

Clallam County

Grant No. G1000003

GRANT TITLE: Northwest Straits Project: Clallam County Marine Resources Committee
Administration and Action Projects.

TASK NO: 5.3 Student Intern program

☐ ANNUAL REPORT (January 1 – December 31)

☐ WORK PLAN

☐ PROGRESS REPORT No. 1 ☐ No. 2 ☐ No. 3 ☐

☐ FINAL PROGRESS REPORT

☒ PROJECT REPORT

☐ SUMMARY REPORT

☐ TECHNICAL REPORT

☐ PROTOCOL

☐ QUALITY ASSURANCE/QUALITY CONTROL

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5 June 2010

First Draft

Annual report to the Clallam MRC for student funding for the 2010 Nearshore Monitoring of the Strait of Juan de Fuca.

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Introduction and Background

Nearshore is a critical component of the marine ecosystem (Fresh et al 2008). The nearshore Strait of Juan de Fuca is diverse, ecologically complex, and a poorly understood connection between coastal and inland marine waters of Washington state. The majority of shoreline of the Strait is privately owned, making private citizens the active stewards of this important nearshore system (Shaffer et al 2008a). The shoreline of the central Strait is also significantly disrupted due to large scale sediment starvation due to in-river dams on the Elwha River and shoreline alteration (Shaffer et al 2008b). The Clallam Marine Resources Committee has sponsored WWU Ecology and Peninsula College Fisheries and Ecology undergraduate student nearshore internships for over a decade. The work has contributed to numerous important discoveries of fish use of the nearshore, including documenting young of the year ESA listed stocks of Columbia River Chinook salmon utilizing central and western Strait shorelines, eulachon utilization of the Elwha river, and surf smelt spawning along Dungeness feeder bluffs (Shaffer et al 2007, 2008b).

In 2007 the Salmon Recovery Funding Board funded a two year long large scale nearshore assessment led by WDFW with Lower Elwha Klallam Tribe, Clallam County, and Peninsula College partners. The work resulted in a number of recommendations for the central Strait of Juan de Fuca, including additional nearshore restoration actions associated with the upcoming dam removals (Shaffer et al 2008b). Continuing long term fish use monitoring of the Elwha and comparative nearshore was a top recommendation of this two year study.

Elwha dam removals, scheduled to begin in 2011, will result in large scale ecosystem restoration in the Elwha watershed (Duda et al 2008). Anne Shaffer, formerly with the WDFW and now via the Coastal Watershed Institute (CWI), with the Clallam MRC as partners, has coordinated the Elwha Nearshore Consortium, an informal group of scientists and managers dedicated to understanding and promoting the Elwha nearshore, since 2004. The group has developed a nearshore assessment restoration strategy that is the basis for understanding fish use and sediment dynamics of the Elwha nearshore (Shaffer et al 2008a).

The Clallam MRC has provided a small grant to Peninsula College in support of the Elwha Nearshore project. Per this year's Clallam MRC grant (#xxx), this brief annual report summarizes results of the ongoing long term fish use monitoring of the Elwha and comparative Salt Creek estuary for January-October 2010 and compares, in general, this year's results to date to those of the last four years. Since the field season is currently underway result analysis is kept to a minimum, and instead, data collected to date are presented in summary form. Further detailed analysis will be provided in future reporting. This work is part of a larger ongoing series of nearshore assessment projects led by the Coastal Watershed Institute with partnership of the Washington Department of Fish and Wildlife, Washington Department of Natural Resources, USGS, Peninsula College, local citizens, and others.

Methods and Materials.

The 2010 MRC contract was finalized in February 2010, and three Peninsula College Fisheries students, Joseph Gonce, Ian Franco, and Justin Brown, who began work on the project in January, were hired within three weeks of signing. Two long term sites, Salt Creek and Elwha River west estuary (Figure 1) were sampled monthly utilizing the small Puget Sound Protocol nets (Figure 2). Two seines were conducted at each site per sampling date. All fish collected were identified to lowest taxa, and 20 of each species measured to closest millimeter. Salmonids were measured for both total and fork length. All other fish were measured for total length. Basic water quality metrics were also collected for each sampling date and site. Fish data were tabulated to monthly summaries for fish abundance, relative percent composition, and fish length for the two sites and compiled along with data for entire four year sampling period.

Results.

A total of six sets of monthly samples have been collected since contract signing in February 2010. There is a strong seasonal trend in fish use, with virtually no fish present in either site in February, outmigrating chum appearing in March, and then Chinook, chum, and coho numbers comprising larger percent composition of the Elwha estuary fish assemblage. Coho, chum, cutthroat, and steelhead were the larger percent composition of the Salt Creek estuary assemblage as the spring outmigration progresses. Fish length also increased as the sampling season progresses (Figure 3a-c). Figure 4 shows students sampling.

Discussion.

Fish abundance and composition in the Salt Creek and Elwha west estuary (between the Place Road dike and the west side of the Elwha River) are comparable to those observed over the last three years, indicating both areas are important for outmigrating salmon. High numbers in the Elwha estuary reflect both hatchery and wild stock outmigrants (McHenry pers com). Sediment dynamics of the lower Elwha River are anticipated to be very high as dam removal progresses (Corum, 2010, Draut et al. 2007, Randall et al 2004). Shaffer et al 2009 therefore recommended that habitat management focus be given to anticipating how the upcoming sediment dynamics

may influence fish use in this critical small area of the Elwha estuary. This analysis should include the current and future role the Place Road levee plays in hydrodynamics and fish use of the estuary. This year's high salmonid numbers in the Elwha west estuary, similar to previous three years, is further justification for this recommendation.

Seasonal trends in fish length observed this year are also similar to previous years. Gonca is currently analyzing chum data to determine if there are interannual trends in chum outmigration and size, and whether differences, if they exist, might be attributed to warming water temperature and concomitant emergence.

As with all long term studies, there was variation in sampling effort over the four year sampling period. The 2007 sampling was intended to document, for the first time, fish use along a series of geomorphic habitat types across the central Strait of Juan de Fuca, including the Elwha and comparative drift cell over a year period. Sampling for this period was therefore high frequency, and initially used larger nets in both the Elwha and Salt Creek estuary. Sampling effort in 2008 shifted as we learned which size net was the most appropriate for our needs and to minimize fish stress. In 2008 priorities for sampling also changed. Sampling effort in the Elwha and comparative area was lower, with bi weekly at Elwha estuary during outmigration. Salt creek not sampled during outmigration in 2008 as efforts were shifted to Pysht for fyke netting. Funding for nearshore sampling project ended in late 2008. Sampling rates for 2009 were lower than previous years due to illness of the PI and loss of PI funding. Long term, monthly sampling of both sites commenced with contract signing in February 2010 (Table 1).

Net size also changed over the four year period. In 2007 the large 30 m PSP net was used at both these sites (Figure 2). However the extremely high numbers of fish collected during peak outmigration warranted shifting to the smaller net to minimize fish stress from holding while processing. Fish numbers may be converted to densities by dividing by net area for comparison between net size samples.

These students bring the total number of college students that have participated in the nearshore project up to 32. A number of these students have graduated and gone on to graduate school, or have entered the workforce, including resource management positions in NOAA, USGS, WDFW, and ONP.. Their work on this project has provided important professional experience that has led to their success in this very tight job market.

Dam removals was originally intended to begin in 2012 (Winter et al 2008) will restore fisheries of the Elwha River (DoI 2005, 1994; Ward et al 2008). Dam removal timeline has been accelerated-removal is now intended to begin late 2011.

The current basic long term monitoring project gives us the sole long term data set for the west estuary of the Elwha, and defines fish use of some of the highest functioning, and impaired nearshore habitats in the central Strait of Juan de Fuca, as well as a clear set of restoration

priorities for the area. The work should continue at the current or higher level of funding, at least thru dam removal.

Table 1. Catalog of sampling rates over four year period.

Year	Time period	Sampling Frequency of Elwha and Salt Creek estuary
2007	April-August	Weekly
	September-October	Biweekly (shifted to allow forage fish spawn sampling)
	Nov-Dec	Monthly
2008	January-March	Monthly
	April-August	Bi-weekly at Elwha only (didn't sample Salt creek May-October-shifted to fyke netting on Pysht)
	Sept-Dec	Monthly
2009	January-July	Monthly
	July-December	No sampling (PI ill)
2010	January	No sampling (PI ill)
	February-present	Monthly

Table 2. Sampling site gps locations.

Site	Sample site latitude/longitude
Salt Creek	48.16168/123.76538
	48.14641/123.56797
Elwha west estuary	48.13196/123.56822
	48.14584/123.56738

Acknowledgements

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project include Jesse Charles, Chris DeSisto, Bryan Hara, Erica Hirsh, Keelan Hooper, Mario Laungayan, Romy Laungayan, Ross McDorman, Sean Oden, Tiffany Nabors, Rebecca Paridis, Jacob Ray, Melanie Roed, Justin Rondeau, Trista Simmons, Tyler Ritchie, Ben Warren, Karen Wilkie, Eric Wood, and Steve Wyall. Tyler Ritchie, ONP, and Jenna Schilke, formerly WDFW, supervised a portion of the field work. Private property owners Pam Lowry and Malcom Dudley along with Chuck Janda provided site access. Project in kind partners in order of contribution included Cathy Lear (Clallam County), Matt Beirne (LEKT), Pat Crain, Brian Winters (ONP), Mitchell Dennis, Ross Fuller, Chris Byrnes, Roger Mosley, Dan Penttila, Dan Doty, and Tim Quinn (WDFW), Dave Parks (DNR), Bruce McCarter (DFO), Tim Randle (BoR) and Amy Draut (USGS), and Kurt Fresh (NOAA). This material is based upon work supported in part by the National Science Foundation under REU Grant No. 0452328 awarded jointly to Peninsula College and Western Washington University. Any opinions, findings and conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

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Figures (attached):

Figure 1. Map with sample sites

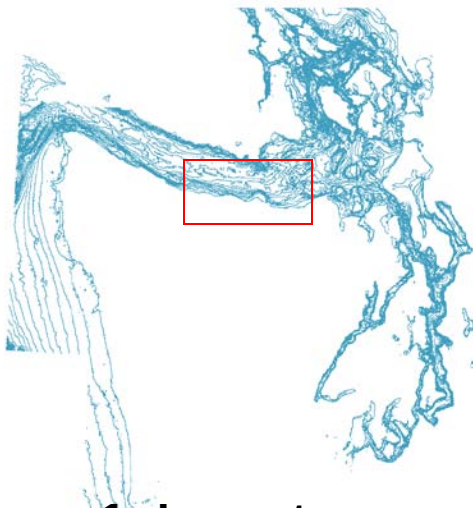
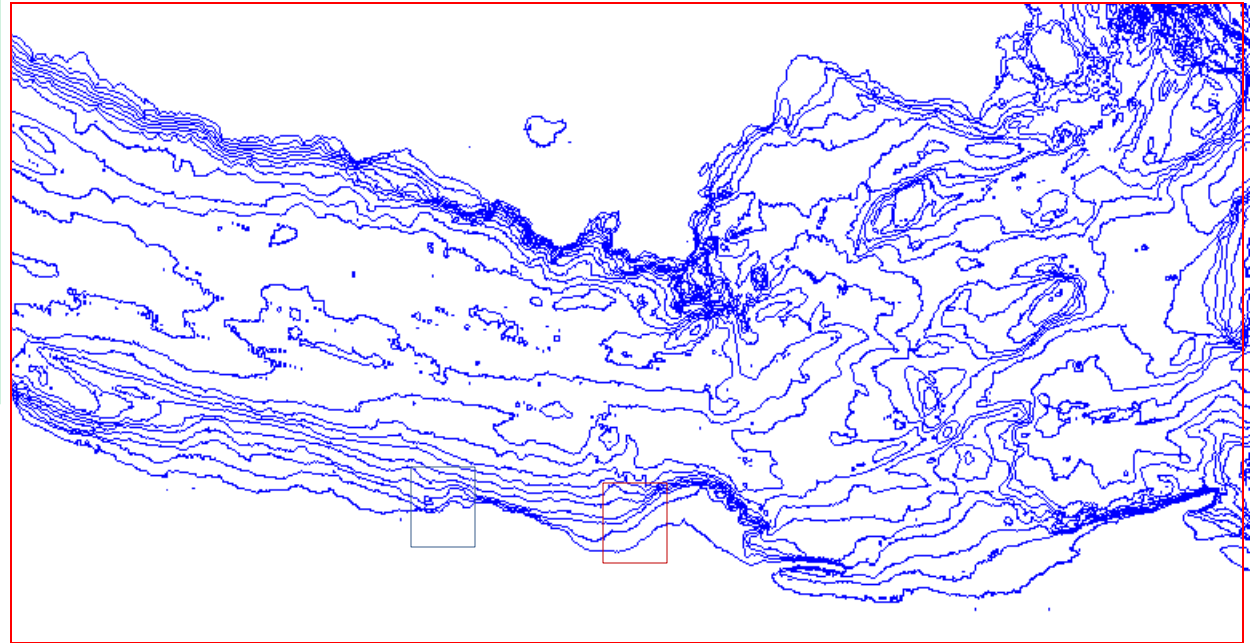
Figure 2. Net diagram

Figure 3. Fish abundance, relative percent density, and lengths 2007-2010

Figure 4. Pictures of students sampling



☆ = long term beach seining sites



Elwha estuary



Figure 1. Long term nearshore monitoring nearshore study sites

Elwha small seine

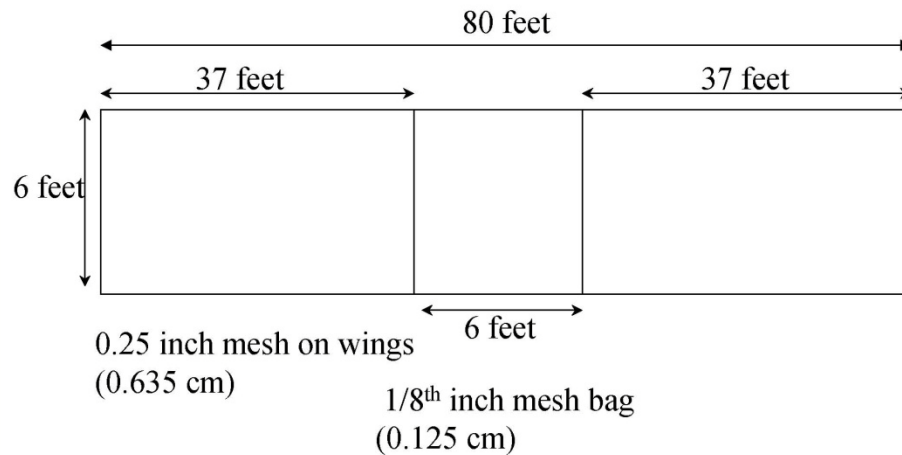
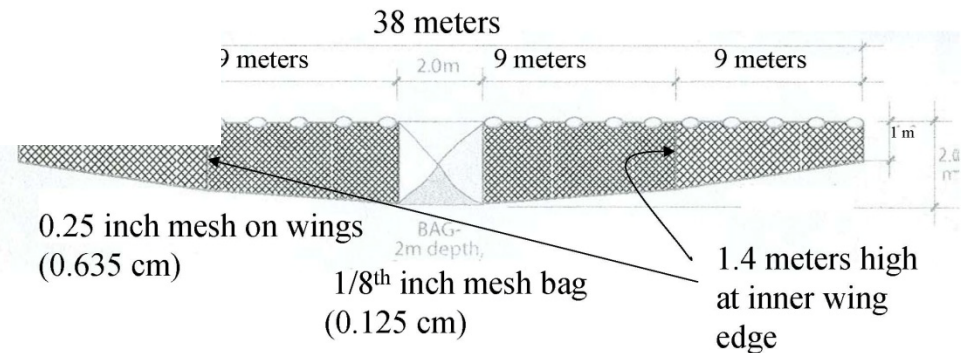


Figure 2. Puget Sound Protocol nets used in central Strait nearshore assessment. Only small net is used in 2010 long term monitoring of Elwha and Salt Creek estuary.



Elwha large seine net synopsis. The net is 38 meters long. Each wing has two panels that are 9 meters each. The outermost panel is 1.0m high on the edge and tapers to 1.4 meters. The second panel is 1.4 meters and tapers to 2.0 meters at the bag. The bag is 2 meters high and 2 meters in depth. Wing mesh is 0.25 inches (0.635 cm). Bag mesh is 1/8th inch (0.125 cm)

Date	Site	Chinook	Coho	Pink	Chum	Smelt (adult =>	Smelt (juv = 50-	Smelt (pl = <50)	Sand sole	English sole	Starry Flounder	Crescent gunn	Saddleback gui	Penpoint gunn	3-Spine stickle	Shiner perch	Staghorn sculp	Cottids Unknov	Juv. Flat fish	Cottids <30mm	Cutthroat	Steelhead	Prickley Sculpin
Mar-07	Elwha W estuary	0%	0%	0%	39%	0%	0%	35%	0%	0%	4%	0%	0%	0%	1%	0%	1%	19%	0%	0%	0%	0%	0%
Apr-07	Elwha W estuary	59%	22%	0%	3%	0%	1%	0%	0%	0%	3%	0%	0%	0%	3%	0%	1%	3%	0%	4%	0%	0%	0%
May-07	Elwha W estuary	51%	26%	0%	3%	0%	0%	0%	0%	0%	3%	0%	0%	0%	7%	0%	6%	0%	1%	2%	1%	1%	0%
Jun-07	Elwha W estuary	23%	2%	0%	3%	0%	0%	0%	0%	4%	5%	0%	0%	0%	22%	0%	6%	0%	2%	31%	1%	0%	2%
Jul-07	Elwha W estuary	13%	1%	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	0%	39%	0%	11%	0%	0%	20%	2%	0%	2%
Aug-07	Elwha W estuary	1%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	73%	0%	1%	0%	0%	15%	0%	0%	3%
Sep-07	Elwha W estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	92%	0%	1%	2%	0%	2%	0%	0%	1%
Oct-07	Elwha W estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	99%	0%	0%	0%	0%	0%	0%	0%	0%
Nov-07	Elwha W estuary	0%	7%	0%	0%	0%	7%	0%	0%	0%	21%	0%	0%	0%	14%	7%	7%	0%	0%	0%	0%	0%	29%
Dec-07	Elwha W estuary	0%	4%	0%	0%	0%	0%	0%	0%	0%	4%	0%	19%	0%	31%	0%	8%	0%	0%	0%	0%	4%	17%
Jan-08	Elwha W estuary	17%	0%	0%	0%	0%	83%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Feb-08	Elwha W estuary	0%	0%	0%	0%	0%	81%	11%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Mar-08	Elwha W estuary	24%	0%	0%	69%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%
Apr-08	Elwha W estuary	32%	33%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	21%	0%	6%	5%	0%	0%	0%	0%	1%
May-08	Elwha W estuary	33%	2%	0%	12%	0%	0%	0%	0%	0%	4%	0%	0%	0%	9%	0%	35%	0%	5%	0%	0%	0%	0%
Jun-08	Elwha W estuary	54%	0%	0%	3%	0%	0%	0%	0%	6%	2%	0%	0%	0%	28%	0%	4%	0%	1%	0%	1%	0%	1%
Jul-08	Elwha W estuary	42%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	42%	0%	2%	0%	0%	0%	1%	0%	0%
Aug-08	Elwha W estuary	11%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	80%	0%	2%	0%	0%	0%	0%	0%	0%
Sep-08	Elwha W estuary	20%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	67%	0%	4%	0%	0%	0%	1%	0%	3%
Nov-08	Elwha W estuary	27%	51%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	1%	0%	0%	0%	7%	0%	3%
Dec-08	Elwha W estuary	0%	0%	0%	0%	7%	0%	1%	0%	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	1%	0%	0%
Jan-09	Elwha W estuary	0%	0%	0%	0%	11%	22%	0%	0%	0%	0%	0%	0%	0%	44%	0%	22%	0%	0%	0%	0%	0%	0%
Mar-09	Elwha W estuary	2%	0%	0%	56%	0%	0%	0%	0%	0%	9%	0%	0%	0%	5%	0%	27%	0%	0%	0%	0%	0%	0%
Apr-09	Elwha W estuary	7%	9%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	75%	0%	6%	0%	0%	0%	0%	0%	0%
Jun-09	Elwha W estuary	55%	1%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	38%	0%	4%	0%	0%	0%	0%	0%	0%
Mar-10	Elwha W estuary	2%	0%	0%	53%	0%	0%	0%	0%	0%	7%	0%	0%	0%	12%	0%	13%	0%	0%	13%	0%	0%	0%
Apr-10	Elwha W estuary	6%	91%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
May-10	Elwha W estuary	50%	33%	0%	4%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	9%	0%	0%	2%	0%	0%	0%
Oct-08	Elwha W estuary	2%	10%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	82%	0%	1%	0%	0%	0%	2%	0%	1%
May-09	Elwha W estuary	27%	32%	0%	4%	0%	0%	0%	0%	0%	2%	0%	0%	0%	31%	0%	5%	0%	0%	0%	0%	0%	0%
Feb-10	Elwha W estuary	0%	0%	0%	43%	5%	5%	0%	0%	0%	0%	0%	0%	0%	11%	0%	34%	0%	0%	0%	0%	0%	0%
Mar-07	Salt Creek Main C	0%	3%	0%	26%	0%	0%	0%	0%	0%	9%	0%	0%	0%	3%	0%	24%	33%	0%	0%	0%	0%	0%
Apr-07	Salt Creek Main C	0%	1%	0%	33%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	2%	0%	0%	63%	0%	0%	0%
May-07	Salt Creek Main C	2%	22%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	9%	10%	0%	0%	41%	2%	0%	0%
June-07	Salt Creek Main C	0%	2%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%	21%	48%	22%	0%	1%	0%	3%	0%	0%
Jul-07	Salt Creek Main C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	67%	18%	0%	0%	0%	2%	0%	0%
Aug-07	Salt Creek Main C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	85%	10%	0%	0%	0%	0%	0%	0%
Sep-07	Salt Creek Main C	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	1%	71%	26%	0%	0%	0%	0%	0%	0%
Oct-07	Salt Creek Main C	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	13%	0%	10%	0%	0%	0%	37%	0%	0%
Nov-07	Salt Creek Main C	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	81%	3%	0%	0%	14%	0%	0%	0%
Dec-07	Salt Creek estuary	0%	14%	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	14%	0%	29%	0%	0%	0%	14%	0%	0%
Jan-08	Salt Creek estuary	0%	0%	0%	0%	0%	20%	0%	0%	0%	20%	0%	0%	0%	0%	0%	60%	0%	0%	0%	0%	0%	0%
Feb-08	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	73%	0%	0%	0%	0%	0%

Date	Site	Chinook	Coho	Pink	Chum	Smelt (adult = > 50mm)	Smelt (juv = 50-100mm)	Smelt (pl = <50mm)	Sand sole	English sole	Starry Flounder	Crescent gunn	Saddleback gui	Penpoint gunn	3-Spine stickle	Shiner perch	Staghorn sculp	Cottids Unknow	Juv. Flat fish	Cottids <30mm	Cutthroat	Steelhead	Prickley Sculpin
May-08	Salt Creek estuary	0%	1%	0%	25%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	7%	0%	0%	64%	0%	0%	2%
Oct-08	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	4%	0%	0%	78%	16%	0%	0%	0%	0%	0%	0%
Nov-08	Salt Creek estuary	0%	1%	0%	0%	0%	0%	0%	0%	0%	7%	1%	19%	0%	1%	39%	32%	0%	0%	0%	1%	0%	0%
Dec-08	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	98%	0%	0%	0%	0%	0%	0%
Jan-09	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
Feb-09	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	25%	0%	25%	0%	0%	0%	0%	0%	0%
Mar-09	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Apr-09	Salt Creek estuary	0%	61%	0%	22%	0%	0%	0%	0%	0%	1%	0%	0%	0%	7%	0%	9%	0%	0%	0%	0%	0%	0%
May-09	Salt Creek estuary	0%	29%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%	0%	1%	53%	2%	0%	0%	0%	1%	0%	0%
Jun-09	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	6%	0%	47%	0%	46%	0%	0%	0%	0%	0%	0%
Feb-10	Salt Creek estuary	0%	0%	0%	0%	0%	0%	0%	0%	0%	34%	0%	0%	0%	6%	0%	59%	0%	0%	0%	0%	0%	0%
Mar-10	Salt Creek estuary	0%	27%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	0%	9%	0%	36%	0%	0%	9%	0%	0%	0%
Apr-10	Salt Creek estuary	0%	13%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	75%	0%	0%	0%	4%	0%	0%
May-10	Salt Creek estuary	0%	32%	0%	43%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	4%	1%	0%	0%	2%	0%	16%	0%

Date	Site	N. Shad	Bull Trout	unk Trout	juvenile trout
Mar-07	Elwha W estuary	0%	1%	0%	0%
Apr-07	Elwha W estuary	0%	0%	0%	0%
May-07	Elwha W estuary	0%	0%	0%	0%
Jun-07	Elwha W estuary	0%	0%	0%	0%
Jul-07	Elwha W estuary	0%	0%	0%	0%
Aug-07	Elwha W estuary	0%	0%	0%	1%
Sep-07	Elwha W estuary	0%	0%	0%	0%
Oct-07	Elwha W estuary	0%	0%	0%	0%
Nov-07	Elwha W estuary	0%	0%	0%	7%
Dec-07	Elwha W estuary	0%	0%	4%	0%
Jan-08	Elwha W estuary	0%	0%	0%	0%
Feb-08	Elwha W estuary	0%	0%	0%	6%
Mar-08	Elwha W estuary	0%	0%	0%	0%
Apr-08	Elwha W estuary	0%	0%	0%	0%
May-08	Elwha W estuary	0%	0%	0%	0%
Jun-08	Elwha W estuary	0%	0%	0%	0%
Jul-08	Elwha W estuary	0%	0%	0%	5%
Aug-08	Elwha W estuary	0%	0%	0%	3%
Sep-08	Elwha W estuary	0%	0%	0%	3%
Nov-08	Elwha W estuary	0%	0%	0%	0%
Dec-08	Elwha W estuary	0%	0%	0%	0%
Jan-09	Elwha W estuary	0%	0%	0%	0%
Mar-09	Elwha W estuary	0%	0%	0%	0%
Apr-09	Elwha W estuary	0%	0%	0%	0%
Jun-09	Elwha W estuary	0%	0%	0%	0%
Mar-10	Elwha W estuary	0%	0%	0%	0%
Apr-10	Elwha W estuary	0%	0%	0%	0%
May-10	Elwha W estuary	0%	0%	0%	0%
Oct-08	Elwha W estuary	0%	0%	0%	1%
May-09	Elwha W estuary	0%	0%	0%	0%
Feb-10	Elwha W estuary	0%	2%	0%	0%
Mar-07	Salt Creek Main C	0%	0%	0%	0%
Apr-07	Salt Creek Main C	0%	0%	0%	0%
May-07	Salt Creek Main C	0%	0%	0%	0%
June-07	Salt Creek Main C	0%	0%	0%	0%
Jul-07	Salt Creek Main C	1%	0%	0%	0%
Aug-07	Salt Creek Main C	0%	0%	0%	0%
Sep-07	Salt Creek Main C	0%	0%	0%	0%
Oct-07	Salt Creek Main C	0%	0%	0%	0%
Nov-07	Salt Creek Main C	0%	0%	0%	0%
Dec-07	Salt Creek estuary	0%	0%	0%	0%
Jan-08	Salt Creek estuary	0%	0%	0%	0%
Feb-08	Salt Creek estuary	0%	0%	0%	0%

Date	Site	N. Shad	Bull Trout	unk Trout	juvenile trout
May-08	Salt Creek estuary	0%	0%	0%	0%
Oct-08	Salt Creek estuary	0%	0%	0%	0%
Nov-08	Salt Creek estuary	0%	0%	0%	0%
Dec-08	Salt Creek estuary	0%	0%	0%	0%
Jan-09	Salt Creek estuary	0%	0%	0%	0%
Feb-09	Salt Creek estuary	0%	0%	0%	0%
Mar-09	Salt Creek estuary	0%	0%	0%	0%
Apr-09	Salt Creek estuary	0%	0%	0%	0%
May-09	Salt Creek estuary	0%	0%	0%	0%
Jun-09	Salt Creek estuary	0%	0%	0%	0%
Feb-10	Salt Creek estuary	0%	0%	0%	0%
Mar-10	Salt Creek estuary	0%	0%	0%	0%
Apr-10	Salt Creek estuary	0%	0%	0%	0%
May-10	Salt Creek estuary	0%	0%	0%	0%

Date	Site	Net Size	Total average		species richness		Chinook		Coho		Pink		Chum		Smelt (adult = >120)		Smelt (juv = 50-120)		Smelt (pl = <50)		Sand sole		English sole		Starry Flounder		Crescent gunnel		Saddleback gunnel	
		ave	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd
Mar-07	Elwha W	458.50	108.50	75.66	5.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	42.00	55.15	0.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00	0.00	0.00	4.00	1.41	0.00	0.00	0.00	0.00
Apr-07	Elwha W	458.50	194.27	124.46	4.50	1.52	115.00	109.97	43.00	0.00	0.00	0.00	6.40	5.94	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.20	4.60	0.00	0.00	0.00	0.00
May-07	Elwha W	458.50	253.17	207.39	6.00	2.45	130.00	106.69	65.00	50.13	0.00	0.00	6.33	5.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.25	2.22	0.00	0.00	0.00	0.00
Jun-07	Elwha W	415.68	326.87	161.08	6.83	2.48	76.00	38.31	5.80	4.87	0.00	0.00	8.67	11.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.00	17.00	15.60	0.00	0.00	0.00	0.00
Jul-07	Elwha W	314.99	344.78	222.97	5.38	1.85	43.50	22.82	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.75	6.90	1.00	0.00	1.00	0.00
Aug-07	Elwha W	309.71	692.92	297.98	5.50	2.35	7.00	6.68	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.75	19.57	0.00	0.00	1.00	0.00
Sep-07	Elwha W	458.50	1194.50	801.69	3.50	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.00	8.49	0.00	0.00	2.00	0.00
Oct-07	Elwha W	458.50	3008.50	4216.48	2.00	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.50	12.02	0.00	0.00	0.00	0.00
Nov-07	Elwha W	458.50	14.00	0.00	4.00	4.24	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
Dec-07	Elwha W	458.50	25.50	16.26	6.50	0.71	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	5.00	0.00
Jan-08	Elwha W	458.50	12.00	0.00	1.00	1.41	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb-08	Elwha W	458.50	36.00	0.00	1.50	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar-08	Elwha W	458.50	54.50	0.71	2.50	2.12	13.00	0.00	0.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Apr-08	Elwha W	458.50	394.58	309.85	4.50	2.65	125.33	107.77	131.00	171.12	0.00	0.00	3.50	3.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.50	3.54	0.00	0.00	0.00	0.00
May-08	Elwha W	364.40	218.33	45.56	3.67	2.52	72.00	15.56	4.00	0.00	0.00	0.00	27.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00
Jun-08	Elwha W	173.06	457.08	594.95	5.50	3.00	248.00	386.50	1.00	0.00	0.00	0.00	15.50	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.00	0.00	11.33	11.68	0.00	0.00	0.00	0.00
Jul-08	Elwha W	210.29	341.00	170.66	4.25	4.03	143.33	142.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.00	2.83	0.00	0.00	0.00	0.00
Aug-08	Elwha W	231.96	433.67	173.99	4.00	2.94	45.50	62.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.00	14.93	0.00	0.00	0.00	0.00
Sep-08	Elwha W	287.24	350.00	342.24	6.00	4.24	71.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50	3.54	0.00	0.00	0.00	0.00
Oct-08	Elwha W	173.06	221.00	na	9.00	na	4.00	na	21.00	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	4.00	na	0.00	na	0.00	na
Nov-08	Elwha W	173.06	67.00	7.07	3.50	3.54	18.00	0.00	34.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec-08	Elwha W	199.01	70.00	0.00	2.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jan-09	Elwha W	173.06	9.00	0.00	2.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar-09	Elwha W	173.06	55.00	43.84	3.50	2.12	1.00	0.00	0.00	0.00	0.00	0.00	31.00	33.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
Apr-09	Elwha W	173.06	708.50	170.41	5.50	2.12	52.50	61.52	62.50	81.32	0.00	0.00	10.50	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00
May-09	Elwha W	173.06	560.00	na	7.00	na	150.00	na	178.00	na	na	na	21.00	na	na	na	na	na	na	na	na	na	na	na	9.00	na	na	na	na	na
Jun-09	Elwha W	173.06	362.50	193.04	4.50	3.54	198.50	191.63	5.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
Feb-10	Elwha W	173.06	44.00	na	7.00	na		1.00		0.00		0.00	19.00	na	2.00	0.00	2.00	na		0.00		0.00		0.00		3.00		0.00		0.00
Mar-10	Elwha W	173.06	43.00	28.28	4.00	2.83	1.00	0.00	0.00	0.00	0.00	0.00	23.00	22.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
Apr-10	Elwha W	173.06	970.83	13.87	3.33	3.21	60.00	0.00	880.00	0.00	1.00	0.00	18.33	7.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
May-10	Elwha W	173.06	247.50	294.86	6.50	2.12	123.00	165.46	81.00	111.72	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	1.41	0.00	0.00	0.00	0.00
Mar-07	Salt Creek	458.50	32.50	7.78	3.50	0.71	0.00	0.00	1.00	0.00	0.00	0.00	8.50	7.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
Apr-07	Salt Creek	458.50	130.07	159.08	3.00	1.41	0.00	0.00	1.00	0.00	0.00	0.00	42.60	48.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	1.10	0.00	0.00	0.00	0.00
May-07	Salt Creek	458.50	464.16	438.99	6.63	2.67	10.50	9.19	102.67	174.36	0.00	0.00	34.43	50.68	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.80	0.84	1.00	0.00	2.00	0.00
Jun-07	Salt Creek	458.50	246.50	172.75	5.33	1.37	0.00	0.00	4.00	1.73	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

Date	Site	Net Size	Total average		species richness		Chinook		Coho		Pink		Chum		Smelt (adult = >120)		Smelt (juv = 50-120)		Smelt (pl = <50)		Sand sole		English sole		Starry Flounder		Crescent gunnel		Saddleback gunnel	
		ave	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd
Aug-07	Salt Creek	458.50	1290.63	632.14	6.38	1.60	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	1.33	0.58	1.00	0.00	1.50	0.84
Sep-07	Salt Creek	455.44	246.75	288.15	4.25	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	1.50	0.71
Oct-07	Salt Creek	458.50	15.00	2.83	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00
Nov-07	Salt Creek	458.50	36.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec-07	Salt Creek	458.50	7.00	1.41	3.50	0.71	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
Jan-08	Salt Creek	458.50	5.00	0.00	1.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Feb-08	Salt Creek	458.50	11.00	9.90	1.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-08	Salt Creek	458.50	173.00	49.50	4.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	42.50	44.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Oct-08	Salt Creek	458.50	874.00	127.28	6.00	1.41	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.50	4.95	0.00	0.00	32.00	0.00
Nov-08	Salt Creek	173.06	145.00	83.44	5.50	0.71	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	5.66	1.00	0.00	28.00	0.00
Dec-08	Salt Creek	173.06	21.50	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jan-09	Salt Creek	173.06	2.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb-09	Salt Creek	173.06	4.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
Mar-09	Salt Creek	173.06	2.00	0.00	0.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
Apr-09	Salt Creek	173.06	71.00	63.64	5.00	1.41	0.00	0.00	43.00	59.40	0.00	0.00	15.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
May-09	Salt Creek	173.06	1090.00	424.26	7.00	1.41	0.00	0.00	313.50	419.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	145.00	0.00	1.00	0.00	1.00	0.00	2.00	0.00	1.00	0.00
Jun-09	Salt Creek	173.06	385.00	83.44	4.50	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	1.41	3.00	0.00	22.50	27.58
Feb-10	Salt Creek	173.06	16.00	14.14	2.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.50	2.12	0.00	0.00	0.00	0.00
Mar-10	Salt Creek	173.06	11.00	7.07	4.00	0.00	0.00	0.00	3.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Apr-10	Salt Creek	173.06	24.00	2.83	2.50	0.71	0.00	0.00	3.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
May-10	Salt Creek	173.06	78.50	27.58	4.00	0.00	0.00	0.00	25.00	26.87	0.00	0.00	34.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

note, numbers are fish per NET (not densities)

Date	Site	Net Size	Penpoint gunnel	3-Spine stickleback		Shiner perch		Staghorn sculpin		Cottids Unknown		Juv. Flat fish		Cottids <30mm		Cutthroat		Steelhead		Prickley Sculpin		N. Shad		Bull Trout		unk Trout		juvenile trout				
		ave	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd				
Mar-07	Elwha W	458.50	0.00	0.00	1.50	0.71	0.00	0.00	1.00	0.00	21.00	18.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00			
Apr-07	Elwha W	458.50	0.00	0.00	6.00	0.00	0.00	0.00	2.17	0.41	6.00	0.00	0.00	0.00	8.50	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
May-07	Elwha W	458.50	0.00	0.00	16.75	17.69	0.00	0.00	15.33	19.67	0.00	0.00	2.00	0.00	5.50	4.95	2.00	1.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jun-07	Elwha W	415.68	0.00	0.00	73.40	66.27	0.00	0.00	18.33	12.03	0.00	0.00	7.50	9.19	100.00	0.00	2.50	1.73	0.00	0.00	5.67	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul-07	Elwha W	314.99	0.00	0.00	135.20	108.73	0.00	0.00	36.25	46.22	0.00	0.00	1.00	0.00	68.75	23.94	8.00	6.87	0.00	0.00	8.33	7.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Aug-07	Elwha W	309.71	0.00	0.00	507.00	180.05	0.00	0.00	4.83	2.40	0.00	0.00	0.00	0.00	106.25	65.75	1.00	0.00	2.00	0.00	17.75	16.30	0.00	0.00	0.00	0.00	0.00	0.00	10.33	7.23		
Sep-07	Elwha W	458.50	0.00	0.00	1103.50	775.70	1.50	0.71	9.00	10.44	25.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	12.50	6.36	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00		
Oct-07	Elwha W	458.50	0.00	0.00	2981.00	4204.46	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Nov-07	Elwha W	458.50	0.00	0.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00		
Dec-07	Elwha W	458.50	0.00	0.00	8.00	9.90	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	4.50	4.95	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00		
Jan-08	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Feb-08	Elwha W	458.50	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00		
Mar-08	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00	2.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Apr-08	Elwha W	458.50	0.00	0.00	82.00	0.00	0.00	0.00	24.25	23.89	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
May-08	Elwha W	364.40	0.00	0.00	20.00	9.90	0.00	0.00	77.33	20.11	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Jun-08	Elwha W	173.06	0.00	0.00	126.00	168.29	0.00	0.00	18.25	16.46	0.00	0.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	4.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Jul-08	Elwha W	210.29	0.00	0.00	143.50	19.09	0.00	0.00	6.67	2.52	0.00	0.00	0.00	0.00	0.00	0.00	4.50	3.54	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	18.00	0.00		
Aug-08	Elwha W	231.96	0.00	0.00	345.00	82.02	0.00	0.00	7.67	2.08	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	15.00	11.31		
Sep-08	Elwha W	287.24	0.00	0.00	234.50	330.22	0.00	0.00	15.00	8.49	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	1.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00	0.00		
Oct-08	Elwha W	173.06		na	181.00	na		na	2.00	na		na		na		na	5.00	na		na	2.00	na		na		na		na		na	2.00	na
Nov-08	Elwha W	173.06	0.00	0.00	7.00	7.07	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Dec-08	Elwha W	199.01	0.00	0.00	63.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Jan-09	Elwha W	173.06	0.00	0.00	4.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Mar-09	Elwha W	173.06	0.00	0.00	3.00	0.00	0.00	0.00	15.00	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Apr-09	Elwha W	173.06	0.00	0.00	535.00	0.00	0.00	0.00	42.00	21.21	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
May-09	Elwha W	173.06		na	172.00	na		na	28.00	na		na		na		na	2.00	na		na		na		na		na		na		na	na	
Jun-09	Elwha W	173.06	0.00	0.00	139.00	0.00	0.00	0.00	15.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Feb-10	Elwha W	173.06		0.00	5.00	5.00		0.00	15.00	5.50		0.00		0.00		5.50		0.00		0.00		0.00		0.00	1.00	0.00		0.00		0.00		
Mar-10	Elwha W	173.06	0.00	0.00	5.00	0.00	0.00	0.00	5.50	2.12	0.00	0.00	0.00	0.00	5.50	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Apr-10	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00	6.50	6.36	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
May-10	Elwha W	173.06	0.00	0.00	3.50	3.54	0.00	0.00	22.00	12.73	0.00	0.00	0.00	0.00	5.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Mar-07	Salt Cree	458.50	0.00	0.00	1.00	0.00	0.00	0.00	8.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Apr-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00	2.67	1.53	0.00	0.00	0.00	0.00	82.00	108.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
May-07	Salt Cree	458.50	0.00	0.00	16.33	22.37	40.00	11.31	47.83	58.20	0.00	0.00	1.00	0.00	191.60	105.47	9.00	6.56	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Jun-07	Salt Cree	458.50	1.00	0.00	51.83	88.96	118.00	32.53	55.33	36.27	1.00	0.00	2.00	0.00	0.00	0.00	8.00	11.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

Date	Site	Net Size	Penpoint gunnel			3-Spine stickleback		Shiner perch		Staghorn sculpin		Cottids Unknown		Juv. Flat fish		Cottids <30mm		Cutthroat		Steelhead		Prickley Sculpin		N. Shad		Bull Trout		unk Trout		juvenile trout		
		ave	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd	ave	sd		
Aug-07	Salt Cree	458.50	1.50	0.71	43.40	39.00	1095.13	493.29	132.38	92.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	2.61	0.00	0.00	1.00	0.00	3.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00
Sep-07	Salt Cree	455.44	0.00	0.00	2.00	1.41	176.25	228.53	63.00	57.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct-07	Salt Cree	458.50	0.00	0.00	2.00	0.00	0.00	0.00	1.50	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.50	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nov-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	29.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Dec-07	Salt Cree	458.50	0.00	0.00	1.00	0.00	0.00	0.00	2.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jan-08	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Feb-08	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	8.00	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
May-08	Salt Cree	458.50	0.00	0.00	1.00	0.00	0.00	0.00	11.50	4.95	0.00	0.00	0.00	0.00	111.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Oct-08	Salt Cree	458.50	0.00	0.00	4.00	0.00	685.00	94.75	139.50	27.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	
Nov-08	Salt Cree	173.06	0.00	0.00	2.00	0.00	56.00	36.77	46.00	41.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Dec-08	Salt Cree	173.06	0.00	0.00	0.00	0.00	0.00	0.00	21.50	27.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jan-09	Salt Cree	173.06	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Feb-09	Salt Cree	173.06	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mar-09	Salt Cree	173.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Apr-09	Salt Cree	173.06	0.00	0.00	5.00	0.00	0.00	0.00	6.50	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
May-09	Salt Cree	173.06	0.00	0.00	8.00	0.00	583.00	0.00	23.50	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jun-09	Salt Cree	173.06	0.00	0.00	181.00	0.00	0.00	0.00	175.50	54.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Feb-10	Salt Cree	173.06	0.00	0.00	1.00	0.00	0.00	0.00	9.50	12.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Mar-10	Salt Cree	173.06	0.00	0.00	1.00	0.00	0.00	0.00	4.00	4.24	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Apr-10	Salt Cree	173.06	0.00	0.00	0.00	0.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
May-10	Salt Cree	173.06	0.00	0.00	1.00	0.00	3.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.50	0.71	0.00	0.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

note, numbers are

Date	Site	Net Size	PL un-lded	sd	Sharpnose Sculpin	sd	Sardine	sd
		ave	ave		ave		ave	
Mar-07	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Apr-07	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
May-07	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Jun-07	Elwha W	415.68	0.00	0.00	0.00	0.00	0.00	0.00
Jul-07	Elwha W	314.99	0.00	0.00	0.00	0.00	0.00	0.00
Aug-07	Elwha W	309.71	0.00	0.00	0.00	0.00	0.00	0.00
Sep-07	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Oct-07	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Nov-07	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Dec-07	Elwha W	458.50	0.00	0.00	2.00	1.41	0.00	0.00
Jan-08	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Feb-08	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Mar-08	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Apr-08	Elwha W	458.50	0.00	0.00	0.00	0.00	0.00	0.00
May-08	Elwha W	364.40	0.00	0.00	0.00	0.00	0.00	0.00
Jun-08	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Jul-08	Elwha W	210.29	0.00	0.00	0.00	0.00	0.00	0.00
Aug-08	Elwha W	231.96	0.00	0.00	0.00	0.00	0.00	0.00
Sep-08	Elwha W	287.24	0.00	0.00	0.00	0.00	0.00	0.00
Oct-08	Elwha W	173.06		na		na		na
Nov-08	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Dec-08	Elwha W	199.01	0.00	0.00	0.00	0.00	0.00	0.00
Jan-09	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Mar-09	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Apr-09	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
May-09	Elwha W	173.06		na		na		na
Jun-09	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Feb-10	Elwha W	173.06		0.00		0.00		0.00
Mar-10	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Apr-10	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
May-10	Elwha W	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Mar-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Apr-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00
May-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Jun-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Jul-07	Salt Cree	458.50	0.00	0.00	0.00	0.00	0.00	0.00

Date	Site	Net Size	PL un-Ided	sd	Sharpnose Sculpin	sd	Sardine	sd
		ave	ave		ave		ave	
Aug-07	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Sep-07	Salt Creek	455.44	0.00	0.00	0.00	0.00	0.00	0.00
Oct-07	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Nov-07	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Dec-07	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Jan-08	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Feb-08	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
May-08	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Oct-08	Salt Creek	458.50	0.00	0.00	0.00	0.00	0.00	0.00
Nov-08	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Dec-08	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Jan-09	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Feb-09	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Mar-09	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Apr-09	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
May-09	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Jun-09	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Feb-10	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
Mar-10	Salt Creek	173.06	0.00	0.00	0.00	0.00	1.00	0.00
Apr-10	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00
May-10	Salt Creek	173.06	0.00	0.00	0.00	0.00	0.00	0.00

note, numbers are

Date	Site		Chinook_tot	Chinook_fork	Coho_tot	Coho_fork	Pink_tot	Pink_fork	Chum_tot	Chum_fork	Smelt (adult = >120)	Smelt (juv = 50-120)	Smelt (pl = <50)	Herring (adult = >120)	Herring (juv = 50-120)	Herring (pl = <50)	Sand Lance (pl = <50)	Sand sole	English sole	Starry Flounder	Crescent gunnel
March-07	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	46.27	0.00	0.00	0.00	43.58	0.00	0.00	0.00	0.00	0.00	0.00	116.00	0.00
		st	0.00	0.00	0.00	0.00	0.00	0.00	3.11	0.00	0.00	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00	34.82	0.00
April-07	Elwha west estuary	ave	60.48	56.86	139.55	130.15	0.00	0.00	46.22	44.22	0.00	113.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.71	0.00
		stdev	8.22	7.34	12.09	10.80	0.00	0.00	6.05	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.83	0.00
May-07	Elwha west estuary	average	77.24	71.22	131.63	121.43	0.00	0.00	54.26	51.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	103.21	0.00
		stdev	17.41	16.38	18.40	16.99	0.00	0.00	8.02	7.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.36	0.00
June-07	Elwha west estuary	ave	85.53	78.64	106.33	97.29	0.00	0.00	59.38	55.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.75	45.44	0.00
		stdev	7.55	7.25	24.52	22.26	0.00	0.00	4.67	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.65	27.52	0.00
July-07	Elwha west estuary	ave	87.98	81.38	96.33	89.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.96	106.00
		stdev	10.15	9.25	5.13	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.23	0.00
August-07	Elwha west estuary	ave	87.46	80.85	0.00	0.00	0.00	0.00	0.00	0.00	162.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.18	0.00
		stdev	9.82	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.39	0.00
September-07	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.32	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.92	0.00
October-07	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.16	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.65	0.00
November-07	Elwha west estuary	ave	780.00	740.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	102.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.33	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.12	0.00
December-07	Elwha west estuary	ave	0.00	0.00	85.00	78.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-08	Elwha west estuary	ave	105.00	95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-08	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.45	47.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.74	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March-08	Elwha west estuary	ave	47.69	44.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	3.77	3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-08	Elwha west estuary	ave	132.06	123.53	136.85	128.92	0.00	0.00	41.71	40.43	109.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.18	0.00
		stdev	54.98	51.38	25.59	24.16	0.00	0.00	2.21	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.90	0.00
May-08	Elwha west estuary	ave	67.11	62.41	82.80	77.20	0.00	0.00	67.71	63.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117.54	0.00
		stdev	14.10	13.01	43.51	39.97	0.00	0.00	9.05	8.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	104.90	0.00
June-08	Elwha west estuary	ave	84.95	77.03	150.00	135.00	0.00	0.00	65.90	61.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.00	65.50	0.00
		stdev	15.72	13.15	0.00	0.00	0.00	0.00	9.72	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.97	0.00
July-08	Elwha west estuary	ave	100.59	93.35	116.00	107.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.05	0.00
		stdev	10.11	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.38	0.00
August-08	Elwha west estuary	ave	98.29	90.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.39	0.00
		stdev	9.29	9.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.56	0.00

Date	Site		Saddleback gunnel	Penpoint gunnel	3-Spine stickleback	Shiner perch	Staghorn sculpin	cottids unknown	Juv Flat Fish	Cutthroat_tot	Cutthroat_fork	Steelhead_tot	Steelhead_fork	Prickley Sculpin	Arrow Goby	N. Shad	Bull Trout_tot	Bull Trout_fork	unk Trout_tot	unk Trout_fork	Juv Trout_tot
March-07	Elwha west estuary	ave	0.00	0.00	41.50	0.00	78.00	28.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	310.00	0.00	0.00	0.00	0.00
		st	0.00	0.00	16.50	0.00	0.00	29.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-07	Elwha west estuary	ave	0.00	0.00	49.00	0.00	54.31	33.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.97	0.00	22.14	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-07	Elwha west estuary	average	0.00	0.00	52.80	0.00	52.75	0.00	27.00	157.33	190.50	267.67	246.67	50.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.64	0.00	19.65	0.00	5.66	74.69	36.67	88.74	72.23	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June-07	Elwha west estuary	ave	0.00	0.00	53.65	0.00	77.79	0.00	29.60	47.09	46.00	0.00	0.00	59.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	6.50	0.00	24.76	0.00	3.85	37.26	36.70	0.00	0.00	14.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
July-07	Elwha west estuary	ave	116.50	0.00	51.90	0.00	92.98	0.00	17.00	34.06	33.09	0.00	0.00	66.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	17.68	0.00	9.62	0.00	18.70	0.00	0.00	4.04	4.04	0.00	0.00	21.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
August-07	Elwha west estuary	ave	80.00	0.00	37.95	0.00	109.10	0.00	0.00	33.00	32.00	37.50	35.50	100.69	0.00	0.00	0.00	0.00	0.00	0.00	42.40
		stdev	0.00	0.00	11.87	0.00	26.55	0.00	0.00	0.00	0.00	2.12	2.12	27.83	0.00	0.00	0.00	0.00	0.00	0.00	5.67
September-07	Elwha west estuary	ave	131.50	0.00	31.68	71.00	131.15	0.00	0.00	0.00	0.00	0.00	0.00	76.48	0.00	0.00	0.00	0.00	0.00	0.00	44.00
		stdev	14.85	0.00	9.47	18.25	15.23	0.00	0.00	0.00	0.00	0.00	0.00	33.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
October-07	Elwha west estuary	ave	0.00	0.00	37.61	71.00	95.00	0.00	0.00	65.00	60.00	0.00	0.00	40.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	8.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November-07	Elwha west estuary	ave	0.00	0.00	35.50	85.00	31.00	0.00	0.00	0.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00	0.00	94.00	88.00	0.00
		stdev	0.00	0.00	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December-07	Elwha west estuary	ave	119.80	0.00	37.25	0.00	51.00	0.00	0.00	0.00	0.00	433.50	412.50	107.83	0.00	0.00	330.00	315.00	0.00	0.00	0.00
		stdev	22.22	0.00	4.09	0.00	8.49	0.00	0.00	0.00	0.00	518.31	491.44	56.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-08	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-08	Elwha west estuary	ave	0.00	0.00	34.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.50
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
March-08	Elwha west estuary	ave	0.00	0.00	0.00	0.00	32.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-08	Elwha west estuary	ave	0.00	0.00	42.82	0.00	39.84	0.00	0.00	0.00	0.00	0.00	0.00	41.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.95	0.00	8.65	0.00	0.00	0.00	0.00	0.00	0.00	16.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-08	Elwha west estuary	ave	0.00	0.00	43.45	0.00	46.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	6.27	0.00	13.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June-08	Elwha west estuary	ave	0.00	0.00	54.04	0.00	61.47	0.00	40.00	130.67	138.00	0.00	0.00	55.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.36	0.00	74.20	0.00	0.00	89.53	84.04	0.00	0.00	21.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
July-08	Elwha west estuary	ave	0.00	0.00	53.63	0.00	76.00	0.00	0.00	172.89	164.78	0.00	0.00	0.00	0.00	0.00	156.00	147.00	0.00	0.00	35.39
		stdev	0.00	0.00	4.87	0.00	18.79	0.00	0.00	40.13	40.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.41
August-08	Elwha west estuary	ave	0.00	0.00	51.95	0.00	89.98	0.00	0.00	164.50	157.00	0.00	0.00	76.67	0.00	0.00	0.00	0.00	0.00	0.00	41.22
		stdev	0.00	0.00	8.54	0.00	19.76	0.00	0.00	45.96	46.67	0.00	0.00	8.08	0.00	0.00	0.00	0.00	0.00	0.00	9.47

Date	Site		Juv Trout_fork	Eulachon
March-07	Elwha west estuary	ave	0.00	0.00
		st	0.00	0.00
April-07	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
May-07	Elwha west estuary	average	0.00	0.00
		stdev	0.00	0.00
June-07	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
July-07	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
August-07	Elwha west estuary	ave	40.57	0.00
		stdev	5.61	0.00
September-07	Elwha west estuary	ave	42.00	0.00
		stdev	0.00	0.00
October-07	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
November-07	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
December-07	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
January-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
February-08	Elwha west estuary	ave	38.00	0.00
		stdev	0.00	0.00
March-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
April-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
May-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
June-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
July-08	Elwha west estuary	ave	34.11	0.00
		stdev	4.11	0.00
August-08	Elwha west estuary	ave	39.48	0.00
		stdev	8.72	0.00

Date	Site		Chinook_tot	Chinook_fork	Coho_tot	Coho_fork	Pink_tot	Pink_fork	Chum_tot	Chum_fork	Smelt (adult = >120)	Smelt (juv = 50-120)	Smelt (pl = <50)	Herring (adult = >120)	Herring (juv = 50-120)	Herring (pl = <50)	Sand Lance (pl = <50)	Sand sole	English sole	Starry Flounder	Crescent gunnel
September-08	Elwha west estuary	ave	113.30	103.20	112.00	105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	88.57	0.00
		stdev	12.25	11.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.34	0.00
October-08	Elwha west estuary	ave	106.00	99.00	120.35	108.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.00	0.00
		stdev	6.68	7.44	18.78	9.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November-08	Elwha west estuary	ave	106.94	97.35	159.25	146.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	4.25	4.85	108.92	101.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December-08	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	125.20	0.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-09	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120.00	57.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-09	Elwha west estuary	ave	0.00	0.00	0.00	0.00	45.00	43.00	43.70	41.44	175.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.38	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	3.42	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.38	0.00
March-09	Elwha west estuary	ave	60.00	56.00	0.00	0.00	0.00	0.00	45.19	42.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.40	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	2.90	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.47	0.00
April-09	Elwha west estuary	ave	91.43	82.86	119.06	112.84	0.00	0.00	45.30	42.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.75	0.00
		stdev	54.99	46.79	53.67	50.30	0.00	0.00	7.12	7.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.57	0.00
May-09	Elwha west estuary	ave	78.00	72.72	130.61	120.26	0.00	0.00	46.57	43.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	114.75	0.00
		stdev	10.28	10.37	44.73	40.42	0.00	0.00	6.19	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.62	0.00
June-09	Elwha west estuary	ave	91.13	84.52	91.00	84.50	0.00	0.00	58.00	55.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	122.50	0.00
		stdev	9.09	7.93	9.27	8.35	0.00	0.00	7.21	10.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54	0.00
February-10	Elwha west estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	41.32	39.05	190.50	75.50	0.00	0.00	83.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	2.47	2.74	27.58	10.61	0.00	0.00	4.24	0.00	0.00	0.00	0.00	0.00	0.00
March-10	Elwha west estuary	ave	51.00	47.00	0.00	0.00	0.00	0.00	41.56	39.44	0.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	133.33	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	1.60	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.72	0.00
April-10	Elwha west estuary	ave	60.88	57.92	114.04	105.96	40.00	39.00	45.17	42.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105.00	0.00
		stdev	6.67	6.81	46.45	43.38	0.00	0.00	4.20	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.93	0.00
May-10	Elwha west estuary	ave	64.36	60.11	72.00	89.22	84.44	0.00	42.89	40.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.25	0.00
		stdev	7.61	7.19	2.83	44.00	41.57	0.00	2.76	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.35	0.00
March-07	Salt Creek estuary	ave	0.00	0.00	77.00	71.00	0.00	0.00	40.00	38.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	147.67	0.00
		stdev	0.00	0.00	0.00	0.00	0.00	0.00	3.12	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51	0.00
April-07	salt creek estuary	ave	0.00	0.00	122.00	113.00	0.00	0.00	43.60	41.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	158.89	0.00
		stdev	0.00	0.00	36.77	35.36	0.00	0.00	4.45	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.37	0.00
May-07	Salt Creek estuary	ave	151.40	138.05	126.50	115.87	0.00	0.00	44.55	42.09	145.50	0.00	51.00	0.00	0.00	0.00	0.00	0.00	0.00	148.22	58.00
		stdev	22.74	22.06	19.12	19.00	0.00	0.00	5.39	5.04	7.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.99	0.00
June-07	Salt Creek estuary	ave	0.00	0.00	110.25	100.33	0.00	0.00	31.50	57.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	111.67	54.00
		stdev	0.00	0.00	5.07	8.91	0.00	0.00	43.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.46	6.93

Date	Site		Saddleback gunnel	Penpoint gunnel	3-Spine stickleback	Shiner perch	Staghorn sculpin	cottids unknown	Juv Flat Fish	Cutthroat_tot	Cutthroat_fork	Steelhead_tot	Steelhead_fork	Prickley Sculpin	Arrow Goby	N. Shad	Bull Trout_tot	Bull Trout_fork	unk Trout_tot	unk Trout_fork	Juv Trout_tot
September-08	Elwha west estuary	ave	0.00	0.00	54.65	0.00	119.97	0.00	0.00	178.60	170.00	89.00	83.00	92.40	0.00	0.00	0.00	0.00	0.00	0.00	67.11
		stdev	0.00	0.00	10.39	0.00	31.21	0.00	0.00	30.49	29.09	0.00	0.00	11.42	0.00	0.00	0.00	0.00	0.00	0.00	7.15
October-08	Elwha west estuary	ave	0.00	0.00	59.33	0.00	142.70	0.00	0.00	198.00	195.00	0.00	0.00	93.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	8.87	0.00	14.83	0.00	0.00	36.74	40.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November-08	Elwha west estuary	ave	0.00	0.00	41.57	0.00	140.00	0.00	0.00	208.80	197.80	0.00	0.00	54.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	8.28	0.00	0.00	0.00	0.00	37.93	34.47	0.00	0.00	12.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December-08	Elwha west estuary	ave	0.00	0.00	38.20	0.00	0.00	0.00	0.00	262.00	239.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	13.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-09	Elwha west estuary	ave	0.00	0.00	36.00	0.00	55.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.66	0.00	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-09	Elwha west estuary	ave	0.00	0.00	28.43	0.00	85.33	0.00	0.00	0.00	0.00	275.00	268.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	8.50	0.00	48.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March-09	Elwha west estuary	ave	0.00	0.00	51.00	0.00	40.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	10.82	0.00	18.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-09	Elwha west estuary	ave	0.00	0.00	42.80	0.00	43.59	0.00	0.00	190.00	179.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	7.75	0.00	13.22	0.00	0.00	22.63	26.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-09	Elwha west estuary	ave	0.00	0.00	47.64	0.00	63.62	0.00	0.00	271.50	262.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.29	0.00	26.16	0.00	0.00	0.71	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June-09	Elwha west estuary	ave	0.00	0.00	51.72	0.00	81.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	4.68	0.00	33.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-10	Elwha west estuary	ave	0.00	0.00	36.60	0.00	71.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	210.00	198.00	0.00	0.00	0.00
		stdev	0.00	0.00	5.55	0.00	38.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March-10	Elwha west estuary	ave	0.00	0.00	43.80	0.00	73.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	6.69	0.00	48.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-10	Elwha west estuary	ave	0.00	0.00	0.00	0.00	99.09	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	54.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-10	Elwha west estuary	ave	0.00	0.00	50.71	0.00	92.76	0.00	0.00	168.00	160.00	220.00	210.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	3.95	0.00	42.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March-07	Salt Creek estuary	ave	0.00	0.00	31.00	0.00	50.13	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	6.94	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-07	salt creek estuary	ave	0.00	0.00	0.00	0.00	50.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	0.00	0.00	0.00	0.00	20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-07	Salt Creek estuary	ave	116.00	0.00	46.30	118.15	51.14	32.33	22.25	188.23	173.23	128.00	120.00	72.60	36.50	140.00	0.00	0.00	0.00	0.00	0.00
		stdev	5.66	0.00	5.45	13.85	18.63	2.50	8.73	54.31	51.77	96.17	91.92	6.73	12.40	0.00	0.00	0.00	0.00	0.00	0.00
June-07	Salt Creek estuary	ave	63.50	62.00	46.89	109.95	61.50	132.00	28.50	181.74	171.22	0.00	0.00	31.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		stdev	2.89	0.00	5.80	16.68	18.95	0.00	2.12	32.62	31.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	Site		Juv Trout_fork	Eulachon
September-08	Elwha west estuary	ave	61.56	0.00
		stdev	7.83	0.00
October-08	Elwha west estuary	ave	68.00	0.00
		stdev	18.38	0.00
November-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
December-08	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
January-09	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
February-09	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
March-09	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
April-09	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
May-09	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
June-09	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
February-10	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
March-10	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
April-10	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
May-10	Elwha west estuary	ave	0.00	0.00
		stdev	0.00	0.00
March-07	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00
April-07	salt creek estuary	ave	0.00	0.00
		stdev	0.00	0.00
May-07	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00
June-07	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00

Date	Site			Chinook_tot	Chinook_fork	Coho_tot	Coho_fork	Pink_tot	Pink_fork	Chum_tot	Chum_fork	Smelt (adult = >120)	Smelt (juv = 50-120)	Smelt (pl = <50)	Herring (adult = >120)	Herring (juv = 50-120)	Herring (pl = <50)	Sand Lance (pl = <50)	Sand sole	English sole	Starry Flounder	Crescent gunnel
July-07	Salt Creek	estuary	ave	0.00	0.00	118.00	107.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.83	79.67
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.17	14.57
August-07	Salt Creek	estuary	ave	0.00	0.00	108.00	99.00	0.00	0.00	0.00	0.00	159.50	0.00	0.00	154.00	120.00	0.00	0.00	0.00	94.40	68.50	120.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.21	2.38	0.00
September-07	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.31	58.78	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.53	31.74	0.00
October-07	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	103.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.83	0.00
November-07	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	103.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December-07	Salt Creek	estuary	ave	0.00	0.00	76.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	107.50	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.75	0.00
January-08	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	102.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	218.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-08	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-08	Salt Creek	estuary	ave	0.00	0.00	78.00	72.00	0.00	0.00	49.62	47.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	111.00	0.00
			stdev	0.00	0.00	57.98	52.33	0.00	0.00	8.68	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
October-08	Salt Creek	estuary	ave	0.00	0.00	119.00	104.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105.46	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.72	0.00
November-08	Salt Creek	estuary	ave	0.00	0.00	108.00	102.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	104.85	74.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.79	0.00
December-08	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-09	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-09	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	96.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.87	0.00
March-09	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.87	0.00
April-09	Salt Creek	estuary	ave	0.00	0.00	109.38	101.19	0.00	0.00	44.68	42.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	155.50	0.00
			stdev	0.00	0.00	16.30	14.84	0.00	0.00	4.78	4.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00
May-09	Salt Creek	estuary	ave	0.00	0.00	117.70	109.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	145.00	44.00	153.00	102.50
			stdev	0.00	0.00	21.16	19.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.68
June-09	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.33	137.67
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.60	20.11

Date	Site			Saddleback gunnel	Penpoint gunnel	3-Spine stickleback	Shiner perch	Staghorn sculpin	cottids unknown	Juv Flat Fish	Cutthroat_tot	Cutthroat_fork	Steelhead_tot	Steelhead_fork	Prickley Sculpin	Arrow Goby	N. Shad	Bull Trout_tot	Bull Trout_fork	unk Trout_tot	unk Trout_fork	Juv Trout_tot
July-07	Salt Creek	estuary	ave	78.75	61.00	52.80	94.18	90.87	0.00	0.00	243.18	234.29	0.00	0.00	103.00	0.00	155.91	0.00	0.00	0.00	0.00	0.00
			stdev	12.31	0.00	10.34	35.30	23.58	0.00	0.00	80.33	79.36	0.00	0.00	9.90	0.00	8.10	0.00	0.00	0.00	0.00	0.00
August-07	Salt Creek	estuary	ave	95.80	106.67	57.74	66.86	94.81	0.00	0.00	227.31	209.23	0.00	0.00	83.50	0.00	170.67	0.00	0.00	0.00	0.00	0.00
			stdev	22.00	32.58	9.11	22.88	18.33	0.00	0.00	62.00	70.64	0.00	0.00	36.23	0.00	19.23	0.00	0.00	0.00	0.00	0.00
September-07	Salt Creek	estuary	ave	91.23	91.85	57.68	70.60	99.85	0.00	0.00	162.86	156.97	0.00	0.00	60.55	0.00	132.30	0.00	0.00	0.00	0.00	0.00
			stdev	31.26	40.35	12.17	20.75	17.32	0.00	0.00	61.48	52.16	0.00	0.00	33.71	0.00	99.59	0.00	0.00	0.00	0.00	0.00
October-07	Salt Creek	estuary	ave	0.00	0.00	52.50	0.00	84.67	0.00	0.00	246.64	217.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	10.61	0.00	45.08	0.00	0.00	44.67	77.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November-07	Salt Creek	estuary	ave	0.00	0.00	0.00	117.35	32.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	18.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December-07	Salt Creek	estuary	ave	0.00	0.00	41.50	0.00	45.50	0.00	0.00	65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.71	0.00	12.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-08	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	55.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	27.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-08	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	41.33	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	17.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-08	Salt Creek	estuary	ave	0.00	0.00	48.00	0.00	44.17	0.00	0.00	0.00	0.00	0.00	0.00	49.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	16.05	0.00	0.00	0.00	0.00	0.00	0.00	10.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
October-08	Salt Creek	estuary	ave	106.95	0.00	35.00	108.78	127.85	0.00	0.00	230.33	218.67	0.00	0.00	105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	20.24	0.00	8.87	19.19	18.59	0.00	0.00	23.71	20.50	0.00	0.00	11.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November-08	Salt Creek	estuary	ave	99.55	0.00	44.00	88.57	120.97	0.00	0.00	225.00	218.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	11.88	0.00	1.41	6.10	23.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December-08	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	41.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	8.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January-09	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	36.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	12.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February-09	Salt Creek	estuary	ave	0.00	0.00	35.00	0.00	34.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March-09	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-09	Salt Creek	estuary	ave	0.00	0.00	35.33	0.00	33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	4.51	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-09	Salt Creek	estuary	ave	107.00	0.00	46.50	106.20	56.64	0.00	0.00	243.00	229.00	106.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	7.82	15.04	21.66	0.00	0.00	64.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June-09	Salt Creek	estuary	ave	111.86	0.00	50.60	0.00	82.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	25.03	0.00	6.89	0.00	12.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	Site		Juv Trout_fork	Eulachon
July-07	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
August-07	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
September-07	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
October-07	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
November-07	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
December-07	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
January-08	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
February-08	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
May-08	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
October-08	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
November-08	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
December-08	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
January-09	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
February-09	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
March-09	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
April-09	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
May-09	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00
June-09	Salt Creek	estuary ave	0.00	0.00
		stdev	0.00	0.00

Date	Site			Chinook_tot	Chinook_fork	Coho_tot	Coho_fork	Pink_tot	Pink_fork	Chum_tot	Chum_fork	Smelt (adult = >120)	Smelt (juv = 50-120)	Smelt (pl = <50)	Herring (adult = >120)	Herring (juv = 50-120)	Herring (pl = <50)	Sand Lance (pl = <50)	Sand sole	English sole	Starry Flounder	Crescent gunnel
February-10	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	96.27	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.57	0.00
March-10	Salt Creek	estuary	ave	0.00	0.00	103.00	98.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	126.00	0.00
			stdev	0.00	0.00	9.51	8.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.07	0.00
April-10	Salt Creek	estuary	ave	0.00	0.00	39.00	37.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	144.50	0.00
			stdev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.82	0.00
May-10	Salt Creek	estuary	ave	0.00	0.00	125.31	116.81	0.00	0.00	46.28	43.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	37.51	35.36	0.00	0.00	10.14	9.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	Site			Saddleback gunnel	Penpoint gunnel	3-Spine stickleback	Shiner perch	Staghorn sculpin	cottids unknown	Juv Flat Fish	Cutthroat_tot	Cutthroat_fork	Steelhead_tot	Steelhead_fork	Prickley Sculpin	Arrow Goby	N. Shad	Bull Trout_tot	Bull Trout_fork	unk Trout_tot	unk Trout_fork	Juv Trout_tot
February-10	Salt Creek	estuary	ave	0.00	0.00	48.00	0.00	39.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	12.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March-10	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	50.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	20.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April-10	Salt Creek	estuary	ave	0.00	0.00	0.00	0.00	47.94	0.00	0.00	394.00	386.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	0.00	10.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May-10	Salt Creek	estuary	ave	0.00	0.00	40.00	109.00	65.00	0.00	0.00	0.00	0.00	199.15	190.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			stdev	0.00	0.00	0.00	18.52	0.00	0.00	0.00	0.00	0.00	11.04	11.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Date	Site		Juv Trout_fork	Eulachon
February-10	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00
March-10	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00
April-10	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00
May-10	Salt Creek estuary	ave	0.00	0.00
		stdev	0.00	0.00



Fig 4. a Student Joseph Gonce and Justin Brown seining Elwha west estuary February 2010



Fig 4a. contd. Students Joseph Gonce, Ian Franco, Justin Brown, and WDFW staff seining Elwha west estuary April 2010 (John Gussman, Doubleclick Productions, in boat).

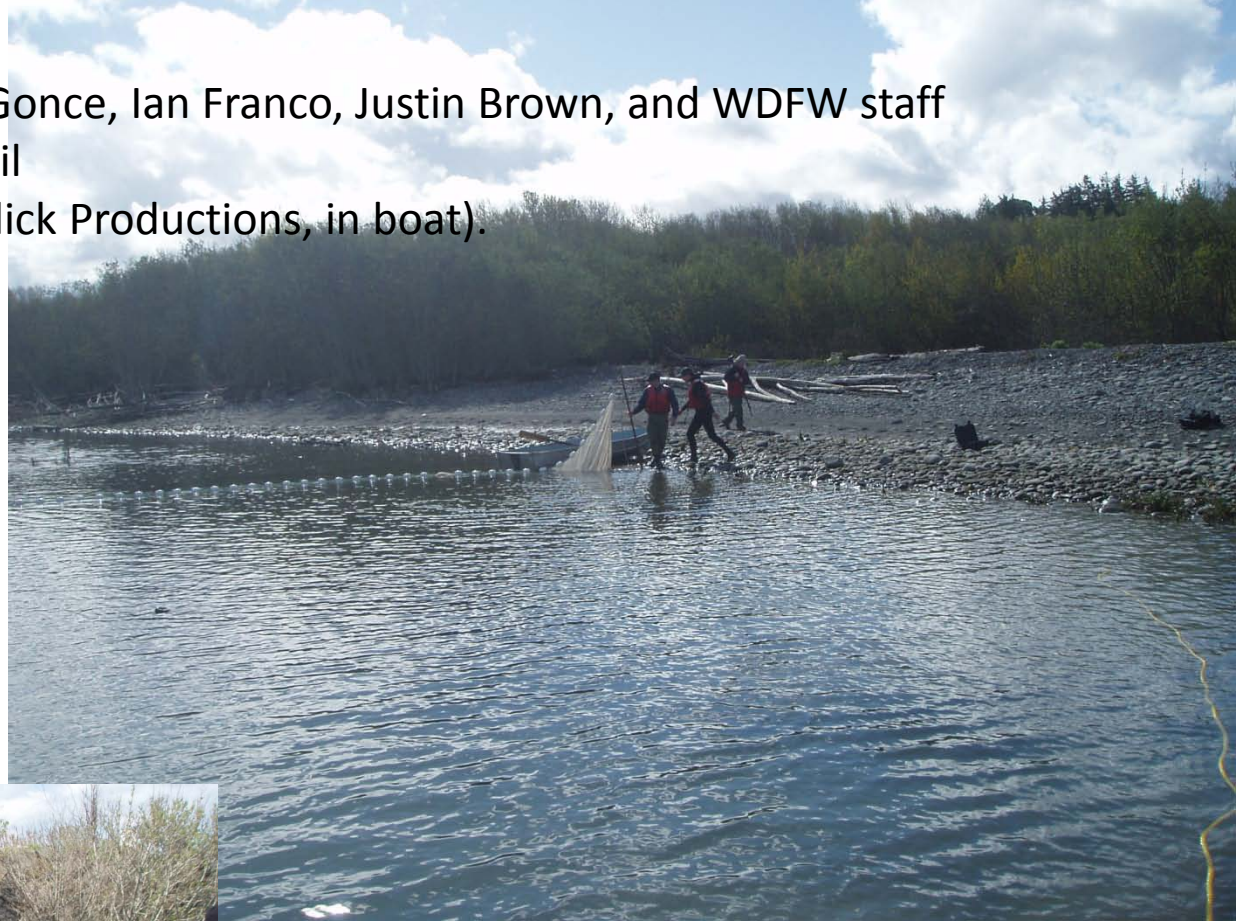


Fig 4b. Students Willie Spring, Aja Latrhop, and others seining Salt Creek estuary February 2009





Fig. 4c Ian Franco collecting water quality data, Elwha west estuary March 2010 (above). Right, *Leptocottus armatus* talking to WDFW.

