

Vaki Riverwatcher 2010-2011

(03/01/10-01/03/12)

		M	A	M	J	J	A	S	O	N	D	J	F	subtotal	total YTD	M	A	M	J	J	A	S	O	N	D	J	F	subtotal	total YTD
O.tshawytscha	N	6	8	53	856	77	93	208	951	143	97	18	16	2526	3590	0	0	0	7	17	259	929	2190	516	94	18		4030	5714
	S	2	0	0	34	117	8	143	725	29	3	2	1	1064		0	0	0	9	8	311	368	886	79	23	0		1684	
Ad-clip	N	7	1	150	1383	58	49	180	142	43	43	5	4	2065	2496	4	0	0	5	20	97	276	529	172	122	2		1227	1774
	S	0	0	0	86	109	0	99	132	3	2	0	0	431		0	0	0	2	3	121	119	249	24	28	1		547	
Ad-undet.	N	0	0	3	53	11	4	13	29	0	-11	5	1	108	155	0	0	0	0	0	10	15	36	7	12	0		80	110
	S	0	0	0	8	6	0	12	19	0	2	0	0	47		0	0	0	0	0	19	4	8	-1	0	0		30	
Total	N	13	9	206	2292	146	146	401	1122	186	129	28	21	4699	6241	4	0	0	12	37	366	1220	2755	695	228	20		5337	7598
	S	2	0	0	128	232	8	254	876	32	7	2	1	1542		0	0	0	11	11	451	491	1143	102	51	1		2261	
O.mykiss	N	22	15	7	7	15	6	10	26	2	10	70	54	244	315	28	230	45	13	21	4	19	27	1	4	0		392	1092
	S	0	0	0	0	0	0	3	13	4	24	18	9	71		38	527	40	36	12	7	13	24	3	0	0		700	
Ad-clip	N	4	40	4	2	2	2	10	17	17	36	31	81	246	383	82	129	93	63	66	64	77	95	11	15	10		705	1039
	S	0	0	0	0	0	0	1	12	0	22	36	66	137		7	239	16	14	2	3	3	27	9	8	6		334	
Ad-undet.	N	1	1	1	3	2	0	3	6	3	135	80	44	279	390	66	6	0	10	3	5	7	4	1	0	0		102	194
	S	4	0	0	1	0	0	0	3	3	102	-24	22	111		75	7	3	3	1	0	0	0	1	1	1		92	
Unk. salmonid	N	0	0	0	0	0	-1	0	2	29	2	0	0	32	40	0	0	0	0	0	0	3	6	0	2	0		11	14
	S	1	0	1	0	2	0	0	1	0	0	0	3	8		0	0	0	0	0	0	0	3	0	0	0		3	
S. pikeminnow	N	26	116	85	43	10	15	11	1	0	0	2	6	315	348	30	125	86	126	11	29	15	6	2	0	0		430	667
	S	0	6	4	16	4	0	0	1	1	0	0	1	33		4	73	81	60	11	7	0	1	0	0	0		237	
S. sucker	N	187	212	48	45	43	16	29	14	1	0	8	83	686	1092	340	508	201	27	42	114	71	55	3	0	0		1361	2802
	S	131	202	15	16	6	0	9	9	0	3	4	11	406		258	30	781	220	107	44	0	1	0	0	0		1441	
Hardhead	N	0	7	18	10	2	3	0	1	0	0	1	1	43	43	0	3	8	7	4	5	3	1	0	0	0		31	54
	S	0	0	0	0	0	0	0	0	0	0	0	0	0		1	1	7	10	4	0	0	0	0	0		23		
A. Shad	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	29	-2	0	0	0	0	0		96	104
	S	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	5	3	0	0	0	0	0		8		
O.gorbuscha	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0		3	3
	S	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		0		
L. mouth bass	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0		9	9
	S	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		0		
Striped bass	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	1
	S	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	1	0	0	0	0	0		1		
Lamprey	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	1
	S	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	1	0	0	0	0	0	0		1		
Unident. (TL<35cm)	N	-20	-14	-3	-7	3	-2	5	-3	8	-67	72	-2	-30	459	31	-345	-322	-159	-6	0	-4	-3	-7	-4	0		-819	-662
	S	55	57	0	6	0	0	21	14	9	17	65	245	489		184	-15	-3	3	-6	-4	-1	1	-1	-1	0		157	
Unident. (TL≥35cm)	N	0	0	0	4	0	0	-1	1	0	0	0	0	4	6	-1	-2	0	0	0	1	1	2	-2	0	0		-1	0
	S	0	0	0	0	0	0	2	0	0	0	0	0	2		1	0	0	0	0	0	0	0	0	0		1		
Mean % Op.	N	100	99	100	100	100	100	100	100	100	100	100	100	100	95	98	100	100	87	100	100	100	100	100	100	100		99	99
	S	100	83	100	100	100	13	99	100	100	91	91	99	90		97	100	100	100	100	100	100	100	100	100	100		100	

Biological Sampling (Narrows Pool to DPD)

CJS Mark-Recapture (DPD to Simpson Lane Bridge)

Survey Week	Fresh Carcasses Observed	Ad-clips Observed	Female Carcasses Observed	Unspawned Females Observed
09/19/2011	0	0	0	0
09/26/2011	4	2	4	3
10/03/2011	45	18	25	2
10/10/2011	125	38	63	2
10/17/2011	73	17	26	1
10/24/2011	64	15	26	0
10/31/2011	33	3	17	0
11/07/2011	31	2	20	0
11/14/2011	23	1	13	0
11/21/2011	22	2	17	0
11/28/2011	2	0	2	0
12/05/2011	8	1	5	0
12/12/2011	3	1	2	0
12/19/2011	3	2	2	0
12/26/2011	6	3	3	0
01/02/2012	2	0	0	0
01/09/2012	1	0	1	0
Totals:	445	105	229	8

Survey Week	Marked Carcass Total	Marked Carcass Recoveries	Dead on Capture	Female Carcass Total	Unspawned Total
09/19/2011	1	0	0	1	0
09/26/2011	3	0	1	0	0
10/03/2011	5	0	2	4	2
10/10/2011	30	2	3	7	1
10/17/2011	84	4	15	16	0
10/24/2011	92	21	14	20	1
10/31/2011	69	35	19	22	0
11/07/2011	57	34	30	14	0
11/14/2011	77	32	15	41	1
11/21/2011	69	46	29	31	0
11/28/2011	23	30	11	14	0
12/05/2011	20	31	13	13	0
12/12/2011	8	15	2	4	0
12/19/2011	8	5	1	3	0
12/26/2011	5	13	3	4	0
01/02/2012	2	5	0	1	0
01/09/2012	2	1	1	1	0
Totals:	555	274	159	196	5

2011 Escapement Estimate (preliminary)

- **7,598 Chinook salmon** estimated from preliminary Vaki Riverwatcher sample (Mar 1, 2011 – Jan 3, 2012) upstream of DPD.
- **1,392 ± 110 (CI@95%) Chinook salmon** estimated from modified CJS mark-recapture (Sep 19, 2011 – Jan 12, 2012) downstream of DPD.
- **Preliminary 2011 Yuba River escapement estimate is: 8,990 Chinook salmon.**
- **Some stats from the CJS estimate:**
 - **17 survey periods/704 carcasses in matrix**
 - **500 replicate bootstraps**
 - **51% recapture rate**
 - **SE was 55.892**
 - **CI @ 95% was 110**

Juvenile Habitat Use Survey

- Surveys conducted Jan 3, 2012 – Jan 5, 2012
- 7 segments with representative MU compositions for each of 7 reaches (EDR, Timbuctoo, Parks Bar, Dry Creek, DPD, Hallwood, Marysville) were surveyed by snorkeling
- Weather conditions were favorable.
 - Air temps between 50-60 degrees F / Water temps between 45-48 degrees F.
 - Sunny with high relative solar intensity for the season (around 50,000 lux for most locations).
 - Turbidity was low with Secchi readings greater than 4.5 m.
- Juvenile Chinook salmon observations were recorded in all 7 survey segments. All were parr at approximately 30-35mm.
- Thirty-three (33) bed tags were dropped during the week's surveys, representing an equal number of HSC data collection points.
- Depths at observation varied, but water velocities measured at observation points were generally low (between 0-0.12 m/s)
- Five hundred fifty-four (554) juvenile Chinook salmon were estimated to be observed during surveys.

Redd Survey

Survey Week	Englebright Reach*	Timbuctoo Reach	Parks Bar Reach	Dry Creek Reach	DPD Reach	Hallwood Reach	Marysville Reach
09/12/2011	0						
09/19/2011	0	7	1	0	2	0	0
09/26/2011	8						
10/3/2011	13						
10/10/2011	18						
10/17/2011	7	79	44	10	24	6	0
10/24/2011	14						
10/31/2011	16						
11/07/2011	3						
11/14/2011	3	56	32	17	22	22	3
11/21/2011	2						
11/28/2011	3						
12/05/2011	0						
12/12/2011	0						
12/19/2011	0	12	17	14	14	19	4
12/26/2011							
01/02/2012							
01/09/2012	0	10	5	3	3	13	0
Totals	87	164	99	44	65	60	7

*USACE EDR redd survey methods specified a weekly sampling frequency through 12/19/11. All surveys beginning 1/09/12 will occur every two weeks.