2012 OUT-MIGRATION REPORT

Fauntleroy Creek

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SUMMARY

Aided by hand transport, a record number of coho smolts survived to reach saltwater habitat in Fauntleroy Cove. The number of release smolts leaving Fauntleroy Park was similar to last year but, by carrying most of them down to the lower creek, we were able to ensure that 157 safely completed their out-migration, with only 2 found dead. At 85, the number of smolts leaving from lower reaches of the creek was also a record. Home-hatch fry flocked prematurely into the lower trap, resulting in 924 sent on their way and 56 dead. We found 1 saltwater fish (a prickleback) in the lower trap.

Year	Monitoring Period	Live Smolts Upper	Live Smolts Lower	Smolts to Salt	Smolt Size Range	Dead Smolts Upper	Dead Smolts Lower	Live Fry Lower	Dead Fry Lower	# Eggs to Schools*	Released Fry
2012	3/17 – 6/7	145	85	157	90 mm-105 mm	0	2	924	56	3,100	2,615
2011	3/25 - 5/30	147	36	36	not measured	0	0	few	0	2,900	2,027
2010	4/1 - 5/22		24	24	110 mm-140 mm		0	81	2	2,500	2,298
2009	4/1 - 5/31		18	18	97 mm-110 mm		1	1	0		1,936
2008	4/2 - 5/31		17	17	100 mm-135 mm		0	85	0		1,790
2007	4/7 - 5/19		24	24	115 mm-128 mm		0	20	0		2,276
2006	4/9 - 5/18		22	22	105 mm-155 mm		1	121	0		2,033
2005	3/16 - 5/27		10	10	100 mm-135 mm		0	34	3		1,138
2004	3/3 - 6/10		11	11	97 mm-123 mm		0	569	3		1,534
2003	4/2 - 6/16		37	37	(different method)		0	637	84		1,254

*Does not include eggs left by spawners

METHODOLOGY

The two traps are similar: a wooden box fitted with netting and anchored below a weir such that all water flows through, softly trapping everything headed downstream. One is located as the creek flows out of Fauntleroy Park (where all fry are released) and the other is just upstream of the fish ladder (about a half block before the creek empties into the cove). We replaced the faulty lower trap this year to preclude any escapement. We checked the traps daily during the monitoring period and released all live fish to continue their journey. To simplify the volunteer task of checking two traps and reduce the chance of trauma to smolts, we measure total body length on only a few.

Within a week of finding smolts in the upper trap, we suspected a discrepancy between catches in the two traps, with smaller numbers being found in the lower trap. On April 11, Washington State Fish and Wildlife granted us permission to transport fish in an aerated bucket of creek water from the upper trap to below the lower trap. We transported 115 smolts, adjusted for the possibility of double counting, and added "new" fish from the lower trap to reach a reliable number to salt.

OBSERVATIONS AND COMMENTS

Next year, we will start transporting from the upper trap right away so that the number of smolts to saltwater will be a clear total of smolts leaving from throughout the system.

As best we could tell, smolts downstream of Fauntleroy Park lingered for days. They seemed in no hurry to get to saltwater.

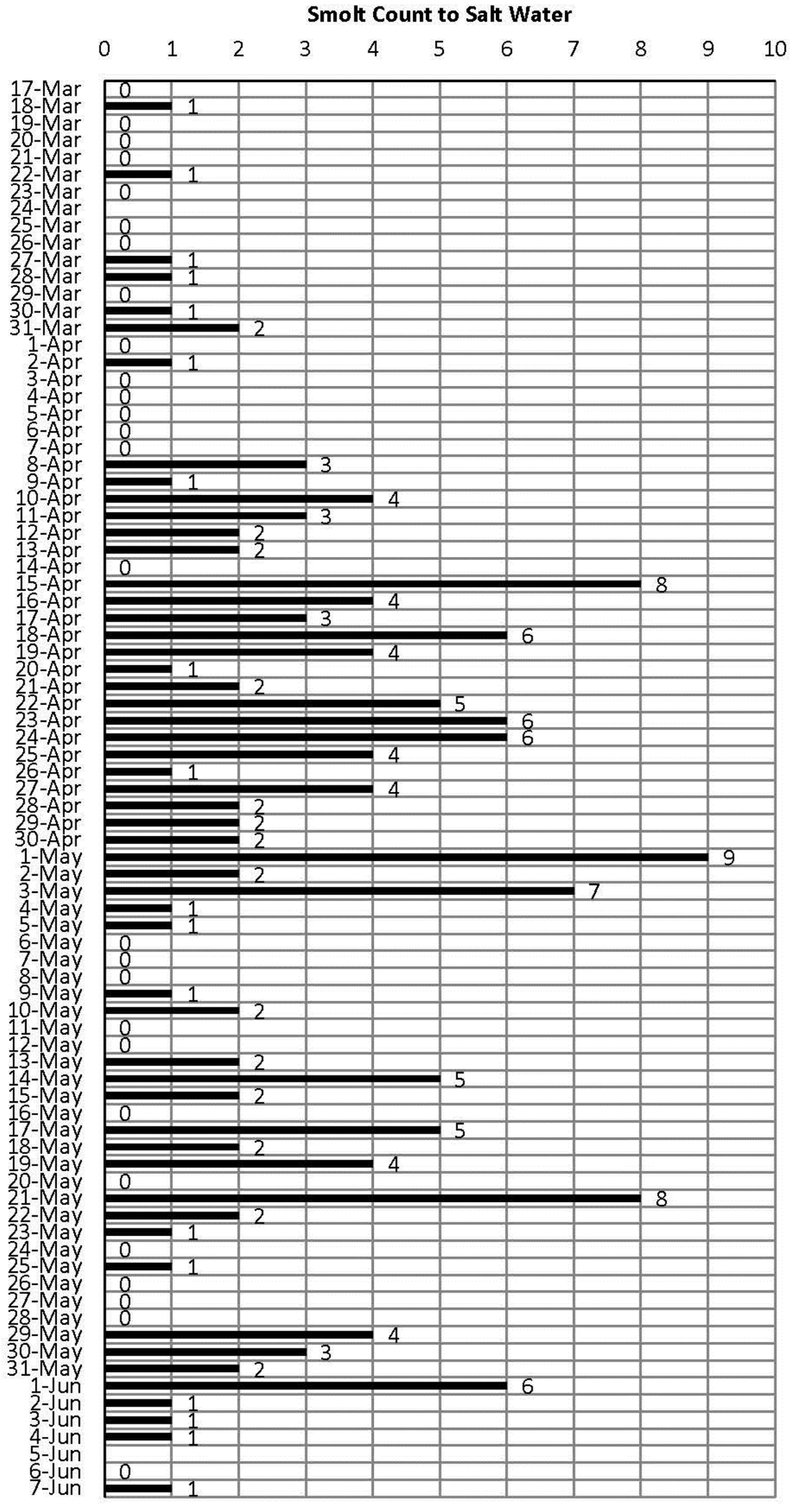
Hundreds of this year's home-hatch fry, however, were intent on leaving the creek early. We have referred the question of why to Fish and Wildlife. Not all did; we observed several apparently staying put in the lower creek. Although we lost hundreds fry to premature migration, having them in the trap enabled us to confirm productive spawning by the handful of adult pairs we had last fall.

Representatives of Fish and Wildlife and Seattle Public Utilities took a close look at the flow intake at the culvert under 45th Ave. SW and concluded that the drop there is likely not causing loss of smolts as it is softened by silt and debris build-up.

This year we emailed Salmon in the Schools teachers a weekly out-migration total (suitable for posting) and know that some relayed the count to their students. Also, for many schools releasing salmon here, we were able to show them smolts caught in the upper trap so that they could see how much fry grow in one year. We will do both next year to make this stage of the salmon life cycle more real to students.

Attachments:
Bar graph of smolt to saltwater by day
Daily record of all data

Smolt Count to Salt Water



2012 Smolt Count

Date	Smolt					To Salt	Fry			Comment
	Upper		Lower							
			Live		Dead		Live		Dead	
	No.	Sum	No.	Sum			No.	Sum		
17-Mar									12	
18-Mar			1	1		1	15	15	4	105 mm
19-Mar				1		1	55	70		
20-Mar				1		1	75	145		
21-Mar				1		1	120	265		
22-Mar			1	2		2	65	330	10	
23-Mar				2		2	55	385		
25-Mar				2		2	55	440		
26-Mar				2		2	20	460		
27-Mar			1	3		3	25	485	2	100 mm
28-Mar			1	4		4	20	505		105 mm
29-Mar				4		4		505		Trap overflowed
30-Mar			1	5		5		505	20	Some overflow
31-Mar			2	7	1	7		505	2	
1-Apr				7		7		505	2	
2-Apr	1	1	1	8		8	25	530		100 mm / 105 mm
3-Apr	3	4		8		8	6	536		90 mm
4-Apr	3	7		8		8	19	555		
5-Apr		7		8		8	15	570		
6-Apr	4	11		8		8	25	595		
7-Apr	3	14		8		8	16	611		
8-Apr	2	16	3	11		11	17	628		
9-Apr	3	19	1	12		12	15	643		100 mm
10-Apr	9	28	4	16		16		643		
11-Apr	2	30	1	17		19	22	665		Started Transfer
12-Apr	2	32	3	20		21	15	680		
13-Apr	2	34		20		23	10	690		
14-Apr	2	36	1	21		23	19	709		2 smolt released at upper - aerator failure
15-Apr	8	44	1	22		31	14	723		
16-Apr	4	48		22		35	18	741		
17-Apr	3	51	1	23		38	4	745		
18-Apr	6	57	1	24		44	4	749		
19-Apr	4	61	13	37		48	4	753		

2012 Smolt Count

Date	Smolt					To Salt	Fry			Comment
	Upper		Lower							
			Live		Dead		Live		Dead	
	No.	Sum	No.	Sum			No.	Sum		
20-Apr	1	62	3	40		**49**	1	754		
21-Apr	2	64	1	41		**51**	3	757		
22-Apr	5	69	4	45		**56**	4	761		
23-Apr	6	75	3	48		**62**	10	764		
24-Apr	6	81	2	50		**68**	4	768		
25-Apr	4	85	1	51		**72**	2	770		
26-Apr	1	86	1	52		**73**	0	770		
27-Apr	4	90	1	53		**77**	0	770		
28-Apr	3	93	3	56	1	**79**	2	772		
29-Apr	2	95	1	57		**81**	4	776		
30-Apr	2	97	2	59		**83**	0	776		
1-May	8	105	1	60		**92**	1	777		started counting upper and lower to salt
2-May	1	106	1	61		**94**	2	779		
3-May	5	111	2	63		**101**	0	779		
4-May	0	111	1	64		**102**	1	780		upper and lower traps collapsed
5-May	1	112	0	64		**103**	0	780		
6-May	0	112	0	64		**103**	2	782		
7-May	0	112	0	64		**103**	5	787		
8-May	0	112	0	64		**103**	3	790		
9-May	1	113	0	64		**104**	5	795		
10-May	2	115	0	64		**106**	5	800		
11-May	0	115	0	64		**106**	5	805		
12-May	0	115	0	64		**106**	8	813		
13-May	2	117	0	64		**108**	6	819		
14-May	4	121	1	65		**113**	5	824		
15-May	2	123	0	65		**115**	7	831		
16-May	0	123	0	65		**115**	0	831		
17-May	3	126	2	67		**120**	8	839		
18-May	2	128	0	67		**122**	5	844		
19-May	3	131	1	68		**126**	8	852		
20-May	0	131	0	68		**126**	0	852		
21-May	3	134	5	73		**134**	2	854	4	Big smolts low, 5-6"
22-May	1	135	1	74		**136**	5	859		

2012 Smolt Count

Date	Smolt					To Salt	Fry			Comment
	Upper		Lower							
			Live		Dead		Live		Dead	
	No.	Sum	No.	Sum			No.	Sum		
23-May	1	136	0	74		**137**	11	870		
24-May	0	136	0	74		**137**	8	878		
25-May	1	137	0	74		**138**	6	884		
26-May	0	137	0	74		**138**	0	884		
27-May	0	137	0	74		**138**	0	884		
28-May	0	137	0	74		**138**	0	884		
29-May	2	139	2	76		**142**	21	905		
30-May	2	141	1	77		**145**	3	908		
31-May	0	141	2	79		**147**	7	915		upper trap collapse
1-Jun	4	145	2	81		**153**	2	917		
2-Jun	0	145	1	82		**154**	0	917		
3-Jun	0	145	1	83		**155**	0	917		upeer trap removed
4-Jun	0	145	1	84		**156**	7	924		
6-Jun	0	145	0	84		**156**	0	924		one dead prickleback
7-Jun	0	145	1	85		**157**	0	924		lower trap removed