

# Salmon River Restoration Council

P.O. Box 1089 ♦ 25631 Sawyers Bar Rd ♦ Sawyers Bar, CA 96027  
email- [info@srrc.org](mailto:info@srrc.org) ♦ webpage – [www.srrc.org](http://www.srrc.org)  
phone: (530) 462-4665 ♦ fax: (530) 462-4664

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## Salmon River Spring Run Chinook Escapement Survey – 2010-FISHERIES-FP-07

Agreement Number: [81333AG041](#)

Time Period: July 18, 2010 – March 1, 2011

March 1, 2011

FWS Project Officer:  
Gary Curtis  
1829 South Oregon Street  
Yreka, CA 96097  
(530) 841-3117  
[gary\\_curtis@fws.gov](mailto:gary_curtis@fws.gov)

FWS Cooperative Agreements Assistant:  
Misty Bradford  
1829 South Oregon Street  
Yreka, CA 96097  
(530) 841-3110  
[misty\\_bradford@fws.gov](mailto:misty_bradford@fws.gov)

The Salmon River Restoration Council (SRRC) is submitting the enclosed final invoice for Agreement # [81333AG041](#) Salmon River Spring Run Chinook Escapement Survey 2010-FISHERIES-FP-07. The SRRC led the coordination of these surveys with support from the California Department of Fish and Game, Karuk Tribe of California, US Forest Service, Oregon State University, Northern California Resource Center and local community volunteers.

The parties involved in these cooperative surveys have identified the need to assess the existing spawning populations and protect the spawning grounds of Salmon River Spring Run Chinook salmon.

During the 2010 Spring Run Chinook spawning season (September through November), the SRRC led the coordination of cooperative efforts to provide training, materials, equipment, supplies, and labor necessary to accomplish the tasks outlined in the Statement of Work for this agreement. All surveys were conducted following the established protocols and procedures of this agreement. The methods outlined in this agreement are identical to methods outlined for Cooperative Fall Run Chinook Escapement Surveys.

Surveys were conducted twice per week from September 14 to November 1, 2010 the SRRC coordinated collection of information on run timing, spawning distribution, abundance, and sex for Spring Run Chinook salmon in the Salmon River, to determine escapement and hatchery straying rates. Samples from these surveys have been provided to the appropriate parties.

Please see the attached report summary, data spreadsheets and photographs for more information regarding the results of 2010 Spring Run Chinook Escapement Surveys.

These community-based surveys continue to be an integral part of restoring and protecting the last remaining wild population of Spring-Run Chinook in the Klamath.

We look forward continuing the success of this program. Thank you very much for your support.

Respectfully,

Thomas Hotaling  
Fisheries Coordinator

## Summary of Activities and Results:

2010 Spring Run Chinook Escapement Surveys were completed with the invaluable participation of the California Department of Fish and Game (CDFG), Karuk Tribe of California, US Forest Service (USFS), Oregon State University (OSU), Northern California Resource Center (NCRC) and local community volunteers. 2010 Salmon River Spring Run Chinook spawning survey training took place in Cecilville, CA on September 9, 2010. 25 people attended this training. 2010 Surveys began 9/14/2010 and ended 11/1/2010. Survey crews were provided by CDFG, Karuk Tribe, USFS and NCRC.

The survey area for 2010 Spring Run Chinook Spawning Surveys was considered to be on the South Fork Salmon River from Matthews Creek to Little South Fork, including the East Fork, and on the North Fork Salmon River from Kelly's Gulch to Big Creek. Surveys were also conducted outside the survey area to determine the extent of overlap between Spring Run and Fall Run spawning.

Survey crews consisted of at least 2 people per reach. All spawning redds were enumerated and located on a survey map. When a carcass was located crew members identified species and gender, checked for marks or tags, obtained a fork length measurement, collected scale samples, and examined females for spawning success. Data from 2010 spawning surveys is preliminary.

Scale samples were delivered to California Department of Fish and Game for determination of age composition of Salmon River spring run Chinook. Tissue samples were collected for genetic analysis. Otolith samples were collected for analysis by Rebecca Quinones, US Forest Service. In addition, the Salmon River Restoration Council (SRRC) coordinated collection of intestine samples for Dr. Jerri Bartholomew and Oregon State University. Intestine samples will be analyzed to determine the affects of *Ceratomyxa Shasta* on spring run Chinook, and investigate the appropriateness of spring run Chinook in the reintroduction to Oregon and the Upper Klamath Basin. Intestine samples were stored in tubes of ethanol and delivered to Oregon State University's John L. Fryer Salmon Disease Laboratory.

For purposes of the mark-and-recapture estimate, each carcass was categorized into one of four pathways. Fresh carcasses, those with clear eyes and/or firm flesh were designated as Path 1. Individually numbered jaw tags were attached to the lower jaw of all Path 1 carcasses and returned to the river for later recapture. Older carcasses, those with cloudy eyes and/or mushy flesh, were categorized as Path 2. All Path 2 carcasses were cut in half and returned to the river once all of the biological data was collected. Path 3 carcasses included all of the Path 1 recaptured carcasses that were marked during previous surveys. Any carcasses that could be observed by a survey crew but could not be captured because they were located in inaccessible or unsafe locations were designated as Path 4.

A total of 187 Spring Run Chinook carcasses were encountered for sampling during the survey period. 99 of these carcasses were marked for recapture and 30 of these marked carcasses were recaptured. A Peterson mark-and-recapture estimate for this population equals 645 spring-run Chinook. A Schaeffer mark-and-recapture estimate for this population equals 462 spring-run Chinook.

No fin-clipped salmon were observed during 2010 Salmon River spring run Chinook spawning surveys. No coded wire tags were recovered. Interestingly, a spring Chinook carcass was found with a 6" trout in its stomach.

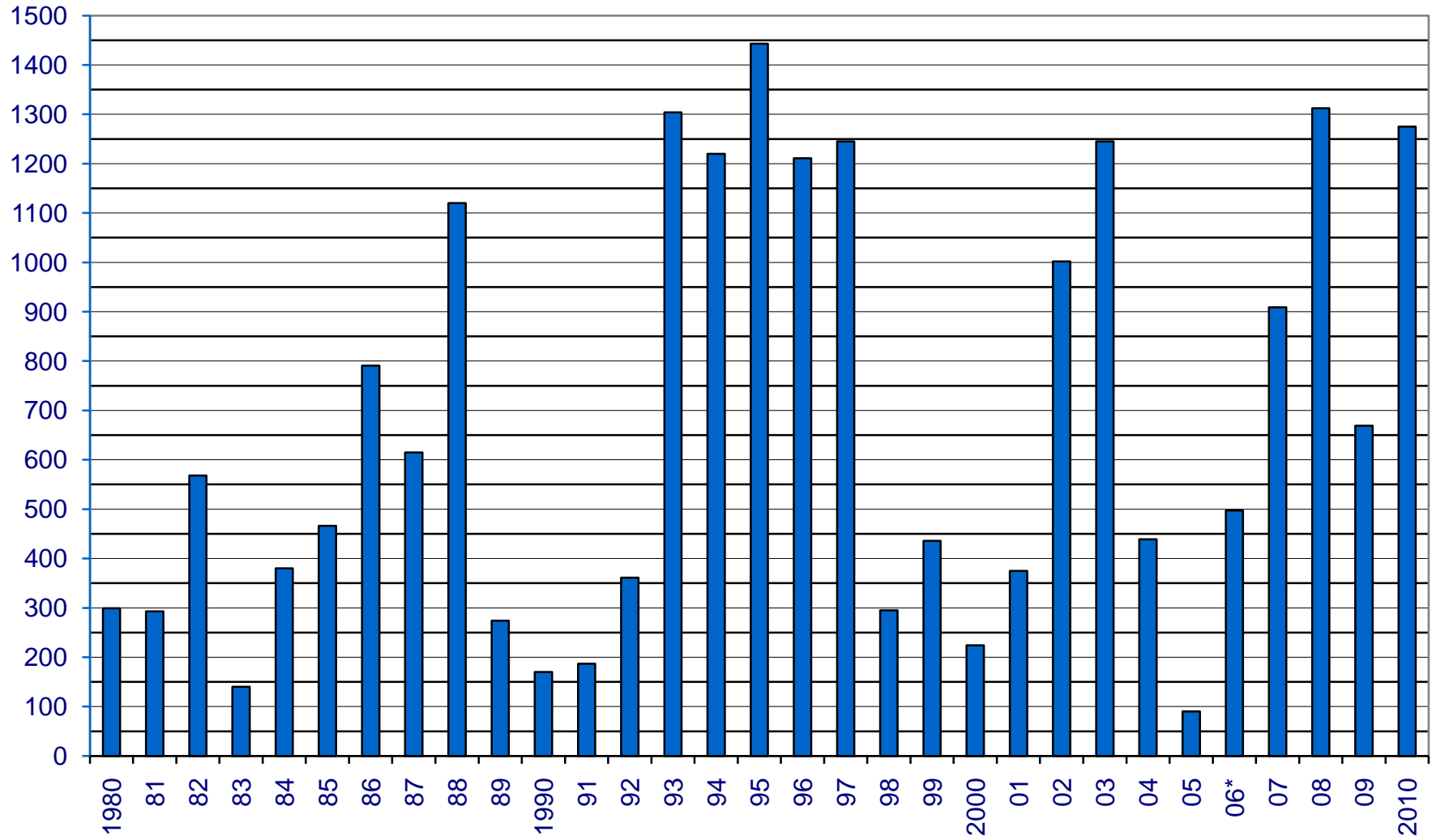
During the 2010 spawning survey period 378 Spring Run Chinook spawning redds were observed in total. Utilizing an expansion rate of 2 adults per redd, the estimated number of adults is 756. Spring-run

Chinook spawning redds were observed from Little South Fork to Matthews Creek on the South Fork of the Salmon River, and from Big Creek to 8 mile marker on the North Fork of the Salmon River. Spawning began mid-September and ended near the end of October. The peak of spawning occurred October 1<sup>st</sup>. During the survey period one spawning red was observed less than 200 feet down river from Matthews Creek. No other spawning redds were discovered outside of the survey area.

The total number of spring run Chinook observed during the Salmon River census dives on August 11, 2010 equaled 1275. In addition, there were 86 spring-run Chinook observed in Wooley Creek (8/26/11). Therefore, 1361 is determined to be the total spawning population of spring-run Chinook in the Salmon River subbasin.

Based on survey results from the Salmon River Spring Chinook and Summer Steelhead Dives, spawning surveys were focused largely on the South Fork of the Salmon River in order to survey the bulk of the spring-run Chinook population. On 8/11/2010 there were 928 spring-run Chinook in the South Fork of the Salmon River, 200 spring-run Chinook in the North Fork of the Salmon River, and 147 spring-run Chinook in the Mainstem Salmon River.

## Salmon River Spring Chinook



**Salmon River Spring Chinook and Summer Steelhead Dives 2010**

8/10 and 8/11 2010

Total miles:80

Reach	STLHD ADULTS	STLHD 1/2 LB	SP CH ADUI	SP CH JACKS	
<b>Mainstem</b>					18 miles
Wooley-Mouth	12	7	20	8	
Grants-Wooley	4	10	4	4	
Nordheimer-Grants	12	13	43	6	
Forks- Nordheimer	32	32	51	11	
<b>Mainstem Count</b>	60	62	118	29	

<b>South Fork</b>					28 miles
Henry Bell-Forks	2	8	185	56	
O'Farrill-Henry Bell	4	5	29	11	
Indian-O'Farrill	3	5	145	28	
Mathews-Indian	4	0	29	13	
French-Mathews	9	13	68	29	
Cecil-French	4	16	58	25	
Petersburg-Cecil	4	21	97	19	
Blindhorse-Petersburg	7	7	50	7	
Little S. Fork-Blindhorse	0	1	58	2	
<b>South Fork Count</b>	37	76	719	190	

<b>North Fork</b>					29.5 miles
4 Mile-Forks	5	11	8	1	
8 Mile-4 Mile	2	6	23	6	
12 Mile-8 Mile	1	5	37	22	
16 Mile-12 Mile	6	2	20	8	
White's GI-12 Mile	3	4	24	0	
Idlewild-Whites GI	1	8	31	13	
Mule Bridge-Idlewild	0	2	0	0	
Big Creek-Mule Bridge	1	2	5	2	
<b>North Fork Count</b>	19	40	148	52	

<b>East Fork</b>					4.5 miles
Taylor-Confluence	0	0	5	0	
Shadow-Taylor	0	1	14	0	
<b>East Fork count</b>	0	1	19	0	

8/26/2010

<b>Wooley Creek</b>					12.5 miles
Gates-Mouth	7	5	20	1	
Bridge-Gates	18	16	26	8	
Hancock-Bridge	11	5	31	0	
N.Fork-Hancock	1	1	0	0	
<b>Wooley Creek count</b>	37	27	77	9	

	153	206	1081	280
<b>Total Counts</b>	359		1361	

Notes:

van in water at NF 4 mile

one sockeye adult seen in Petersburg to Cecil reach (Steve Gough USFWS)

Blindhorse - Petersburg: one unspawned carscass seen

Forks - Nordheimer: steelhead 1/2 lbr counts in mainstem likely incl. resident trout (P. Higgins)

a couple brown trout seen in mainstem

**Cooperative Spring Chinook Spawning Ground and Carcass Survey**

Crew: \_\_\_\_\_ Stream: \_\_\_\_\_  
 Date: \_\_\_\_\_ Reach: \_\_\_\_\_  
 Air Temp: \_\_\_\_\_ Water Temp: \_\_\_\_\_ Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_  
 Weather: clear cloudy rain Turbidity: clear turbid very turbid

<b>Sample #</b>			<b>Jaw Tag</b>				<b>Y/N</b>	<i>Hatchery only</i>	<b>Y/N</b>					<b>Intestine</b>
e.g.:SA101210R10-1	Species	Path #	Applied	Recap	Sex M/F	F / L	Spawned	Head Tag #	Scales	Otolith	Tissue	Scar #	Disease #	Sample #
SA														
SA														
SA														
SA														
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Sample # = SA-date-reach-sample #-sample type (e.g. "SA-101210-R10-1-OTS" = Salmon River, October 12,2010 Reach 10 Sample 1 Otolith Tissue Scale)  
 Species Abbreviations: SPCH=Spring Chinook, STHD=Steelhead, SS=Silver Salmon (Coho)  
 Path #: 1=Fresh Carcass, 2=Decomposed Carcass, 3=Recapture, 4=Unretrievable  
 Fish Scar Codes: 1=lamprey, 2=gill net, 3=hook, 4=otter bite  
 Disease Assessment Codes: 1=Columaris, 2=Ictth, 3=C.Shasta

### Spring Chinook Redd Location and Habitat Survey

Stream: \_\_\_\_\_ Reach: \_\_\_\_\_ Date: \_\_\_\_\_  
 Crew: \_\_\_\_\_  
 Start Time : \_\_\_\_\_ Water Temp: \_\_\_\_\_ Air Temp: \_\_\_\_\_ End Time: \_\_\_\_\_ Water Temp. \_\_\_\_\_  
 Air Temp.: \_\_\_\_\_ Weather: Clear Cloudy Rain Snow Method: Walk Dive Float  
 Turbidity: Clear Lightly Turbid Turbid Muddy

Redd #	# of fish on redd	% Canopy Over Redd	Instream Cover (none, wood, boulder, white water, undercut ledge, pool)	Proximity to instream cover in ft.	Habitat Type (pool, riffle, run,)	Spawning Area Available (L x W)	Spawning Area Used (L x W)	G.P.S. Reference #	Comments:

Total # of Redds \_\_\_\_\_ Total # of Live Spring Chinook \_\_\_\_\_ Total # of Live Steelhead \_\_\_\_\_

Cooperative Spring Chinook Spawning Ground and Carcass Survey  
2010 Spawning Redd Data & Final Field Data

	9/14	9/17	9/21	9/24	9/27	10/1	10/5	10/8	10/11	10/14	10/18	10/21	10/25	10/28	11/1	TOTAL
<b>SOUTH FORK</b>																
L.S. Fork - Blindhorse	3	5	8		15											31
Blindhorse - Petersburg	1	6	5	12	21	26	3	0			0					74
Petersburg - Cecil	1	1	0	11	15	7	26	4	0	1	0				0	66
Cecil - French	0	1	6	2	8	22	14	5	10	1	12					81
French - Matthews	0	0	2	2	10	16	13	22		0	0					65
Matthews - Indian					1											1
East Fork							11			4						15
subtotals:	5	13	21	27	70	71	67	31	10	6	12				0	333
<b>NORTH FORK</b>																
Big Cr. - Mule Bridge			1		5											6
Mule Bridge - Idlewild			0				10									10
Idlewild - Whites			0	3								4				7
Whites - 16		0	0			1						7				8
16 - 12						6										6
12 to 8						8										8
subtotals:		0	1	3	5	15	10					11				45
TOTAL REDDS	5	13	22	30	75	86	77	31	10	6	12	11				378

REACH		9/14	9/17	9/21	9/24	9/27	10/1	10/5	10/8	10/11	10/14	10/18	10/21	10/25	10/28	11/1	Total
<b>South Fork:</b>																	
Little South Fork-Blindhorse (A)	REDDS	3	5	8		15											31
	CARCASSES	0	0	0		0											
	LIVES	30	30	26		28											
Blindhorse-Petersburg (B)	REDDS	1	6	5	12	21	26	3	0		*	0					74
	CARCASSES	1	2	0	0	1	5	9	6		7	20					
	LIVES	*	6	21	43	37	45	37	28		12	5					
Petersburg-Cecil Cr. ( C)	REDDS	1	1	0	11	15	7	26	4	0	1	0				0	66
	CARCASSES	0	0	0	0	0	2	3	7	14	17	13				0	
	LIVES	20*	26	12	17	18	23	34	31	*	15	*				5	
Cecil-French (D)	REDDS	0	1	6	2	8	22	14	5	10	1	12					81
	CARCASSES	1	0	1	0	0	0	3	16	14	14	12					
	LIVES	48	42	37	41	41	48	45	46	50	35	8					
French-Matthews (E)	REDDS	0	0	2	2	10	16	13	22		0	0					65
	CARCASSES	0	0	0	0	1	0	1	4		6	2					
	LIVES	60	89	8	29	18	70	*	43		20	8					
Matthews-Indian	REDDS					1											1
	CARCASSES					0											
	LIVES					45											
<b>South Fork Totals:</b>	REDDS	5	13	21	27	70	71	56	31	10	2	12					318
	CARCASSES	1	2	1	0	2	7	16	33	28	54	47					191
	LIVES	158	193	104	130	187	186	116	148	50	82	21					
<b>East Fork:</b>																	
Shadow-Taylor Cr. (F)	REDDS							5			0						5
	CARCASSES							0			0						0
	LIVES							7			1						
Taylor-South Fork Conf. (G)	REDDS							6			4						10
	CARCASSES							0			2						2
	LIVES							7			5						
<b>East Fork Totals:</b>	REDDS							11			4						15
	CARCASSES							0			2						2
	LIVES							14			6						
<b>North Fork:</b>																	
Big Cr.-Mule Bridge (I)	REDDS			1		5											6
	CARCASSES			0		0											
	LIVES			0		7											
Mule Bridge-Idlewild (J)	REDDS			0				10									10
	CARCASSES			0				3									
	LIVES			0				3*									
Idlewild-White's (J)	REDDS			0	3								4				7
	CARCASSES			0	0								0				
	LIVES			0	4								2				
White's-16 (K)	REDDS		0	0			1						7				8
	CARCASSES		0	0			1						0				
	LIVES		12	4			3						3				
16-12	REDDS						6										6
	CARCASSES						0										
	LIVES						6										
12 to 8	REDDS						8										8
	CARCASSES						*										
	LIVES						47										
<b>North Fork Totals:</b>	REDDS																45
	CARCASSES																
	LIVES																
<b>Overall Spring Chinook Totals=</b>	REDDS																378
	CARCASSES																

\* = incomplete data  
note: "CARCASSES" includes recaptures



REACH		9/14	9/17	9/21	9/24	9/27	10/1	10/5	10/8	10/11	10/14	10/18	10/21	10/25	10/28	11/1	Total
<b>South Fork:</b>																	
Little South Fork-Blindhorse (A)	REDDS	3	5	8		15											31
	CARCASSES	0	0	0		0											
	LIVES	30	30	26		28											
Blindhorse-Petersburg (B)	REDDS	1	6	5	12	21	26	3	0		47 (total)	0					74
	CARCASSES	1	2	0	0	1	5	9	6		7	20					
	LIVES	*	6	21	43	37	45	37	28		12	5					
Petersburg-Cecil Cr. (C)	REDDS	1	1	0	11	15	7	26	4	0	1	0				0	66
	CARCASSES	0	0	0	0	0	2	3	7	14	17	13				0	
	LIVES	20*	26	12	17	18	23	34	31	*	15	*				5	
Cecil-French (D)	REDDS	0	1	6	2	8	22	14	5	10	1	12					81
	CARCASSES	1	0	1	0	0	0	3	16	14	14	12					
	LIVES	48	42	37	41	41	48	45	46	50	35	8					
French-Matthews (E)	REDDS	0	0	2	2	10	16	13	22		0	0					65
	CARCASSES	0	0	0	0	1	0	1	4		6	2					
	LIVES	60	89	8	29	18	70	*	43		20	8					
Matthews-Indian	REDDS					1											1
	CARCASSES					0											
	LIVES					45											
<b>South Fork Totals:</b>																	
	REDDS	5	13	21	27	70	71	56	31	10	2	12					318
	CARCASSES	1	2	1	0	2	7	16	33	28	54	47					191
	LIVES	158	193	104	130	187	186	116	148	50	82	21					
<b>East Fork:</b>																	
Shadow-Taylor Cr. (F)	REDDS							5			0						5
	CARCASSES							0			0						0
	LIVES							7			1						
Taylor-South Fork Conf. (G)	REDDS							6			4						10
	CARCASSES							0			2						2
	LIVES							7			5						
<b>East Fork Totals:</b>																	
	REDDS							11			4						15
	CARCASSES							0			2						2
	LIVES							14			6						
<b>North Fork:</b>																	
Big Cr.-Mule Bridge (I)	REDDS			1		5											6
	CARCASSES			0		0											
	LIVES			0		7											
Mule Bridge-Idlewild (J)	REDDS			0				10									10
	CARCASSES			0				3									
	LIVES			0				3*									
Idlewild-White's (J)	REDDS			0	3							4					7
	CARCASSES			0	0							0					
	LIVES			0	4							2					
White's-16 (K)	REDDS		0	0			1						7				8
	CARCASSES		0	0			1					0					
	LIVES		12	4			3					3					
16-12	REDDS						6										6
	CARCASSES						0										
	LIVES						6										
12 to 8	REDDS						8										8
	CARCASSES						*										
	LIVES						47										
<b>North Fork Totals:</b>																	
	REDDS																45
	CARCASSES																
	LIVES																
<b>Overall Spring Chinook Totals=</b>																	
	REDDS																378
	CARCASSES																

\* = incomplete data  
note: "CARCASSES" includes recaptures

**Cooperative Salmon River Spring Chinook Spawning Ground and Carcass Survey**

**2010 Carcass Data**

**Path #:** 1=Fresh Carcass, 2=Decomposed Carcass, 3=Recapture, 4=Unretrievable

**Disease #:** 1=Columnaris, 2=Ict, 3=C.Shasta

**Species:** SPCH=Spring Chinook, STHD=Steelhead

**Scar #:** 1=lamprey, 2=gill net, 3=hook, 4=otter

#	Date	Species	Path #	Applied	Recap	Sex M/F	F / L	SpawndY/N	ScalesY/N	F ClipY/N	OtolithY/N	Tissue Y/N	Scar #	Disease #
1	14-Sep	SPCH	1	*	-	F	76	N	Y	N	Y	Y	-	1
2	14-Sep	SPCH	1	3670	-	F	94	N	Y	N	Y	Y	-	-
3	17-Sep	SPCH	1	*	-	M	97	N	Y	N	N	Y	-	-
4	17-Sep	SPCH	1	765	-	F	84	N	Y	N	Y	Y	-	-
5	21-Sep	SPCH	2	-	-	F	73	-	Y	N	N	N	-	-
6	28-Sep	SPCH	1	790	-	F	86	Y	Y	N	Y	Y	-	-
7	28-Sep	SPCH	1	1920	-	-	72	-	Y	N	-	Y	-	-
8	1-Oct	SPCH	2	-	-	M	34	-	N	N	N	N	-	-
9	1-Oct	SPCH	2	-	-	M	-	-	N	N	N	N	-	-
10	1-Oct	SPCH	2	-	-	F	72	-	Y	N	Y	Y	-	-
11	1-Oct	SPCH	1	649	-	M	76	-	Y	N	Y	Y	1	*
12	1-Oct	SPCH	2	-	-	M	-	-	N	-	N	N	-	-
13	1-Oct	SPCH	2	-	-	M	63	-	Y	N	N	Y	-	-
14	1-Oct	SPCH	1	744	-	F	77	-	Y	N	Y	Y	-	-
15	5-Oct	SPCH	1	1917	-	F	76	-	Y	N	Y	Y	-	-
16	5-Oct	SPCH	1	-	-	F	60	N	Y	N	Y	Y	-	-
17	5-Oct	SPCH	1	-	-	M	78	Y	Y	N	Y	Y	-	-
18	5-Oct	SPCH	1	-	-	M	63	N	Y	N	Y	Y	-	-
19	5-Oct	SPCH	2	-	-	F	82	Y	N	N	N	N	-	-
20	5-Oct	SPCH	1	1964	-	F	73	Y	Y	N	Y	Y	-	-
21	5-Oct	SPCH	1	761	-	F	67	Y	-	N	Y	Y	-	-
22	5-Oct	SPCH	2	-	-	-	70	-	-	-	-	-	-	-
23	5-Oct	SPCH	1	643	-	F	63	Y	Y	N	Y	Y	-	-
24	5-Oct	SPCH	1	759	-	M	72	-	Y	N	Y	Y	-	-
25	5-Oct	SPCH	1	775	-	M	71	-	Y	N	Y	Y	-	-
26	5-Oct	SPCH	1	1542	-	M	73	-	Y	N	Y	Y	-	-
27	5-Oct	SPCH	1	771	-	F	69	Y	Y	N	Y	Y	-	-
28	5-Oct	SPCH	2	-	-	-	43	-	-	-	-	-	-	-
29	5-Oct	SPCH	1	5714	-	F	85	Y	Y	N	Y	Y	-	-
30	5-Oct	SPCH	1	1967	-	F	71	Y	Y	N	Y	Y	-	-
31	5-Oct	SPCH	2	-	-	F	78	Y	-	-	-	-	-	-
32	8-Oct	SPCH	1	1532	-	F	75	Y	Y	N	Y	Y	-	-
33	8-Oct	SPCH	1	1939	-	M	78	Y	Y	N	Y	Y	-	-
34	8-Oct	SPCH	1	1530	-	F	59	Y	Y	N	Y	Y	-	-
35	8-Oct	SPCH	3	-	1917	-	-	-	-	-	-	-	-	-
36	8-Oct	SPCH	2	-	-	M	86	Y	N	N	N	N	-	-
37	8-Oct	SPCH	1	-	-	F	79	Y	Y	N	Y	Y	-	-
38	8-Oct	SPCH	1	-	-	F	84	Y	Y	N	Y	Y	-	-
39	8-Oct	SPCH	3	-	759	M	74	Y	-	-	-	-	-	-
40	8-Oct	SPCH	3	-	1542	M	72	Y	-	-	-	-	-	-
41	8-Oct	SPCH	1	-	-	M	46	Y	Y	N	Y	Y	-	-
42	8-Oct	SPCH	1	5952	-	M	80	-	Y	N	Y	Y	-	3?
43	8-Oct	SPCH	2	-	-	F	-	Y	N	N	N	N	-	-
44	8-Oct	SPCH	1	5722	-	M	94	Y	Y	N	Y	Y	-	-
45	8-Oct	SPCH	1	5723	-	F	67	Y	Y	N	Y	Y	-	-
46	8-Oct	SPCH	1	5947	-	F	78	Y	Y	N	Y	Y	-	-
47	8-Oct	SPCH	1	5717	-	F	72	Y	Y	N	Y	Y	-	-
48	8-Oct	SPCH	1	5718	-	F	72	Y	Y	N	Y	Y	-	-
49	8-Oct	SPCH	1	1656	-	F	72	Y	Y	N	Y	Y	-	-
50	8-Oct	SPCH	1	1659	-	F	86	Y	Y	N	Y	Y	-	-
51	8-Oct	SPCH	2	-	-	F	61	Y	Y	N	N	N	-	-
52	8-Oct	SPCH	1	1658	-	F	77	Y	Y	N	N	Y	-	-
53	8-Oct	SPCH	1	1660	-	M	78	-	Y	N	N	Y	-	-
54	8-Oct	SPCH	1	1663	-	F	76	Y	Y	N	N	N	-	-
55	8-Oct	SPCH	1	1667	-	F	77	Y	Y	N	N	N	-	-
56	8-Oct	SPCH	1	1633	-	M	57	-	Y	N	N	N	-	-
57	8-Oct	SPCH	2	-	-	M	-	-	-	-	-	-	-	-
58	8-Oct	SPCH	4	-	-	-	-	-	-	-	-	-	-	-
59	8-Oct	SPCH	1	1671	-	F	63	Y	Y	N	N	N	-	-
60	8-Oct	SPCH	1	1665	-	F	79	Y	Y	N	N	N	-	-
61	8-Oct	SPCH	1	1662	-	F	74	Y	Y	N	N	N	-	-
62	8-Oct	SPCH	1	1631	-	F	69	Y	Y	N	N	N	-	-
63	8-Oct	SPCH	4	-	-	-	-	-	-	-	-	-	-	-
64	11-Oct	SPCH	1	5948	-	F	75	Y	Y	N	Y	Y	-	-
65	11-Oct	SPCH	1	5725	-	F	64	Y	Y	N	Y	Y	-	-
66	11-Oct	SPCH	3	-	5722	-	-	-	-	-	-	-	-	-
67	11-Oct	SPCH	1	5719	-	F	80	Y	Y	N	Y	Y	-	-
68	11-Oct	SPCH	1	5949	-	F	84	Y	Y	N	Y	Y	-	-
69	11-Oct	SPCH	1	5942	-	F	82	Y	Y	N	Y	Y	-	-
70	11-Oct	SPCH	1	5726	-	F	70	Y	Y	N	Y	Y	-	-
71	11-Oct	SPCH	1	5950	-	M	84	Y	Y	N	Y	Y	-	-
72	11-Oct	SPCH	3	-	5723	-	-	-	-	-	-	-	-	-
73	11-Oct	SPCH	1	5716	-	F	79	Y	Y	N	Y	Y	-	-
74	11-Oct	SPCH	1	5953	-	F	78	Y	Y	N	Y	Y	-	-
75	11-Oct	SPCH	1	5724	-	F	74	Y	Y	N	Y	Y	-	-
76	11-Oct	SPCH	1	5941	-	F	81	Y	Y	N	Y	Y	-	-

#	Date	Species:	Path #	Applied	Recap	Sex M/F	F / L	Spawned/Y/N	Scales/Y/N	F Clip/Y/N	Otilith/Y/N	Tissue Y/N	Scar #	Disease #
77	11-Oct	SPCH	3	-	5717	-	-	-	-	-	-	-	-	-
78	11-Oct	SPCH	3	-	1659	F	84	-	-	-	-	-	-	-
79	11-Oct	SPCH	1	646	-	F	81	Y	Y	N	Y	Y	-	-
80	11-Oct	SPCH	1	1900	-	F	73	Y	Y	N	Y	Y	-	-
81	11-Oct	SPCH	3	-	1667	F	78	Y	-	-	-	-	-	-
82	11-Oct	SPCH	2	-	-	F	77	Y	-	-	-	-	-	-
83	11-Oct	SPCH	1	1895	-	M	43	N	Y	N	Y	Y	-	-
84	11-Oct	SPCH	1	5983	-	M	77	Y	Y	N	Y	Y	-	-
85	11-Oct	SPCH	3	-	1671	F	63	Y	-	-	-	-	-	-
86	11-Oct	SPCH	2	-	-	F	72	-	-	-	-	-	-	-
87	11-Oct	SPCH	3	-	1662	F	75	Y	-	-	-	-	-	-
88	11-Oct	SPCH	1	1892	-	M	86	Y	Y	N	-	-	-	-
89	11-Oct	SPCH	2	-	-	M	58	Y	-	-	-	-	-	-
90	11-Oct	SPCH	1	1898	-	F	74	Y	Y	N	Y	Y	-	-
91	11-Oct	SPCH	1	5990	-	M	43	Y	Y	N	Y	Y	-	-
92	14-Oct	SPCH	1	5774	-	F	78	Y	Y	N	Y	Y	-	-
93	14-Oct	SPCH	2	-	-	M	84	Y	N	N	N	N	-	-
94	14-Oct	SPCH	1	5770	-	F	73	Y	Y	N	Y	Y	-	-
95	14-Oct	SPCH	3	-	1633	-	-	-	-	-	-	-	-	-
96	14-Oct	SPCH	1	4608	-	F	79	Y	Y	N	Y	Y	-	-
97	14-Oct	SPCH	1	4633	-	F	81	Y	Y	N	Y	Y	-	-
98	14-Oct	SPCH	1	4620	-	F	73	Y	Y	N	Y	Y	-	-
99	14-Oct	SPCH	1	4632	-	F	85	Y	Y	N	Y	Y	-	-
100	14-Oct	SPCH	1	4660	-	M	74	Y	Y	N	Y	Y	-	-
101	14-Oct	SPCH	1	4617	-	F	64	Y	Y	N	Y	Y	-	-
102	14-Oct	SPCH	1	4630	-	F	80	Y	Y	N	Y	Y	-	-
103	14-Oct	SPCH	2	-	-	F	83	Y	N	N	N	N	-	-
104	14-Oct	SPCH	1	4628	-	F	83	Y	Y	N	Y	Y	-	-
105	14-Oct	SPCH	1	4621	-	F	60	Y	Y	N	Y	Y	-	-
106	14-Oct	SPCH	1	1899	-	F	70	Y	Y	N	Y	Y	-	-
107	14-Oct	SPCH	3	-	5948	F	80	Y	-	-	-	-	-	-
108	14-Oct	SPCH	2	-	-	F	69	Y	-	-	-	-	-	-
109	14-Oct	SPCH	2	-	-	M	44	-	-	-	-	-	-	-
110	14-Oct	SPCH	3	-	5725	M	64	Y	-	-	-	-	-	-
111	14-Oct	SPCH	2	-	-	M	68	Y	-	-	-	-	-	-
112	14-Oct	SPCH	2	-	-	M	93	Y	-	-	-	-	-	-
113	14-Oct	SPCH	3	-	5719	M	78	Y	-	-	-	-	-	-
114	14-Oct	SPCH	1	1894	-	M	42	Y	Y	N	Y	Y	1	-
115	14-Oct	SPCH	2	-	-	M	58	Y	-	-	-	-	-	-
116	14-Oct	SPCH	3	-	5942	M	79	-	-	-	-	-	-	-
117	14-Oct	SPCH	2	-	-	M	45	Y	-	-	-	-	-	-
118	14-Oct	SPCH	1	5986	-	M	69	Y	Y	N	Y	Y	1	-
119	14-Oct	SPCH	3	-	5950	M	84	-	-	-	-	-	-	-
120	14-Oct	SPCH	1	5985	-	M	43	Y	Y	N	Y	Y	-	-
121	14-Oct	SPCH	1	1896	-	F	57	Y	Y	N	Y	Y	-	-
123	14-Oct	SPCH	2	-	-	F	70	Y	N	N	N	N	-	-
124	14-Oct	SPCH	2	-	-	F	60	Y	-	-	-	-	-	-
125	14-Oct	SPCH	2	-	-	F	69	Y	-	-	-	-	-	-
126	14-Oct	SPCH	1	5932	-	M	90	Y	Y	N	Y	Y	-	-
127	14-Oct	SPCH	1	5937	-	M	95	Y	Y	N	Y	Y	-	-
128	14-Oct	SPCH	2	-	-	F	77	Y	-	-	-	-	-	-
129	14-Oct	SPCH	1	1922	-	F	78	Y	Y	N	Y	Y	-	-
130	14-Oct	SPCH	1	5783	-	F	64	Y	Y	N	Y	Y	-	-
131	14-Oct	SPCH	1	5954	-	F	69	Y	Y	N	Y	Y	-	-
132	18-Oct	SPCH	2	-	-	F	73	Y	-	-	-	-	-	-
133	18-Oct	SPCH	1	5993	-	M	64	-	Y	N	Y	Y	-	-
134	18-Oct	SPCH	3	-	762	F	79	-	-	-	-	-	-	-
135	18-Oct	SPCH	1	5992	-	F	70	Y	Y	N	Y	Y	-	-
136	18-Oct	SPCH	3	-	747	F	-	-	-	-	-	-	-	-
137	18-Oct	SPCH	1	5988	-	F	71	Y	Y	N	Y	Y	-	-
138	18-Oct	SPCH	3	-	1963	F	73	-	-	-	-	-	-	-
139	18-Oct	SPCH	3	-	650	F	77	-	-	-	-	-	-	-
140	18-Oct	SPCH	1	1893	-	F	69	Y	Y	N	Y	Y	-	-
141	18-Oct	SPCH	2	-	-	M	-	-	-	-	-	-	-	-
142	18-Oct	SPCH	2	-	-	F	69	-	-	-	-	-	-	-
143	18-Oct	SPCH	2	-	-	F	-	-	-	-	-	-	-	-
144	18-Oct	SPCH	2	-	-	F	75	-	-	-	-	-	-	-
145	18-Oct	SPCH	3	-	1961	F	71	-	-	-	-	-	-	-
146	18-Oct	SPCH	2	-	-	F	-	-	-	-	-	-	-	-
147	18-Oct	SPCH	1	5984	-	M	41	Y	Y	N	Y	Y	-	-
148	18-Oct	SPCH	2	-	-	F	74	Y	-	-	-	-	-	-
149	18-Oct	SPCH	2	-	-	F	70	Y	-	-	-	-	-	-
150	18-Oct	SPCH	2	-	-	F	48	Y	-	-	-	-	-	-
151	18-Oct	SPCH	1	5789	-	F	71	Y	Y	N	Y	Y	-	-
152	18-Oct	SPCH	3	-	1899	F	70	Y	-	-	-	-	-	-
153	18-Oct	SPCH	2	-	-	-	-	-	-	-	-	-	1	-
154	18-Oct	SPCH	2	-	-	M	48	-	-	-	-	-	-	-
155	18-Oct	SPCH	2	-	-	F	77	Y	Y	N	N	Y	-	-
156	18-Oct	SPCH	2	-	-	M	43	Y	-	-	-	-	-	-
157	18-Oct	SPCH	3	-	1894	M	-	-	-	-	-	-	-	-
158	18-Oct	SPCH	2	-	-	-	-	-	-	-	-	-	-	-
159	18-Oct	SPCH	1	4636	-	F	57	Y	Y	N	Y	Y	-	-
160	18-Oct	SPCH	1	5786	-	M	89	Y	Y	N	Y	Y	-	-
161	18-Oct	SPCH	2	-	-	F	79	Y	Y	N	N	N	-	-
162	18-Oct	SPCH	3	-	1656	F	-	-	-	-	-	-	-	-
163	18-Oct	SPCH	2	-	-	F	78	Y	-	-	-	-	-	-
164	18-Oct	SPCH	3	-	5774	F	79	-	-	-	-	-	-	-
165	18-Oct	SPCH	2	-	-	F	73	-	-	-	-	-	-	-

#	Date	Species:	Path #	Applied	Recap	Sex M/F	F / L	SpawnedY/N	ScalesY/N	F ClipY/N	OtolithY/N	Tissue Y/N	Scar #	Disease #
166	18-Oct	SPCH	1	1925	-	F	83	Y	Y	N	Y	Y	-	-
167	18-Oct	SPCH	1	1918	-	F	73	Y	Y	N	Y	Y	-	-
168	18-Oct	SPCH	1	5934	-	M	51	-	Y	N	Y	Y	-	-
169	18-Oct	SPCH	3	-	1892	M	67	-	-	-	-	-	-	-
170	18-Oct	SPCH	3	-	4633	F	87	-	-	-	-	-	-	-
171	18-Oct	SPCH	3	-	4632	F	-	-	-	-	-	-	-	-
172	18-Oct	SPCH	3	-	4617	F	64	-	-	-	-	-	-	-
173	18-Oct	SPCH	3	-	4630	F	82	-	-	-	-	-	-	-
174	18-Oct	SPCH	1	5930	-	F	86	Y	Y	N	Y	Y	-	-
175	18-Oct	SPCH	1	5708	-	F	66	Y	Y	N	N	Y	-	-
176	18-Oct	SPCH	1	779	-	F	68	Y	Y	N	N	Y	-	-

**NORTH FORK SALMON RIVER**

177	1-Oct	SPCH	2	-	-	M	76	-	-	-	-	-	-	-
178	5-Oct	SPCH	1	4641	-	M	71	Y	Y	N	Y	Y	-	-
179	5-Oct	SPCH	1	4649	-	M	63	N	Y	N	Y	Y	1	-
180	5-Oct	SPCH	1	4634	-	M	63	Y	Y	N	Y	Y	1&2	-

**Total # SPCH Carcasses: 180**  
**Total # Carcasses Tagged: 92**  
**Total # Tags Recaptured: 30**

\* 6" rainbow trout in stomach (see pictures, A. Robinson)