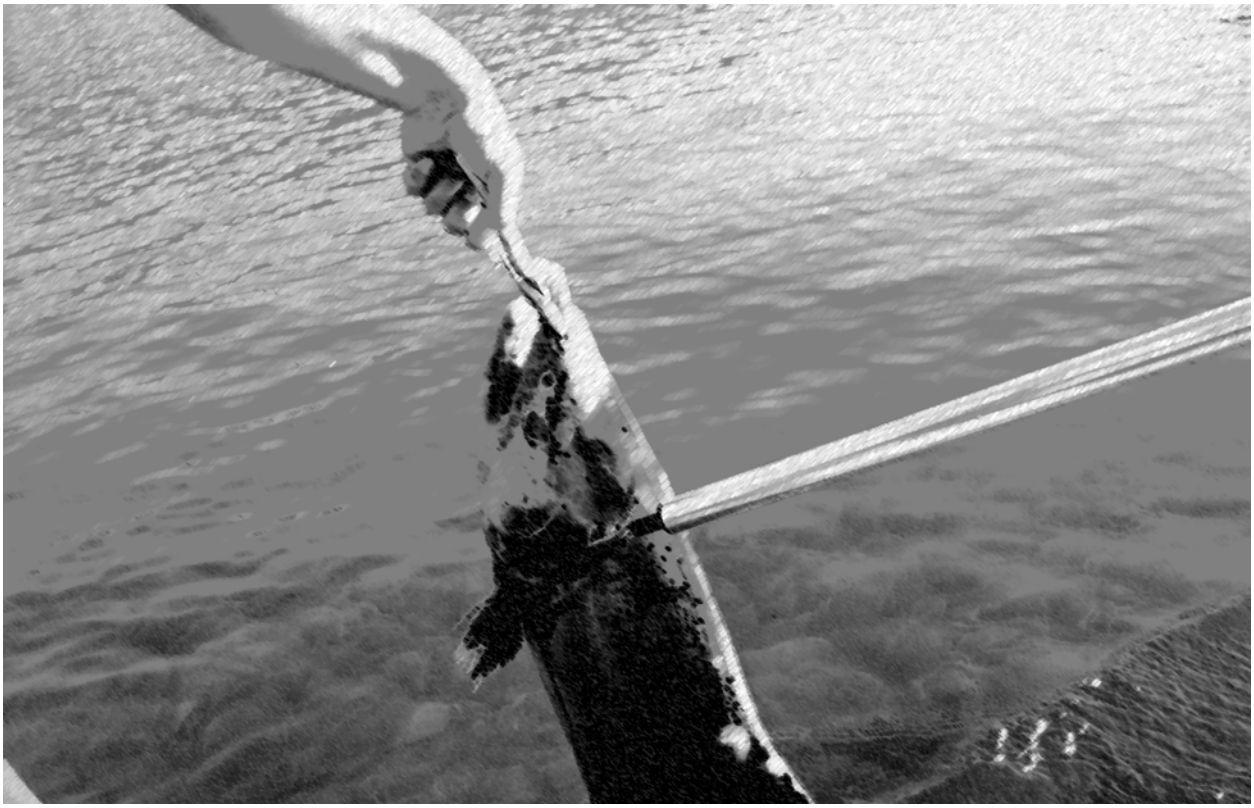

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Table of Contents

Introduction

The Yuba River, a tributary of the Feather River, drains a watershed of 3,468 kilometers^2 (1,339 miles^2), originating in the higher elevations of the west slope of the Sierra Nevada. The lower Yuba River is drained by the North, Middle, and South Yuba Rivers. The three tributaries converge near, and are impounded by the U.S. Army Corps of Engineers' (ACOE) Englebright Dam, approximately 39 kilometers (24 river miles) east of the city of Marysville which represents the upper limits of anadromous fish migration and spawning (Drury, 2001). The lower Yuba River provides spawning habitat for adult spring-, fall-, and late fall-run Chinook salmon, as well as Central Valley steelhead trout (DFG, 1991). In addition, the river below Daguerre Point Dam supports other anadromous species including American shad and striped bass. Over the years, lower Yuba River anadromous salmonid populations have been adversely affected by water and land use practices; such as mining, dam construction, and water diversions that have impacted available spawning habitat through non-natural flow regimes, unsuitable water temperatures, and an overall loss of available spawning gravel substrates. These practices affect adult Chinook salmon populations through losses to crucial habitat during essential rearing, migration and spawning periods.

Historically, the spring-run Chinook salmon was considered the most abundant run of salmon in the Central Valley of California, with yearly escapements in the Sacramento River estimated to have reached 600,000 spawners. The spring-run was also a major component of the Yuba River fishery. Prior to extensive habitat degradation by hydraulic mining and hydroelectric dams, spring-run Chinook salmon were able to ascend high into the Sierra Nevada in the North Yuba River to Loves Falls near Sierra City (Yoshiyama, 2001). The Middle and South Yuba Rivers were also utilized for spawning and rearing. Currently, spring-run Chinook salmon are restricted from their historic range and must spawn in less-than-optimal habitat downstream of Englebright Dam. Spring-run Chinook salmon on the lower Yuba River were listed as threatened under both the Federal and State Endangered Species Acts on September 16, 1999, and their threatened status was reaffirmed on July 28, 2005.

Fall-run Chinook salmon also historically utilized the lower Yuba River. They supported up to 15% of the total annual escapement of fall-run Chinook salmon in the Sacramento River system (Reynolds, 1993). Hydraulic mining activities in the past have played a major role in habitat degradation, through water diversions that blocked fish passage and through extensive siltation that choked prime spawning habitat. Due to fall-run Chinook salmon life history traits, Yuba River populations have not been largely affected by the spatial loss of habitat due to dam construction, but rather are more affected by the associated non-natural flows and loss of rearing/spawning habitat; notably the absence of natural gravel recruitment and large woody debris.

Escapement surveys have been conducted on the lower Yuba River to estimate the number of returning adult Chinook salmon since 1953. Previous estimates were infrequent and unlike more recent surveys (1994, 1996-2005), methods were not consistent from year to year. Survey duration and area of sampling varied, resulting in data that are statistically inappropriate for trend analysis. Escapement survey methods have been more consistent in recent years in both duration

and actual area surveyed. This year's survey on the Yuba River incorporates the methods of more recent escapement protocols.

Methods

The lower Yuba River Chinook salmon escapement survey was conducted from the Narrows pool downstream to the Simpson Lane Bridge; a distance of approximately 32 kilometers (20 river miles). The river was stratified into three reaches (**Table 1**). All reaches were surveyed once a week via two jet boats from September 19, 2006 through December 29, 2006. Each weekly survey was completed utilizing a crew of five to six people.

Table 1. Yuba River fall-run Chinook salmon escapement survey reaches.

Reach	Location	Kilometers
1	Narrows pool to State Route 20 Bridge	5
2	State Route 20 Bridge to Daguerre Point Dam	11
3	Daguerre Point Dam to Simpson Lane Bridge	16
Total		**32**

Each week all fresh carcasses (defined as having one clear eye and pink gills) were counted and tagged with a color-coded hog ring on the upper jaw for adults and on the lower jaw for grilse. A unique color was used each week to identify the carcasses to a specific tagging week. Each tagged carcass was returned to flowing water for dispersal. Fresh carcasses with missing adipose fins were identified as potentially having a coded-wire tag (CWT). Heads were removed from the fresh CWT carcasses and affixed with a jaw tag containing information on fish length, sex, species, method of take, river mile, date and a tag code. Collected CWT heads were frozen and later processed (tags extracted and read) by Department personnel. CWT carcasses were chopped in half and recorded as a freshly chopped carcass. All observed decomposing carcasses were counted and chopped with a machete to prevent recounting during subsequent surveys, but were not tagged. Decomposing and recovered (previously tagged) carcasses were also chopped. Fresh adult carcass data were compiled and used in a Schaefer mark-recovery calculation (Schaefer, 1951) as modified by Taylor (1974) to produce an adult escapement estimate. A grilse estimate was completed by taking the observed proportion of fresh adult to grilse carcasses and extrapolating the Schaefer adult estimate.

A grilse cutoff length of 64.5 cm was utilized to distinguish between adult and sub-adult spawners. This critierion was used for the 2005 survey as well. Additionally, the standard cutoff length from the 2003 and 2004 Jones and Stokes study was 64.5 cm. A discussion in July 2005 with George Neillands, DFG Fishery Biologist with the Ocean Salmon Project, indicated that 65 cm was a good average cutoff length. His analysis of Central Valley Chinook salmon metadata has indicated that two- and three-year old spawners fall either above or below this cutoff length, but that this length represents an adequate middle ground for escapement purposes.

Scale samples were collected from fresh Chinook salmon carcasses for age determination and cohort reconstruction though cooperation with the Ocean Salmon Project in Santa Rosa. A

member of the Ocean Salmon Project's sampling team spent one day per week sampling all available fresh carcasses observed. A skin patch containing scales was removed from the scale pocket located posterior of the last dorsal fin ray, and above the lateral line. Each skin patch was placed in an individual envelope containing a unique sample code, date, location, fork length, sex, ad-clip status, and head tag number if available. Scale envelopes were placed in a dry storage area for later processing by the Ocean Salmon Project's scale aging team.

Mean daily flow data were obtained from the Marysville gaging station located on the lower Yuba River near the town of Hallwood.

Results

An estimated 8,231 Chinook salmon spawned in the lower Yuba River survey area during the period of September 19, 2006 to December 29, 2006 (**Appendix A, Tables A1-A3**). This estimate was the lowest observed in ten consecutive years, and was nearly half of the escapement estimate reported for 2004 (15,269 fish) and 2005 (17,630 fish) (**Figure 1**).

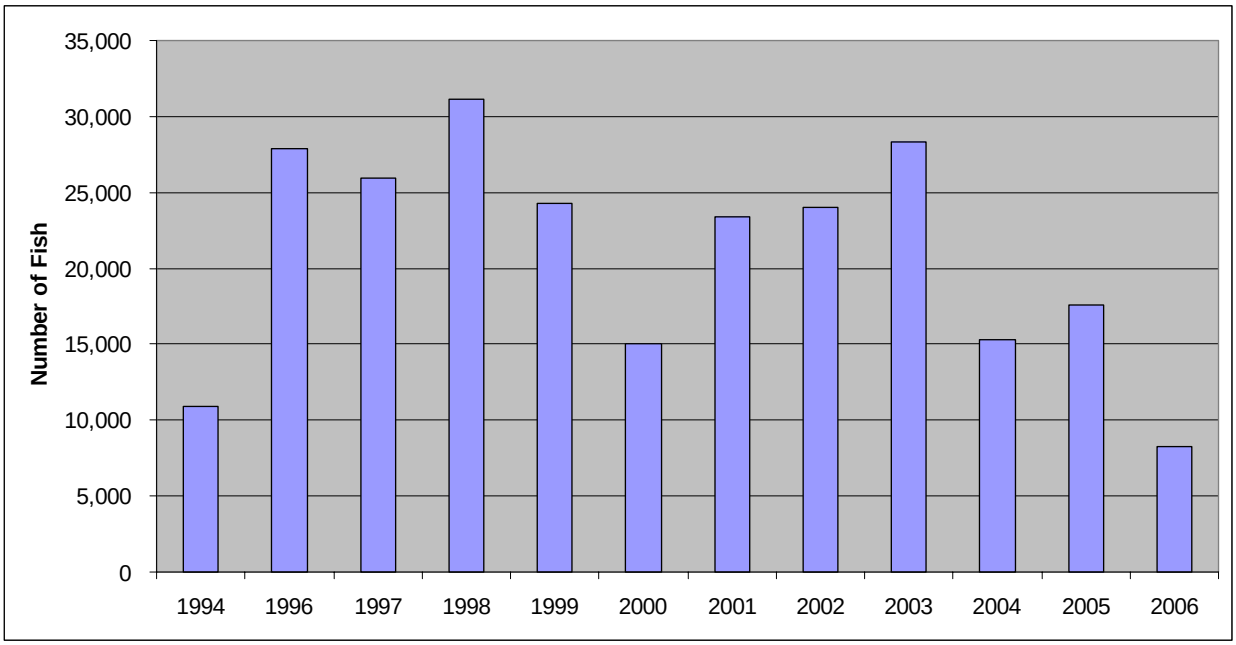

Figure 1. Yuba River Chinook salmon escapement estimates (from comparable methods).

A direct grilse estimate could not be completed as planned due to the low number of grilse observed (37 total for the survey period) during weekly surveys, making Schaefer estimation methods impossible. The grilse component of the total estimate was derived by taking the ratio of fresh adult to grilse carcasses and extrapolating the adult Schaefer estimate to obtain a grilse estimate. The adult Schaefer estimate was 7,998, whereas the grilse estimate was 233, for a total escapement of 8,231 Chinook salmon based upon a 34.3:1 adult to grilse ratio. Separate estimates were created for each of the three survey reaches. Reach 1 (Narrows to SR 20 Bridge)

accounted for 22.9% of the total spawner estimate with 1,835 adults and 53 grilse (**Appendix A, Table A1**). Reach 2 (SR 20 to Daguerre Dam) accounted for 43.0% of the total spawner estimate with 3,435 adults and 100 grilse (**Appendix A, Table A2**). Reach 3 accounted for 34.1% of the total spawner estimate with 2,728 adults and 80 grilse (**Appendix A, Table A3**).

A total of 27 fresh carcasses were identified as having an adipose fin clip and the heads were collected for later CWT extraction and reading (**Appendix B, Table B1**). Of the 27 collected heads, 21 CWTs were successfully extracted and read. The remaining six tags were recorded as sheds. Spring-run Chinook salmon accounted for 15 of the recoveries, whereas fall-run accounted for 6 of the total 21 recoveries. As observed in 2005, all 2006 spring-run Chinook salmon recoveries were from the Feather River Hatchery. Fall-run recoveries originated from both the Feather River Hatchery and Coleman National Fish Hatchery. One fall-run recovery was observed from DFG's ongoing wild-tagging operation (Lower Yuba River Life History Investigation). Excluding this one exception, all CWTs recovered during the survey period were from out-of-basin hatcheries. Feather River Hatchery Chinook salmon accounted for 90% of the CWT recoveries, whereas Coleman National Fish Hatchery accounted for less than 10% of the recoveries. The majority of Feather River Hatchery strays were from plants transported far from their natal hatchery, mostly to Benecia and San Pablo Bay. The straying from this hatchery could be attributed to these non-natal stream plants, either through an incomplete imprinting on home waters, or an increase in survivability over in-river releases. A combination of both scenarios could be possible; however, further data analysis and cohort reconstruction from the 2002 and 2003 brood years would be needed to make any definitive conclusions.

An egg retention survey was attempted as part of the escapement enumeration process, but the methods were changed substantially from the previous year's effort. The original methods utilized a visual estimation of egg retention for every tenth fresh female observed. The proposed methods called for a much higher sampling frequency and field extraction of the ovaries. The time required to perform such rigorous sampling was too intensive to complete the entire survey during daylight hours, so a less frequent model was adopted. Following the significant number of CWT recoveries from 2005 (196 CWT heads collected that year), it was assumed that sampling only CWT recoveries for egg retention under the new protocols would provide an adequately robust dataset for analysis. However, only 27 ad-clipped Chinook salmon carcasses were recovered. Of the total 27 CWT ad-clipped carcasses recovered, only half were fresh enough for inclusion under the new methods. Furthermore, only three of the carcasses observed met the set criteria for egg collection.

Most of the unspawned carcasses observed during weekly surveys were not ad-clipped, and thus were overlooked by the new methods. During a one-week period in November 2006, survey crews estimated that every other female carcass handled was completely unspawned, but was unaccounted for under the new survey methods as few carcasses were observed to be ad-clipped during this time. This observation was repeated during several weekly surveys. Due to these problems associated with the egg retention survey (low sample size/conflicting field observations), data from the egg retention survey will not be reported.

Scale samples were collected at random from September 19, 2006 through December 20, 2006. A total of 301 samples were collected and transferred to the Ocean Salmon Project for

processing. The results from the age scale reading and cohort analysis from these collections will not be available immediately. The raw data have been included in Appendix C.

Flows during the survey period remained fairly constant (450 – 600 cfs), with the exception of a small increase in flows from precipitation in late December 2006 (**Figure 2**).

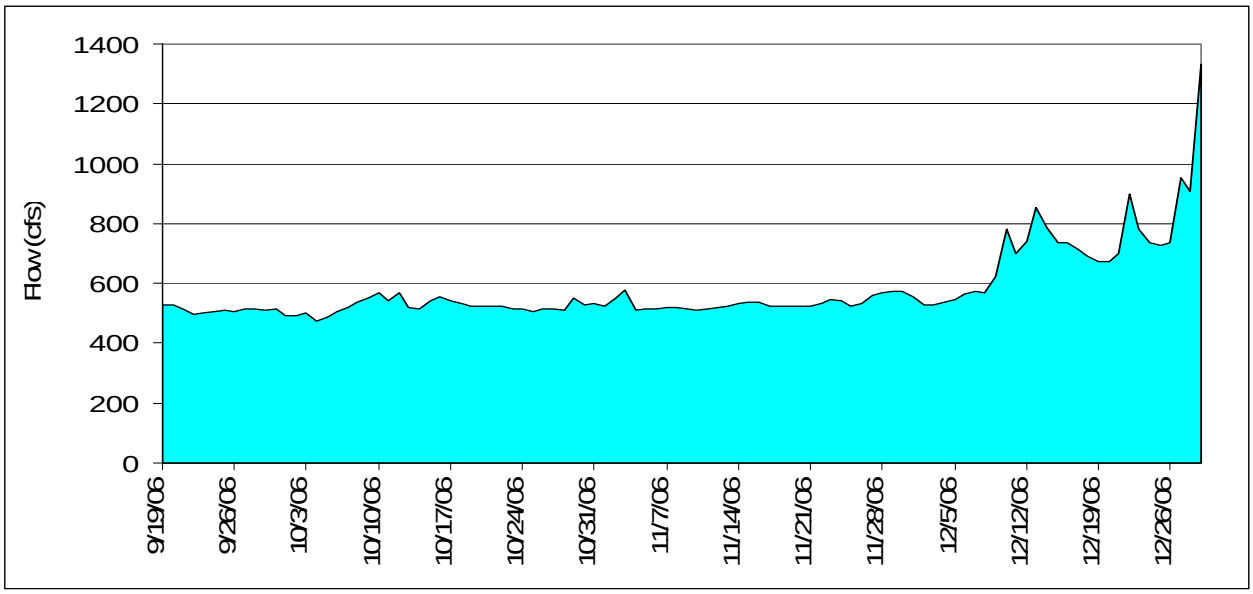

Figure 2. Yuba River mean daily flow as measured at the Marysville gage from September 19, 2006 to December 29, 2006.

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Appendix A – Weekly Schaefer Estimates

Table A1. Weekly recoveries and population estimates of adult Chinook salmon from the Narrows pool to the State Route 20 Bridge.

Week of	R *(ij)* by Week of Tagging *(i)*														Tags Recovd	Carcass Count	
Recovery *(j)*	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	R *(j)*	C *(j)*	C*(j)* /R*(j)*
25-Sep	0														0	5	0.00
2-Oct	0	2													2	55	27.50
9-Oct	0	0	4												4	127	31.75
16-Oct	0	0	1	17											18	179	9.94
23-Oct	0	0	2	10	23										35	128	3.66
30-Oct	0	0	0	2	3	12									17	100	5.88
6-Nov	0	0	0	1	4	8	8								21	81	3.86
13-Nov	0	0	0	0	0	0	4	10							14	94	6.71
20-Nov	0	0	0	0	0	1	2	3	16						22	111	5.05
27-Nov	0	0	0	0	0	0	0	0	5	19					24	65	2.71
4-Dec	0	0	0	0	0	0	0	0	0	4	4				8	35	4.38
11-Dec	0	0	0	0	0	0	0	0	0	0	0	1			1	7	7.00
18-Dec	0	0	0	0	0	0	0	0	0	0	0	3	1		4	27	6.75
25-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.00
Recovery R*(i)*	0	2	7	30	30	21	14	13	21	23	4	4	1	0	170	1018	
Tagged M *(i)*	0	4	20	58	73	40	34	25	36	43	14	6	2	7	362		
M *(i)* / R *(i)*	0.00	2.00	2.86	1.93	2.43	1.90	2.43	1.92	1.71	1.87	3.50	1.50	2.00	0.00			
Recov. Ratio:	0.0%	50.0%	35.0%	51.7%	41.1%	52.5%	41.2%	52.0%	58.3%	53.5%	28.6%	66.7%	50.0%	0.0%	**47.0%**	**Overall Recovery**	

Week of	Estimate by Week of Tagging *(i)*														Schaefer Weekly Totals	
Recovery *(j)*	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec		
25-Sep	0														0	
2-Oct	0	110													110	
9-Oct	0	0	363												363	
16-Oct	0	0	28	327											355	
23-Oct	0	0	21	71	205										297	
30-Oct	0	0	0	23	43	134									200	
6-Nov	0	0	0	7	38	59	75								179	
13-Nov	0	0	0	0	0	0	65	129							194	
20-Nov	0	0	0	0	0	10	25	29	138						202	
27-Nov	0	0	0	0	0	0	0	0	23	96					119	
4-Dec	0	0	0	0	0	0	0	0	0	33	61				94	
11-Dec	0	0	0	0	0	0	0	0	0	0	0	11			11	
18-Dec	0	0	0	0	0	0	0	0	0	0	0	30	14		44	
25-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	27	27	
subtotal	0	110	412	428	286	203	165	158	161	129	61	41	14	27	2195	Total Estimate
subtract tags		-4	-20	-58	-73	-40	-34	-25	-36	-43	-14	-6	-2	-7	-362	Total Tag Adjustment
															2	Fish Handled 1st Week
															1835	**Adjusted Total**

Table A2. Weekly recoveries and population estimates of adult Chinook salmon from the State Route 20 Bridge to Daguerre Dam.

Week of	R *(ij)* by Week of Tagging *(i)*														Tags Recovd	Carcass Count	
Recovery *(j)*	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	R *(j)*	C *(j)*	C*(j)* /R*(j)*
25-Sep	0														0	3	0.00
2-Oct	0	1													1	42	42.00
9-Oct	0	0	4												4	119	29.75
16-Oct	0	0	0	10											10	95	9.50
23-Oct	0	0	1	0	4										5	99	19.80
30-Oct	0	0	0	0	5	14									19	103	5.42
6-Nov	0	0	0	0	1	4	12								17	136	8.00
13-Nov	0	0	0	0	0	0	4	28							32	375	11.72
20-Nov	0	0	0	0	0	0	3	4	47						54	303	5.61
27-Nov	0	0	0	0	0	0	0	0	14	28					42	186	4.43
4-Dec	0	0	0	0	0	0	0	0	3	6	20				29	73	2.52
11-Dec	0	0	0	0	0	0	0	0	0	2	4	3			9	33	3.67
18-Dec	0	0	0	0	0	0	0	0	0	1	0	0	4		5	29	5.80
25-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0.00
Recovery R*(i)*	0	1	5	10	10	18	19	32	64	37	24	3	4	0	227	1605	
Tagged M *(i)*	0	1	25	54	29	39	41	61	96	87	46	15	9	7	510		
M *(i)* / R *(i)*	0.00	1.00	5.00	5.40	2.90	2.17	2.16	1.91	1.50	2.35	1.92	5.00	2.25	0.00			
Recov. Ratio:	0.0%	100.0%	20.0%	18.5%	34.5%	46.2%	46.3%	52.5%	66.7%	42.5%	52.2%	20.0%	44.4%	0.0%	**44.5%**	**Overall Recovery**	

Week of	Estimate by Week of Tagging *(i)*														Schaefer Weekly Totals	
Recovery *(j)*	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec		
25-Sep	0														0	
2-Oct	0	42													42	
9-Oct	0	0	595												595	
16-Oct	0	0	0	513											513	
23-Oct	0	0	99	0	230										329	
30-Oct	0	0	0	0	79	164									243	
6-Nov	0	0	0	0	23	69	207								299	
13-Nov	0	0	0	0	0	0	101	625							726	
20-Nov	0	0	0	0	0	0	36	43	396						475	
27-Nov	0	0	0	0	0	0	0	0	93	292					385	
4-Dec	0	0	0	0	0	0	0	0	11	36	96				143	
11-Dec	0	0	0	0	0	0	0	0	0	17	28	55			100	
18-Dec	0	0	0	0	0	0	0	0	0	14	0	0	52		66	
25-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	29	29	
subtotal	0	42	694	513	332	233	344	668	500	359	124	55	52	29	3945	Total Estimate
subtract tags		-1	-25	-54	-29	-39	-41	-61	-96	-87	-46	-15	-9	-7	-510	Total Tag Adjustment
															0	Fish Handled 1st Week
															3435	**Adjusted Total**

Table A3. Weekly recoveries and population estimates of adult Chinook salmon from Daguerre Dam to the Simpson Lane Bridge.

Week of	R *(ij)* by Week of Tagging *(i)*														Tags Recovd	Carcass Count	
Recovery *(j)*	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	R *(j)*	C *(j)*	C*(j)* /R*(j)*
25-Sep	1														1	12	12.00
2-Oct	0	1													1	11	11.00
9-Oct	0	0	1												1	10	10.00
16-Oct	0	0	1	1											2	20	10.00
23-Oct	0	0	0	0	1										1	29	29.00
30-Oct	0	0	0	0	0	3									3	46	15.33
6-Nov	0	0	0	0	0	1	3								4	151	37.75
13-Nov	0	0	0	0	0	0	1	21							22	178	8.09
20-Nov	0	0	0	0	0	0	0	5	30						35	208	5.94
27-Nov	0	0	0	0	0	0	0	0	1	19					20	175	8.75
4-Dec	0	0	0	0	0	0	0	0	2	6	26				34	158	4.65
11-Dec	0	0	0	0	0	0	0	0	0	1	3	10			14	71	5.07
18-Dec	0	0	0	0	0	0	0	0	0	0	3	6	2		11	50	4.55
25-Dec	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7	7.00
Recovery R*(i)*	1	1	2	1	1	4	4	26	33	26	32	17	2	0	150	1126	
Tagged M *(i)*	1	3	3	2	1	14	24	72	56	57	58	47	13	9	360		
M *(i)* / R *(i)*	1.00	3.00	1.50	2.00	1.00	3.50	6.00	2.77	1.70	2.19	1.81	2.76	6.50	0.00			
Recov. Ratio:	100.0%	33.3%	66.7%	50.0%	100.0%	28.6%	16.7%	36.1%	58.9%	45.6%	55.2%	36.2%	15.4%	0.0%	**41.7%**	**Overall Recovery Rate**	

Week of	Estimate by Week of Tagging *(i)*														Schaefer Weekly Totals	
Recovery *(j)*	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec		
25-Sep	12														12	
2-Oct	0	33													33	
9-Oct	0	0	15												15	
16-Oct	0	0	15	20											35	
23-Oct	0	0	0	0	29										29	
30-Oct	0	0	0	0	0	161									161	
6-Nov	0	0	0	0	0	132	680								812	
13-Nov	0	0	0	0	0	0	49	471							520	
20-Nov	0	0	0	0	0	0	0	82	303						385	
27-Nov	0	0	0	0	0	0	0	0	15	364					379	
4-Dec	0	0	0	0	0	0	0	0	16	61	219				296	
11-Dec	0	0	0	0	0	0	0	0	0	11	28	140			179	
18-Dec	0	0	0	0	0	0	0	0	0	0	25	75	59		159	
25-Dec	0	0	0	0	0	0	0	0	0	0	0	19	0	50	69	
subtotal	12	33	30	20	29	293	729	553	334	436	272	234	59	50	3084	Total Estimate
subtract tags		-3	-3	-2	-1	-14	-24	-72	-56	-57	-58	-47	-13	-9	-359	Total Tag Adjustment
															3	Fish Handled 1st Week
															2728	**Adjusted Total**

Appendix B – Coded-Wire Tag Recovery

Table B1. Coded-wire tag recoveries from the Yuba River escapement survey from September 19, 2006 to December 29, 2006.

Date Rec	Head Tag #	CWT #	Location	Brood Yr.	Race	Rel Location	Rel Date	# Released	Origin	FL (mm)	Sex
9/19/2006	74901	062400	RM 21	2003	SRCS	San Pablo Bay	5/28/2004	118424	FRH	730	F
9/21/2006	74902	062790	RM 04	2002	SRCS	Live Oak	5/21/2003	112494	FRH	870	F
9/21/2006	74903	062792	RM 03	2002	SRCS	Live Oak	5/21/2003	112283	FRH	965	F
9/26/2006	74904	062785	RM 21	2002	SRCS	Benicia	5/21/2003	111858	FRH	1035	M
10/3/2006	74906	062786	RM 22	2002	SRCS	Benicia	5/21/2003	111843	FRH	845	F
10/3/2006	74908	062758	RM 21	2002	SRCS	Benicia	4/29/2003	55676	FRH	980	M
10/3/2006	74905	shed	RM 22	n/a	n/a	n/a	n/a	n/a	n/a	830	F
10/3/2006	74907	shed	RM 22	n/a	n/a	n/a	n/a	n/a	n/a	750	F
10/4/2006	74909	062786	RM 15	2002	SRCS	Benicia	5/21/2003	111843	FRH	905	M
10/5/2006	74910	shed	RM 05	n/a	n/a	n/a	n/a	n/a	n/a	930	M
10/10/2006	74912	062400	RM 21	2003	SRCS	San Pablo Bay	5/28/2004	118424	FRH	745	F
10/10/2006	74913	062785	RM 20	2002	SRCS	Benicia	5/21/2003	111858	FRH	910	F
10/10/2006	74911	062409	RM 22	2003	FRCS	San Pablo Bay	6/4/2004	119105	FRH	730	F
10/11/2006	74915	062402	RM 15	2003	SRCS	San Pablo Bay	5/28/2004	117576	FRH	715	F
10/11/2006	74914	062789	RM 16	2002	SRCS	Live Oak	5/21/2003	110942	FRH	830	F
10/12/2006	74916	062786	RM 10	2002	SRCS	Benicia	5/21/2003	111843	FRH	835	F
10/12/2006	74917	062409	RM 04	2003	FRCS	San Pablo Bay	6/4/2004	119105	FRH	735	F
10/17/2006	74918	062401	RM 22	2003	SRCS	San Pablo Bay	5/28/2004	116664	FRH	710	F
10/17/2006	74919	062792	RM 19	2002	SRCS	Live Oak	5/21/2003	112283	FRH	955	F
10/17/2006	74927	062786	RM 22	2002	SRCS	Benicia	5/21/2003	111843	FRH	980	M
10/19/2006	74928	062765	RM 05	2002	FRCS	Live Oak	4/15/2003	55953	FRH	945	M
10/24/2006	74920	062766	RM 21	2002	FRCS	Live Oak	4/15/2003	56127	FRH	1065	M
10/25/2006	74921	0601030009	RM 17	2002	FRCS	Yuba River HLW	4/7/2004	841		745	F
10/31/2006	74922	shed	RM 21	n/a	n/a	n/a	n/a	n/a	n/a	815	F
11/1/2006	74923	0501030103	RM 14	2003	FRCS	Clarksburg	3/2/2004	50196	CNFH	835	F
11/15/2006	74924	shed	RM 18	n/a	n/a	n/a	n/a	n/a	n/a	815	F
11/16/2006	74925	shed	RM 11	n/a	n/a	n/a	n/a	n/a	n/a	900	F

Appendix C – Scale Age Sampling

Table C-1. Chinook Salmon scale samples collected from the Yuba River escapement survey from September 19, 2006 to December 29, 2006.

Sample #	Sample ID	Date	River	Location (river mile)	Type	Run	Fl (mm)	Sex	Head tag	Comments	Collector
1	12001	9/19/2006	Yuba R.	21	carcass	Fall	730	F	74901		Massa/Rehse
2	12002	9/21/2006	Yuba R.	4	carcass	Fall	870	F	74902	unspawned	Massa/Karcher
3	12003	9/21/2006	Yuba R.	3	carcass	Fall	965	F	74903	unspawned	Massa/Rehse
4	12004	9/26/2006	Yuba R.	22	carcass	Fall	920	M			Campos/Rehse
5	12005	9/26/2006	Yuba R.	21	carcass	Fall	1035	M	74904		Karcher
6	12006	9/27/2006	Yuba R.	18	carcass	Spr.	720	M		DWR Floy tag # 04186	Rehse/Karcher
7	12007	9/28/2006	Yuba R.	5	carcass	Fall	860	M			Campos
8	12008	10/4/2006	Yuba R.	16	carcass	Fall	1030	M			Rehse
9	12009	10/3/2006	Yuba R.	22	carcass	Fall	845	F	74906	spawned	Rehse/Karcher
10	12010	10/5/2006	Yuba R.	5	carcass	Fall	930	M	74910		Massa
11	12011	10/10/2006	Yuba R.	21	carcass	Fall	745	F	74912	spawned	Karcher
12	12012	10/10/2006	Yuba R.	20	carcass	Fall	910	F	74913		Carpenter
13	12013	10/10/2006	Yuba R.	19	carcass	Fall	755	F		spawned	Rehse
14	12014	10/11/2006	Yuba R.	16	carcass	Fall	830	F	74914	spawned	Karcher
15	12015	10/11/2006	Yuba R.	15	carcass	Fall	715	F	74915	spawned	Karcher
16	12016	10/12/2006	Yuba R.	4	carcass	Fall	735	F	74917	partial spawned	Carpenter
17	12017	10/25/2006	Yuba R.	17	carcass	Fall	745	F	74921	spawned	Karcher
18	12018	10/12/2006	Yuba R.	10	carcass	Fall	835	F	74916	spawned	Campos
19	12019	10/31/2006	Yuba R.	21	carcass	Fall	900	F			Karcher
20	12020	10/17/2006	Yuba R.	22	carcass	Fall	763	F			CP
21	12021	10/17/2006	Yuba R.	22	carcass	Fall	754	F		spawned	CP
22	12022	10/17/2006	Yuba R.	22	carcass	Fall	849	F		spawned	CP
23	12023	10/17/2006	Yuba R.	22	carcass	Fall	992	M			CP
24	12024	10/17/2006	Yuba R.	22	carcass	Fall	762	F		spawned	CP
25	12025	10/17/2006	Yuba R.	22	carcass	Fall	817	F		spawned	CP
26	12026	10/17/2006	Yuba R.	22	carcass	Fall	853	M			CP
27	12027	10/17/2006	Yuba R.	22	carcass	Fall	748	F		spawned	CP
28	12028	10/17/2006	Yuba R.	22	carcass	Fall	710	F	74918	spawned	CP
29	12029	10/17/2006	Yuba R.	22	carcass	Fall	805	M			CP
30	12030	10/17/2006	Yuba R.	21	carcass	Fall	726	F		spawned	CP
31	12031	10/17/2006	Yuba R.	21	carcass	Fall	910	M			CP
32	12032	10/17/2006	Yuba R.	21	carcass	Fall	890	M			CP
33	12033	10/17/2006	Yuba R.	21	carcass	Fall	744	M			CP
34	12034	10/17/2006	Yuba R.	21	carcass	Fall	764	F		spawned	CP
35	12035	10/17/2006	Yuba R.	21	carcass	Fall	810	F		spawned	CP
36	12036	10/17/2006	Yuba R.	21	carcass	Fall	780	F		spawned	CP
37	12037	10/17/2006	Yuba R.	21	carcass	Fall	782	F		spawned	CP
38	12038	10/17/2006	Yuba R.	21	carcass	Fall	880	F		spawned	CP
39	12039	10/17/2006	Yuba R.	21	carcass	Fall	806	F		spawned	CP
40	12040	10/17/2006	Yuba R.	21	carcass	Fall	860	F			CP
41	12041	10/17/2006	Yuba R.	20	carcass	Fall	800	F			CP
42	12042	10/17/2006	Yuba R.	20	carcass	Fall	1040	M			CP
43	12043	10/17/2006	Yuba R.	20	carcass	Fall	700	M			CP
44	12044	10/17/2006	Yuba R.	20	carcass	Fall	822	F		spawned	CP
45	12045	10/17/2006	Yuba R.	20	carcass	Fall	1080	M			CP
46	12046	10/17/2006	Yuba R.	20	carcass	Fall	955	F	74919	spawned	CP
47	12047	10/19/2006	Yuba R.	5	carcass	Fall	945	F	74928		Karcher
48	12048	10/24/2006	Yuba R.	22	carcass	Fall	814	F			CP
49	12049	10/24/2006	Yuba R.	22	carcass	Fall	805	M			CP
50	12050	10/24/2006	Yuba R.	22	carcass	Fall	1003	M			CP

Table C-1. Chinook Salmon scale samples collected from the Yuba River escapement survey from September 19, 2006 to December 29, 2006 (cont.).

Sample #	Sample ID	Date	River	Location (river mile)	Type	Run	Fl (mm)	Sex	Head tag	Comments	Collector
51	12051	10/24/2006	Yuba R.	22	carcass	Fall	781	F			CP
52	12052	10/24/2006	Yuba R.	22	carcass	Fall	765	F			CP
53	12053	10/24/2006	Yuba R.	22	carcass	Fall	755	F			CP
54	12054	10/24/2006	Yuba R.	22	carcass	Fall	790	F			CP
55	12055	10/24/2006	Yuba R.	22	carcass	Fall	837	M			CP
56	12056	10/24/2006	Yuba R.	22	carcass	Fall	740	F			CP
57	12057	10/24/2006	Yuba R.	22	carcass	Fall	635	M		Jack	CP
58	12058	10/24/2006	Yuba R.	22	carcass	Fall	880	F			CP
59	12059	10/24/2006	Yuba R.	21	carcass	Fall	1065	M	74920		CP
60	12060	10/24/2006	Yuba R.	21	carcass	Fall	870	M			CP
61	12061	10/24/2006	Yuba R.	21	carcass	Fall	905	F			CP
62	12062	10/24/2006	Yuba R.	21	carcass	Fall	895	F			CP
63	12063	10/24/2006	Yuba R.	21	carcass	Fall	893	F			CP
64	12064	10/24/2006	Yuba R.	21	carcass	Fall	648	F		Jill	CP
65	12065	10/24/2006	Yuba R.	21	carcass	Fall	560	M		Jack	CP
66	12066	10/24/2006	Yuba R.	21	carcass	Fall	795	F			CP
67	12067	10/24/2006	Yuba R.	21	carcass	Fall	914	F			CP
68	12068	10/24/2006	Yuba R.	21	carcass	Fall	740	F			CP
69	12069	10/24/2006	Yuba R.	21	carcass	Fall	943	F			CP
70	12070	10/24/2006	Yuba R.	22	carcass	Fall	860	F			CP
71	12071	10/24/2006	Yuba R.	19	carcass	Fall	686	M			CP
72	12072	10/24/2006	Yuba R.	19	carcass	Fall	860	F			CP
73	12073	10/24/2006	Yuba R.	19	carcass	Fall	940	M			CP
74	12074	10/24/2006	Yuba R.	19	carcass	Fall	810	F			CP
75	12075	10/31/2006	Yuba R.	21	carcass	Fall	930	NO DATA			Karcher
76	12076	10/31/2006	Yuba R.	21	carcass	Fall	815	F	74922	spawned	Karcher
77	12077	11/1/2006	Yuba R.	19	carcass	Fall	755	F			CP
78	12078	11/1/2006	Yuba R.	19	carcass	Fall	778	F			CP
79	12079	11/1/2006	Yuba R.	18	carcass	Fall	727	F			CP
80	12080	11/1/2006	Yuba R.	18	carcass	Fall	960	M			CP
81	12081	11/1/2006	Yuba R.	17	carcass	Fall	850	F			CP
82	12082	11/1/2006	Yuba R.	17	carcass	Fall	905	F			CP
83	12083	11/1/2006	Yuba R.	17	carcass	Fall	800	F			CP
84	12084	11/1/2006	Yuba R.	16	carcass	Fall	1010	M			CP
85	12085	11/1/2006	Yuba R.	16	carcass	Fall	845	M			CP
86	12086	11/1/2006	Yuba R.	16	carcass	Fall	845	F			CP
87	12087	11/1/2006	Yuba R.	15	carcass	Fall	755	F			CP
88	12088	11/1/2006	Yuba R.	14	carcass	Fall	730	M			CP
89	12089	11/1/2006	Yuba R.	14	carcass	Fall	720	M			CP
90	12090	11/1/2006	Yuba R.	14	carcass	Fall	775	F			CP
91	12091	11/1/2006	Yuba R.	14	carcass	Fall	775	F			CP
92	12092	11/1/2006	Yuba R.	14	carcass	Fall	865	F			CP
93	12093	11/1/2006	Yuba R.	14	carcass	Fall	729	F			CP
94	12094	11/1/2006	Yuba R.	14	carcass	Fall	930	F			CP
95	12095	11/1/2006	Yuba R.	14	carcass	Fall	695	M			CP
96	12096	11/1/2006	Yuba R.	14	carcass	Fall	950	M			CP
97	12097	11/1/2006	Yuba R.	14	carcass	Fall	835	F	74923		CP
98	12098	11/1/2006	Yuba R.	14	carcass	Fall	820	F			CP
99	12099	11/1/2006	Yuba R.	14	carcass	Fall	1000	M			CP
100	12100	11/1/2006	Yuba R.	13	carcass	Fall	770	F			CP

Table C-1. Chinook Salmon scale samples collected from the Yuba River escapement survey from September 19, 2006 to December 29, 2006 (cont.).

Sample #	Sample ID	Date	River	Location (river mile)	Type	Run	Fl (mm)	Sex	Head tag	Comments	Collector
101	12101	11/1/2006	Yuba R.	13	carcass	Fall	1080	M			CP
102	12102	11/1/2006	Yuba R.	13	carcass	Fall	900	M			CP
103	12103	11/1/2006	Yuba R.	12	carcass	Fall	790	F			CP
104	12104	11/1/2006	Yuba R.	12	carcass	Fall	660	M			CP
105	12105	11/1/2006	Yuba R.	12	carcass	Fall	807	F			CP
106	12106	11/1/2006	Yuba R.	12	carcass	Fall	950	M			CP
107	12107	11/1/2006	Yuba R.	12	carcass	Fall	885	F			CP
108	12108	11/7/2006	Yuba R.	22	carcass	Fall	875	F			CP
109	12109	11/7/2006	Yuba R.	22	carcass	Fall	785	F			CP
110	12110	11/7/2006	Yuba R.	22	carcass	Fall	800	F			CP
111	12111	11/7/2006	Yuba R.	21	carcass	Fall	830	F			CP
112	12112	11/7/2006	Yuba R.	21	carcass	Fall	1120	M			CP
113	12113	11/7/2006	Yuba R.	21	carcass	Fall	760	F			CP
114	12114	11/7/2006	Yuba R.	21	carcass	Fall	940	F			CP
115	12115	11/7/2006	Yuba R.	21	carcass	Fall	935	F			CP
116	12116	11/7/2006	Yuba R.	20	carcass	Fall	843	F			CP
117	12117	11/7/2006	Yuba R.	20	carcass	Fall	640	F		Jill	CP
118	12118	11/7/2006	Yuba R.	20	carcass	Fall	712	F			CP
119	12119	11/7/2006	Yuba R.	20	carcass	Fall	787	F			CP
120	12120	11/7/2006	Yuba R.	20	carcass	Fall	673	F			CP
121	12121	11/7/2006	Yuba R.	20	carcass	Fall	735	F			CP
122	12122	11/7/2006	Yuba R.	20	carcass	Fall	912	F			CP
123	12123	11/7/2006	Yuba R.	20	carcass	Fall	655	F			CP
124	12124	11/7/2006	Yuba R.	20	carcass	Fall	1015	M			CP
125	12125	11/7/2006	Yuba R.	20	carcass	Fall	915	F			CP
126	12126	11/7/2006	Yuba R.	20	carcass	Fall	772	F			CP
127	12127	11/7/2006	Yuba R.	20	carcass	Fall	610	M		Jack	CP
128	12128	11/7/2006	Yuba R.	20	carcass	Fall	905	F			CP
129	12129	11/7/2006	Yuba R.	20	carcass	Fall	760	F			CP
130	12130	11/15/2006	Yuba R.	18	carcass	Fall	815	F	74924		Karcher
131	12131	11/16/2006	Yuba R.	11	carcass	Fall	950	M			CP
132	12132	11/16/2006	Yuba R.	11	carcass	Fall	780	F	74925		CP
133	12133	11/16/2006	Yuba R.	11	carcass	Fall	903	F			CP
134	12134	11/16/2006	Yuba R.	11	carcass	Fall	920	F			CP
135	12135	11/16/2006	Yuba R.	11	carcass	Fall	830	F			CP
136	12136	11/16/2006	Yuba R.	9	carcass	Fall	750	F			CP
137	12137	11/16/2006	Yuba R.	9	carcass	Fall	825	F			CP
138	12138	11/16/2006	Yuba R.	9	carcass	Fall	920	F			CP
139	12139	11/16/2006	Yuba R.	7	carcass	Fall	740	M			CP
140	12140	11/16/2006	Yuba R.	7	carcass	Fall	720	F			CP
141	12141	11/16/2006	Yuba R.	7	carcass	Fall	720	F			CP
142	12142	11/16/2006	Yuba R.	7	carcass	Fall	1065	M			CP
143	12143	11/16/2006	Yuba R.	6	carcass	Fall	930	F			CP
144	12144	11/16/2006	Yuba R.	6	carcass	Fall	935	M			CP
145	12145	11/16/2006	Yuba R.	4	carcass	Fall	780	F			CP
146	12146	11/16/2006	Yuba R.	4	carcass	Fall	1125	M			CP
147	12147	11/16/2006	Yuba R.	4	carcass	Fall	653	F			CP
148	12148	11/16/2006	Yuba R.	4	carcass	Fall	1085	M			CP
149	12149	11/16/2006	Yuba R.	4	carcass	Fall	760	F			CP
150	12150	11/16/2006	Yuba R.	4	carcass	Fall	850	F			CP

Table C-1. Chinook Salmon scale samples collected from the Yuba River escapement survey from September 19, 2006 to December 29, 2006 (cont.).

Sample #	Sample ID	Date	River	Location (river mile)	Type	Run	Fl (mm)	Sex	Head tag	Comments	Collector
151	12151	11/16/2006	Yuba R.	4	carcass	Fall	850	F			CP
152	12152	11/16/2006	Yuba R.	4	carcass	Fall	900	F			CP
153	12153	11/16/2006	Yuba R.	3	carcass	Fall	1067	M			CP
154	12154	11/16/2006	Yuba R.	3	carcass	Fall	1100	M			CP
155	12155	11/16/2006	Yuba R.	3	carcass	Fall	960	F			CP
156	12156	11/16/2006	Yuba R.	3	carcass	Fall	990	M			CP
157	12157	11/16/2006	Yuba R.	3	carcass	Fall	980	M			CP
158	12158	11/16/2006	Yuba R.	3	carcass	Fall	800	M			CP
159	12159	11/16/2006	Yuba R.	3	carcass	Fall	665	F			CP
160	12160	11/16/2006	Yuba R.	3	carcass	Fall	730	F			CP
161	12161	11/16/2006	Yuba R.	3	carcass	Fall	1015	M			CP
162	12162	11/16/2006	Yuba R.	3	carcass	Fall	760	M			CP
163	12163	11/16/2006	Yuba R.	3	carcass	Fall	880	F			CP
164	12164	11/16/2006	Yuba R.	2	carcass	Fall	880	M			CP
165	12165	11/21/2006	Yuba R.	18	carcass	Fall	900	F			CP
166	12166	11/21/2006	Yuba R.	18	carcass	Fall	750	F			CP
167	12167	11/21/2006	Yuba R.	18	carcass	Fall	880	F			CP
168	12168	11/21/2006	Yuba R.	18	carcass	Fall	655	M			CP
169	12169	11/21/2006	Yuba R.	18	carcass	Fall	860	F			CP
170	12170	11/21/2006	Yuba R.	18	carcass	Fall	930	F			CP
171	12171	11/21/2006	Yuba R.	18	carcass	Fall	940	F			CP
172	12172	11/21/2006	Yuba R.	18	carcass	Fall	880	F			CP
173	12173	11/21/2006	Yuba R.	17	carcass	Fall	945	F			CP
174	12174	11/21/2006	Yuba R.	17	carcass	Fall	960	F			CP
175	12175	11/21/2006	Yuba R.	17	carcass	Fall	950	F			CP
176	12176	11/21/2006	Yuba R.	17	carcass	Fall	790	F			CP
177	12177	11/21/2006	Yuba R.	17	carcass	Fall	850	F			CP
178	12178	11/21/2006	Yuba R.	17	carcass	Fall	910	M			CP
179	12179	11/21/2006	Yuba R.	17	carcass	Fall	860	F			CP
180	12180	11/21/2006	Yuba R.	17	carcass	Fall	750	F			CP
181	12181	11/21/2006	Yuba R.	17	carcass	Fall	920	F			CP
182	12182	11/21/2006	Yuba R.	17	carcass	Fall	710	F			CP
183	12183	11/21/2006	Yuba R.	17	carcass	Fall	835	F			CP
184	12184	11/21/2006	Yuba R.	15	carcass	Fall	985	M			CP
185	12185	11/21/2006	Yuba R.	15	carcass	Fall	900	F			CP
186	12186	11/21/2006	Yuba R.	15	carcass	Fall	935	M			CP
187	12187	11/21/2006	Yuba R.	15	carcass	Fall	910	F			CP
188	12188	11/21/2006	Yuba R.	15	carcass	Fall	875	F			CP
189	12189	11/21/2006	Yuba R.	15	carcass	Fall	810	F			CP
190	12190	11/21/2006	Yuba R.	15	carcass	Fall	865	F			CP
191	12191	11/21/2006	Yuba R.	15	carcass	Fall	740	F			CP
192	12192	11/21/2006	Yuba R.	15	carcass	Fall	830	F			CP
193	12193	11/21/2006	Yuba R.	14	carcass	Fall	910	F			CP
194	12194	11/21/2006	Yuba R.	14	carcass	Fall	910	F			CP
195	12195	11/21/2006	Yuba R.	14	carcass	Fall	860	F			CP
196	12196	11/21/2006	Yuba R.	14	carcass	Fall	895	F			CP
197	12197	11/21/2006	Yuba R.	14	carcass	Fall	835	M			CP
198	12198	11/21/2006	Yuba R.	14	carcass	Fall	800	F			CP
199	12199	11/21/2006	Yuba R.	14	carcass	Fall	900	F			CP
200	12200	11/21/2006	Yuba R.	13	carcass	Fall	860	F			CP

Table C-1. Chinook Salmon scale samples collected from the Yuba River escapement survey from September 19, 2006 to December 29, 2006 (cont.).

Sample #	Sample ID	Date	River	Location (river mile)	Type	Run	Fl (mm)	Sex	Head tag	Comments	Collector
201	12201	11/21/2006	Yuba R.	13	carcass	Fall	723	F			CP
202	12202	11/21/2006	Yuba R.	13	carcass	Fall	890	F			CP
203	12203	11/21/2006	Yuba R.	13	carcass	Fall	840	F			CP
204	12204	11/21/2006	Yuba R.	13	carcass	Fall	800	F			CP
205	12205	11/21/2006	Yuba R.	13	carcass	Fall	670	M			CP
206	12206	11/21/2006	Yuba R.	13	carcass	Fall	980	F			CP
207	12207	11/21/2006	Yuba R.	13	carcass	Fall	990	M			CP
208	12208	11/21/2006	Yuba R.	13	carcass	Fall	1050	F			CP
209	12209	11/21/2006	Yuba R.	13	carcass	Fall	845	F			CP
210	12210	11/21/2006	Yuba R.	13	carcass	Fall	1000	M			CP
211	12211	11/21/2006	Yuba R.	12	carcass	Fall	925	F			CP
212	12212	11/21/2006	Yuba R.	12	carcass	Fall	825	M			CP
213	12213	11/21/2006	Yuba R.	12	carcass	Fall	655	M			CP
214	12214	11/21/2006	Yuba R.	12	carcass	Fall	615	F		Jill	CP
215	12215	11/21/2006	Yuba R.	12	carcass	Fall	905	F			CP
216	12216	11/21/2006	Yuba R.	12	carcass	Fall	685	F			CP
217	12217	11/29/2006	Yuba R.	18	carcass	Fall	865	F			CP
218	12218	11/29/2006	Yuba R.	17	carcass	Fall	880	F			CP
219	12219	11/29/2006	Yuba R.	17	carcass	Fall	920	F			CP
220	12220	11/29/2006	Yuba R.	17	carcass	Fall	915	F			CP
221	12221	11/29/2006	Yuba R.	17	carcass	Fall	935	F			CP
222	12222	11/29/2006	Yuba R.	17	carcass	Fall	865	F			CP
223	12223	11/29/2006	Yuba R.	17	carcass	Fall	1100	M			CP
224	12224	11/29/2006	Yuba R.	17	carcass	Fall	1040	M			CP
225	12225	11/29/2006	Yuba R.	17	carcass	Fall	900	F			CP
226	12226	11/29/2006	Yuba R.	17	carcass	Fall	850	F			CP
227	12227	11/29/2006	Yuba R.	16	carcass	Fall	1035	M			CP
228	12228	11/29/2006	Yuba R.	16	carcass	Fall	945	F			CP
229	12229	11/29/2006	Yuba R.	16	carcass	Fall	905	F			CP
230	12230	11/29/2006	Yuba R.	16	carcass	Fall	960	F			CP
231	12231	11/29/2006	Yuba R.	16	carcass	Fall	800	F			CP
232	12232	11/29/2006	Yuba R.	16	carcass	Fall	875	F			CP
233	12233	11/29/2006	Yuba R.	16	carcass	Fall	820	F			CP
234	12234	11/29/2006	Yuba R.	16	carcass	Fall	825	F			CP
235	12235	11/29/2006	Yuba R.	16	carcass	Fall	880	F			CP
236	12236	11/29/2006	Yuba R.	15	carcass	Fall	945	F			CP
237	12237	11/29/2006	Yuba R.	15	carcass	Fall	970	F			CP
238	12238	11/29/2006	Yuba R.	15	carcass	Fall	960	F			CP
239	12239	11/29/2006	Yuba R.	15	carcass	Fall	910	F			CP
240	12240	11/29/2006	Yuba R.	15	carcass	Fall	965	F			CP
241	12241	11/29/2006	Yuba R.	15	carcass	Fall	910	F			CP
242	12242	11/29/2006	Yuba R.	15	carcass	Fall	890	F			CP
243	12243	11/29/2006	Yuba R.	15	carcass	Fall	925	F			CP
244	12244	11/29/2006	Yuba R.	14	carcass	Fall	865	M			CP
245	12245	11/29/2006	Yuba R.	13	carcass	Fall	680	F			CP
246	12246	11/29/2006	Yuba R.	13	carcass	Fall	970	F			CP
247	12247	11/29/2006	Yuba R.	13	carcass	Fall	615	M		Jack	CP
248	12248	11/29/2006	Yuba R.	12	carcass	Fall	900	F			CP
249	12249	11/29/2006	Yuba R.	12	carcass	Fall	965	M			CP
250	12250	12/7/2006	Yuba R.	11	carcass	Fall	890	F			CP

Table C-1. Chinook Salmon scale samples collected from the Yuba River escapement survey from September 19, 2006 to December 29, 2006 (cont.).

Sample #	Sample ID	Date	River	Location (river mile)	Type	Run	Fl (mm)	Sex	Head tag	Comments	Collector
251	12251	12/7/2006	Yuba R.	11	carcass	Fall	915	F			CP
252	12252	12/7/2006	Yuba R.	11	carcass	Fall	980	M			CP
253	12253	12/7/2006	Yuba R.	11	carcass	Fall	810	M			CP
254	12254	12/7/2006	Yuba R.	11	carcass	Fall	885	F			CP
255	12255	12/7/2006	Yuba R.	8	carcass	Fall	920	F			CP
256	12256	12/7/2006	Yuba R.	7	carcass	Fall	1100	M			CP
257	12257	12/7/2006	Yuba R.	7	carcass	Fall	1055	M			CP
258	12258	12/7/2006	Yuba R.	7	carcass	Fall	925	F			CP
259	12259	12/7/2006	Yuba R.	7	carcass	Fall	1070	M			CP
260	12260	12/7/2006	Yuba R.	7	carcass	Fall	845	F			CP
261	12261	12/7/2006	Yuba R.	6	carcass	Fall	975	F			CP
262	12262	12/7/2006	Yuba R.	5	carcass	Fall	1035	M			CP
263	12263	12/7/2006	Yuba R.	5	carcass	Fall	910	F			CP
264	12264	12/7/2006	Yuba R.	5	carcass	Fall	820	F			CP
265	12265	12/7/2006	Yuba R.	5	carcass	Fall	1050	M			CP
266	12266	12/7/2006	Yuba R.	5	carcass	Fall	1040	M			CP
267	12267	12/7/2006	Yuba R.	5	carcass	Fall	855	F			CP
268	12268	12/7/2006	Yuba R.	5	carcass	Fall	930	F			CP
269	12269	12/7/2006	Yuba R.	5	carcass	Fall	925	F			CP
270	12270	12/7/2006	Yuba R.	5	carcass	Fall	664	M			CP
271	12271	12/7/2006	Yuba R.	4	carcass	Fall	755	F			CP
272	12272	12/7/2006	Yuba R.	4	carcass	Fall	1070	M			CP
273	12273	12/7/2006	Yuba R.	3	carcass	Fall	665	M			CP
274	12274	12/7/2006	Yuba R.	3	carcass	Fall	880	F			CP
275	12275	12/7/2006	Yuba R.	3	carcass	Fall	890	F			CP
276	12276	12/7/2006	Yuba R.	3	carcass	Fall	915	F			CP
277	12277	12/7/2006	Yuba R.	3	carcass	Fall	880	F			CP
278	12278	12/7/2006	Yuba R.	3	carcass	Fall	950	F			CP
279	12279	12/7/2006	Yuba R.	2	carcass	Fall	540	M		Jack	CP
280	12280	12/7/2006	Yuba R.	2	carcass	Fall	845	F			CP
281	12281	12/7/2006	Yuba R.	2	carcass	Fall	1150	M			CP
282	12289	12/15/2006	Yuba R.	7	carcass	Fall	910	F			CP
283	12290	12/15/2006	Yuba R.	7	carcass	Fall	907	F			CP
284	12291	12/15/2006	Yuba R.	7	carcass	Fall	835	F			CP
285	12292	12/15/2006	Yuba R.	5	carcass	Fall	910	F			CP
286	12293	12/15/2006	Yuba R.	5	carcass	Fall	805	F			CP
287	12294	12/15/2006	Yuba R.	5	carcass	Fall	755	F			CP
288	12295	12/15/2006	Yuba R.	5	carcass	Fall	810	M			CP
289	12296	12/15/2006	Yuba R.	3	carcass	Fall	805	F			CP
290	12297	12/15/2006	Yuba R.	3	carcass	Fall	885	F			CP
291	12298	12/15/2006	Yuba R.	3	carcass	Fall	960	F			CP
292	12299	12/15/2006	Yuba R.	3	carcass	Fall	885	F			CP
293	12300	12/15/2006	Yuba R.	2	carcass	Fall	855	F			CP
294	12301	12/20/2006	Yuba R.	6	carcass	Fall	885	F			CP
295	12302	12/20/2006	Yuba R.	6	carcass	Fall	875	F			CP
296	12303	12/20/2006	Yuba R.	6	carcass	Fall	925	F			CP
297	12304	12/20/2006	Yuba R.	6	carcass	Fall	912	F			CP
298	12305	12/20/2006	Yuba R.	4	carcass	Fall	947	F			CP
299	12306	12/20/2006	Yuba R.	4	carcass	Fall	885	F			CP
300	12307	12/20/2006	Yuba R.	3	carcass	Fall	900	F			CP
301	12308	12/20/2006	Yuba R.	3	carcass	Fall	788	F			CP