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WILLAMETTE VALLEY FISH PASSAGE MONITORING – RESERVOIR DISTRIBUTION & RIVERINE SAMPLING

Bi-Weekly Report: May 1 – May 15, 2025



Prepared for: United States Army Corps of Engineers Prepared by: Cramer Fish Sciences May 22, 2025

RESERVOIR DISTRIBUTION SUMMARY

Reservoir sampling during the reporting period was conducted in the nearshore areas of Green Peter and Lookout Point Reservoir using Oneida lake traps and box minnow traps (Table 1). Each reservoir was sampled every other week.

On Green Peter Reservoir, traps were deployed on 05/05/25 and pulled for the week on 05/08/25. During the sampling week, the average surface temperature was 15.6 °C (Table 2; Figure 2). Traps were set at the surface in each reservoir zone (Lower, Middle, Upper, and Quartzville). One Oneida trap and three box minnow traps were set in each reservoir longitudinal zone per sampling day with the exception of the Quartzville zone, which only had one Oneida and one box minnow trap. Over the course of the sampling week (Week of 5/5: n=12 Oneida sets, n=30 box minnow sets), two hatchery subyearling Chinook salmon, 22 subyearling natural origin Chinook salmon, two dace (one speckled, one longnose), thirty-four northern pikeminnow, and four bluegill were captured (Tables 1, 3-5). The adipose clipped hatchery Chinook salmon had an average fork length of 81 mm and were captured in the Quartzville reservoir zone. One was a confirmed recapture from the bulk marking project and the other was clipped but had no PIT tag (probable tag shed). The natural origin Chinook salmon had an average fork length of 70 mm and were primarily caught in the Quartzville and Upper reservoir zones. Fourteen of the captured salmonids of natural origin were implanted with PIT tags. Two of the natural origin Chinook salmon were incidental mortalities. There were also six young-of-year northern pikeminnow mortalities, requiring a modification to our ODFW sampling permit to increase the incidental mortality rate for that species. The modification was submitted and approved on 05/16/25.

On Lookout Point Reservoir, traps were deployed on 05/12/2025 and pulled for the week on 05/15/2025. During the sampling week, average surface temperatures were 14.3 °C (Table 2; Figure 1). Traps were set at the surface in each reservoir zone (Lower, Middle, and Upper). One Oneida trap and three box minnow traps were set in each reservoir longitudinal zone per sampling day. Over the course of the sampling week (n=9 Oneida sets, n=27 box minnow sets), one subyearling natural origin Chinook salmon, one northern pikeminnow, one bluegill, one largescale sucker, one black crappie, and one white crappie were captured (Tables 1, 3-5). The Chinook salmon was 103 mm fork length and was captured in the Middle reservoir zone. This fish was presumably naturally produced from adfluvial Chinook salmon or potentially escaped from the hatchery prior to being adipose clipped (no adult spawners out planted upstream during 2024). Our crew implanted the specimen with a PIT tag.

					Effort	Effort
Week	Start	End	Reservoir	Net Type	(# sets)	(hrs)
6	2/3/2025	2/4/2025	Lookout Point	box minnow	5	118
6	2/3/2025	2/4/2025	Lookout Point	oneida	2	47
7	2/10/2025	2/12/2025	Green Peter	box minnow	18	414
7	2/10/2025	2/12/2025	Green Peter	oneida	8	187
8	2/17/2025	2/20/2025	Lookout Point	box minnow	21	485
8	2/17/2025	2/20/2025	Lookout Point	oneida	9	208
9	2/24/2025	2/27/2025	Green Peter	box minnow	26	615
9	2/24/2025	2/27/2025	Green Peter	oneida	11	261
10	3/3/2025	3/6/2025	Lookout Point	box minnow	27	646
10	3/3/2025	3/6/2025	Lookout Point	oneida	9	214
11	3/10/2025	3/14/2025	Green Peter	box minnow	30	841
11	3/10/2025	3/14/2025	Green Peter	oneida	12	301
12	3/17/2025	3/20/2025	Lookout Point	box minnow	18	655
12	3/17/2025	3/20/2025	Lookout Point	oneida	6	218

Table 1. Start and end date by statistical week for 2025 reservoir sampling.

					Effort	Effort
Week	Start	End	Reservoir	Net Type	(# sets)	(hrs)
13	3/24/2025	3/27/2025	Green Peter	box minnow	20	591
13	3/24/2025	3/27/2025	Green Peter	oneida	8	252
14	4/1/2025	4/4/2025	Lookout Point	box minnow	31	734
14	4/1/2025	4/4/2025	Lookout Point	oneida	9	234
15	4/7/2025	4/10/2025	Green Peter	box minnow	24	792
15	4/7/2025	4/10/2025	Green Peter	oneida	9	262
16	4/14/2025	4/17/2025	Lookout Point	box minnow	31	734
16	4/14/2025	4/17/2025	Lookout Point	oneida	9	210
17	4/21/2025	4/24/2025	Lookout Point	box minnow	27	627
17	4/21/2025	4/24/2025	Lookout Point	oneida	9	208
18	4/28/2025	5/1/2025	Lookout Point	box minnow	27	631
18	4/28/2025	5/1/2025	Lookout Point	oneida	9	209
19	5/5/2025	5/8/2025	Green Peter	box minnow	30	717
19	5/5/2025	5/8/2025	Green Peter	oneida	12	285
20	5/12/2025	5/15/2025	Lookout Point	box minnow	27	628
20	5/12/2025	5/15/2025	Lookout Point	oneida	9	210

 Table 2. Mean surface water temperature measured during each trap net deployment.

Week	Reservoir	Mean Water Surface Temperature °C
6	Lookout Point	4.3
7	Green Peter	4.8
8	Lookout Point	4.8
9	Green Peter	6.2
10	Lookout Point	6.8
11	Green Peter	7.8
12	Lookout Point	7.4
13	Green Peter	11.4
14	Lookout Point	8.5
15	Green Peter	10.4
16	Lookout Point	10.8
17	Lookout Point	12.6
18	Lookout Point	12.9
19	Green Peter	15.6
20	Lookout Point	14.3

Table 3. Summary of total catch by reservoir. CHS – Chinook salmon, RBT - O. *mykiss*, CUT - cutthroat trout, KOK – kokanee, DAC – speckled dace, NPM - northern pikeminnow, RSS – redside shiner, SCU – sculpin, BLG - bluegill, LWB – western brook lamprey, BBH- brown bullhead, YBH – yellow bullhead, LSS - largescale sucker, SMB - smallmouth bass, LMB – largemouth bass, BLC – black crappie, WHC – white crappie, WAL – walleye, UNID – unidentified.

Week	Reservoir	CHS	RBT	CUT	KOK	DAC	NPM	RSS	SCU	BLG	LWB	BBH	YBH	LSS	SMB	LMB	BLC	WHC	WAL	UNID
6	Lookout Point	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Green Peter	11	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8	Lookout Point	1	2	2	0	1	1	0	0	1	0	0	0	0	2	0	0	0	0	0
9	Green Peter	28	1	4	0	0	3	0	0	15	0	0	0	0	0	0	0	0	0	0
10	Lookout Point	0	3	7	0	1	3	2	0	4	0	0	0	0	1	0	0	1	0	0
11	Green Peter	38	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
12	Lookout Point	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
13	Green Peter	13	0	3	0	0	1	0	0	6	0	0	0	0	0	0	0	1	0	0
14	Lookout Point	2	4	6	0	0	1	0	1	0	0	0	0	0	0	0	0	7	0	0
15	Green Peter	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Lookout Point	1	7	4	0	0	0	0	0	1	0	0	1	0	1	0	0	15	0	0
17	Lookout Point	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	3	0	0
18	Lookout Point	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0
19	Green Peter	24	0	0	0	2	34	0	0	4	0	0	0	0	0	0	0	0	0	0
20	Lookout Point	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	0	0

Table 4. Catch summary of Chinook salmon and *O. mykiss* by reservoir zone. CHS-AD = ad clipped Chinook salmon, CHS-natural = natural origin Chinook salmon, RBT-AD = ad clipped *O. mykiss*, RBT-natural = natural origin *O. mykiss*.

Week	Reservoir	Species	Lifestage	LOWER	MIDDLE	UPPER	QUARTZVILLE
6	Lookout Point	RBT-natural	Adult	0	0	1	0
7	Green Peter	CHS-natural	Fry	0	0	10	0
7	Green Peter	RBT-AD	Adult	0	1	0	0
7	Green Peter	RBT-natural	Juvenile	0	1	0	0
8	Lookout Point	CHS-AD	Yearling	1	0	0	0
8	Lookout Point	RBT-natural	Adult	0	1	0	0
8	Lookout Point	RBT-natural	Juvenile	0	1	0	0
9	Green Peter	CHS-natural	Fry	0	8	11	1

Week	Reservoir	Species	Lifestage	LOWER	MIDDLE	UPPER	QUARTZVILLE
9	Green Peter	CHS-natural	Sub-Yearling	0	4	4	0
9	Green Peter	RBT-natural	Juvenile	0	0	0	1
10	Lookout Point	RBT-natural	Juvenile	0	0	3	0
11	Green Peter	CHS-natural	Fry	1	2	21	2
11	Green Peter	CHS-natural	Sub-Yearling	0	3	7	2
12	Lookout Point	CHS-natural	Sub-Yearling	1	0	0	0
13	Green Peter	CHS-AD	Sub-Yearling	0	1	0	0
13	Green Peter	CHS-natural	Fry	0	5	4	1
13	Green Peter	CHS-natural	Sub-Yearling	0	0	2	0
14	Lookout Point	CHS-natural	Sub-Yearling	1	1	0	0
14	Lookout Point	RBT-natural	Juvenile	0	2	2	0
15	Green Peter	CHS-AD	Sub-Yearling	0	0	0	43
15	Green Peter	CHS-natural	Fry	0	0	1	19
15	Green Peter	CHS-natural	Sub-Yearling	0	0	1	18
16	Lookout Point	CHS-natural	Sub-Yearling	0	1	0	0
16	Lookout Point	RBT-natural	Adult	0	1	0	0
16	Lookout Point	RBT-natural	Juvenile	0	0	6	0
17	Lookout Point	RBT-natural	Juvenile	0	0	1	0
18	Lookout Point	RBT-natural	Adult	0	0	1	0
19	Green Peter	CHS-AD	Sub-Yearling	0	0	0	2
19	Green Peter	CHS-natural	Sub-Yearling	2	0	11	9
20	Lookout Point	CHS-natural	Sub-Yearling	0	1	0	0

Table 5. Summary of Chinook salmon and *O. mykiss* lengths, tags implanted, recaptures and sampling mortalities. LOP - Lookout Point Reservoir, GPR – Green Peter Reservoir. FL = fork length. *One fish was captured that had no PIT tag, but had a PIT tag scar and evidence of prior fin clip (likely tag shed).

					Min FL	Mean FL	Max FL	# VIE	# PIT		
Week	Reservoir	Species	Lifestage	Catch	(mm)	(mm)	(mm)	tagged	tagged	# Recap	Mortalities
6	Lookout Point	RBT-natural	Adult	1	235	235	235	0	0	0	0
7	Green Peter	CHS-natural	Fry	10	39	42.4	45	0	0	0	1
7	Green Peter	RBT-AD	Adult	1	334	334	334	0	0	0	0
7	Green Peter	RBT-natural	Juvenile	1	95	95	95	0	0	0	1

					Min FL	Mean FL	Max FL	# VIE	# PIT		
Week	Reservoir	Species	Lifestage	Catch	(mm)	(mm)	(mm)	tagged	tagged	# Recap	Mortalities
8	Lookout Point	CHS-AD	Yearling	1	120	120	120	0	1	0	0
8	Lookout Point	RBT-natural	Adult	1	359	359	359	0	0	0	0
8	Lookout Point	RBT-natural	Juvenile	1	80	80	80	0	1	0	0
9	Green Peter	CHS-natural	Fry	20	34	39	44	0	0	0	2
9	Green Peter	CHS-natural	Sub-Yearling	8	46	49.9	53	0	6	0	3
9	Green Peter	RBT-natural	Juvenile	1	182	182	182	0	1	0	0
10	Lookout Point	RBT-natural	Juvenile	3	116	117	118	0	3	0	0
11	Green Peter	CHS-natural	Fry	26	34	39.8	44	0	0	0	0
11	Green Peter	CHS-natural	Sub-Yearling	12	46	52	58	0	12	1*	0
12	Lookout Point	CHS-natural	Sub-Yearling	1	54	54	54	0	1	0	0
13	Green Peter	CHS-AD	Sub-Yearling	1	52	52	52	0	0	1	0
13	Green Peter	CHS-natural	Fry	10	38	41.7	44	0	0	0	0
13	Green Peter	CHS-natural	Sub-Yearling	2	45	45.5	46	0	2	0	0
14	Lookout Point	CHS-natural	Sub-Yearling	2	57	67.5	78	0	2	0	0
14	Lookout Point	RBT-natural	Juvenile	4	66	104.5	126	0	4	0	0
15	Green Peter	CHS-AD	Sub-Yearling	43	48	56.5	64	0	0	42	9
15	Green Peter	CHS-natural	Fry	20	36	39.9	44	0	0	0	6
15	Green Peter	CHS-natural	Sub-Yearling	19	45	55.8	78	0	16	0	3
16	Lookout Point	CHS-natural	Sub-Yearling	1	87	87	87	0	1	0	0
16	Lookout Point	RBT-natural	Adult	1	215	215	215	0	1	0	0
16	Lookout Point	RBT-natural	Juvenile	6	91	107.7	116	0	6	0	0
17	Lookout Point	RBT-natural	Juvenile	1	118	118	118	0	1	0	0
18	Lookout Point	RBT-natural	Adult	1	203	203	203	0	1	0	0
19	Green Peter	CHS-AD	Sub-Yearling	2	74	81	88	0	0	1	0
19	Green Peter	CHS-natural	Sub-Yearling	22	49	70	99	0	14	0	2
20	Lookout Point	CHS-natural	Sub-Yearling	1	103	103	103	0	1	0	0



Figure 1. Lookout Point limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.



Figure 2. Green Peter limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.

RIVERINE SAMPLING SUMMARY

Riverine sampling was conducted on a weekly basis during the reporting period for both the Middle Santiam River and Quartzville Creek using a 20 m river seine and 9.1 m pole seine.

Quartzville Creek

Quartzville Creek was sampled during this reporting period from 5/05 to 5/09/2025 (Week 19) and from 5/13 to 5/15/2025 (Week 20). Over this period, the average water temperature was 10.99 C and 10.30 C for weeks 19 and 20, respectively. Week 19 consisted of three days (5/05 to 5/07/2025) and two nights (5/08 to 5/09/2025) of sampling effort. During the three days of sampling (n = 12 pole seine hauls, n = 12 river seine hauls), 15 dace were captured (Tables 6, 8-10). During the two night efforts (n = 7 pole seine hauls, n = 8 river seine hauls), 9 natural-origin and 3 hatchery-origin Chinook salmon, 18 natural-origin *O. mykiss*, one cutthroat trout, 134 dace, 26 sculpin and 14 northern pikeminnow were captured (Tables 6, 8-10). Of the 12 Chinook salmon captured, two were smolts (mean FL = 70 mm), eight were parr (mean FL = 53.5 mm), and the remaining two fish were fry (mean FL = 42 mm). One of the natural origin Chinook salmon parr was an incidental mortality. All untagged Chinook salmon and *O. mykiss* received PIT tags, excepting the fry which were too small to tag. Week 20 consisted of three days (5/13 to 5/15/2025) of sampling effort. During the three days of sampling (n = 12 pole seine hauls), 22 dace and one northern pikeminnow were captured (Tables 6, 8-10).

Middle Santiam River

The Middle Santiam River was sampled this reporting period from 5/01 to 5/03/2025 during the daytime (Week 18). Additionally, night samples were taken on 5/05 and 5/06/2025 and day samples were collected from 5/08 to 5/10/2025 (Week 19). Further day sampling was conducted from 5/15 to 5/17/2025 (Week 20) (Table 6). Over this reporting period, the average water temperature was 9.35 C, 10.60 C, and 9.82 C for weeks 18, 19, and 20, respectively. Week 18 consisted of three days (5/01 to 5/03/2025) of sampling effort (n = 18 pole seine hauls, n = 6 river seine hauls) but no fish were caught. Week 19 consisted of two nights (5/05 to 5/06/2025) and three days (5/08 to 5/10/2025) of sampling effort. During the two nights of sampling (n = 13 pole seine hauls), two Chinook salmon, two O. mykiss, 13 dace, and one unidentified sculpin were caught. During the three days of sampling (n = 20 pole seine hauls, n = 4 river seine hauls), one unidentified sculpin was caught. The two Chinook salmon were natural origin fry (mean FL = 42.5 mm) and the two O. mykiss were natural origin smolts (mean FL = 128 mm). Both O. mykiss smolts were PIT tagged and released downstream. Week 20 consisted of three days (5/15 to 5/17/2025) of sampling effort. During the three days of sampling (n = 22 pole seine hauls, n = 2 river seine hauls), one natural-origin Chinook salmon parr (FL = 49 mm) was captured, PIT tagged, and released downstream (Tables 6, 8-10).

Week	Start	End	River	Day/ Night	Seine Type	Effort (# Hauls)
4	1/23/2025	1/24/2025	Middle Santiam	Day	Pole	17
4	1/23/2025	1/24/2025	Middle Santiam	Day	River	0
5	1/29/2025	1/31/2025	Middle Santiam	Day	Pole	18

Table 6. Start and end date by statistical week for riverine sampling.

Week	Start	End	River	Day/ Night	Seine Type	Effort (# Hauls)
5	1/29/2025	1/31/2025	Middle Santiam	Day	River	0
6	2/3/2025	2/4/2025	Quartzville Creek	Day	Pole	11
6	2/3/2025	2/4/2025	Quartzville Creek	Day	River	7
6	2/5/2025	2/7/2025	Middle Santiam	Day	Pole	17
6	2/5/2025	2/7/2025	Middle Santiam	Day	River	4
7	2/11/2025	2/14/2025	Middle Santiam	Day	Pole	17
7	2/11/2025	2/14/2025	Middle Santiam	Day	River	1
8	2/19/2025	2/20/2025	Quartzville Creek	Day	Pole	11
8	2/19/2025	2/20/2025	Quartzville Creek	Day	River	1
8	2/17/2025	2/21/2025	Middle Santiam	Day	Pole	15
8	2/17/2025	2/21/2025	Middle Santiam	Day	River	0
9	2/27/2025	3/1/2025	Quartzville Creek	Day	Pole	18
9	2/27/2025	3/1/2025	Quartzville Creek	Day	River	6
9	2/28/2025	3/1/2025	Middle Santiam	Day	Pole	9
9	2/28/2025	3/1/2025	Middle Santiam	Day	River	0
10	3/4/2025	3/6/2025	Quartzville Creek	Day	Pole	14
10	3/4/2025	3/6/2025	Quartzville Creek	Day	River	10
10	3/6/2025	3/8/2025	Middle Santiam	Day	Pole	23
10	3/6/2025	3/8/2025	Middle Santiam	Day	River	2
11	3/10/2025	3/12/2025	Quartzville Creek	Day	Pole	16
11	3/10/2025	3/12/2025	Quartzville Creek	Day	River	9
11	3/13/2025	3/14/2025	Quartzville Creek	Night	Pole	4
11	3/13/2025	3/14/2025	Quartzville Creek	Night	River	8
11	3/10/2025	3/11/2025	Middle Santiam	Night	Pole	9
11	3/10/2025	3/11/2025	Middle Santiam	Night	River	2
11	3/13/2025	3/15/2025	Middle Santiam	Day	Pole	18
11	3/13/2025	3/15/2025	Middle Santiam	Day	River	6
12	3/18/2025	3/21/2025	Quartzville Creek	Day	Pole	14
12	3/18/2025	3/21/2025	Quartzville Creek	Day	River	9
12	3/20/2025	3/22/2025	Middle Santiam	Day	Pole	8
12	3/20/2025	3/22/2025	Middle Santiam	Day	River	2
13	3/24/2025	3/26/2025	Quartzville Creek	Day	Pole	15
13	3/24/2025	3/26/2025	Quartzville Creek	Day	River	6
13	3/27/2025	3/28/2025	Quartzville Creek	Night	Pole	7
13	3/27/2025	3/28/2025	Quartzville Creek	Night	River	4
13	3/24/2025	3/25/2025	Middle Santiam	Night	Pole	0
13	3/24/2025	3/25/2025	Middle Santiam	Night	River	4
13	3/27/2025	3/29/2025	Middle Santiam	Day	Pole	7
13	3/27/2025	3/29/2025	Middle Santiam	Day	River	0
14	4/1/2025	4/3/2025	Quartzville Creek	Day	Pole	12
14	4/1/2025	4/3/2025	Quartzville Creek	Day	River	11
14	4/3/2025	4/5/2025	Middle Santiam	Day	Pole	14

Week	Start	End	River	Day/ Night	Seine Type	Effort (# Hauls)
14	4/3/2025	4/5/2025	Middle Santiam	Day	River	6
15	4/7/2025	4/8/2025	Middle Santiam	Night	Pole	8
15	4/7/2025	4/8/2025	Middle Santiam	Night	River	4
15	4/7/2025	4/9/2025	Quartzville Creek	Day	Pole	13
15	4/7/2025	4/9/2025	Quartzville Creek	Day	River	10
15	4/10/2025	4/11/2025	Quartzville Creek	Night	Pole	8
15	4/10/2025	4/11/2025	Quartzville Creek	Night	River	7
15	4/10/2025	4/12/2025	Middle Santiam	Day	Pole	14
15	4/10/2025	4/12/2025	Middle Santiam	Day	River	6
16	4/14/2025	4/16/2025	Quartzville Creek	Day	Pole	12
16	4/14/2025	4/16/2025	Quartzville Creek	Day	River	12
16	4/17/2025	4/19/2025	Middle Santiam	Day	Pole	20
16	4/18/2025	4/19/2025	Middle Santiam	Day	River	4
17	4/21/2025	4/22/2025	Middle Santiam	Night	River	4
17	4/21/2025	4/23/2025	Middle Santiam	Night	Pole	12
17	4/21/2025	4/23/2025	Quartzville Creek	Day	Pole	12
17	4/21/2025	4/23/2025	Quartzville Creek	Day	River	12
17	4/24/2025	4/25/2025	Quartzville Creek	Night	Pole	7
17	4/24/2025	4/25/2025	Quartzville Creek	Night	River	8
17	4/24/2025	4/26/2025	Middle Santiam	Day	Pole	18
17	4/24/2025	4/26/2025	Middle Santiam	Day	River	6
18	4/28/2025	4/30/2025	Quartzville Creek	Day	Pole	12
18	4/28/2025	4/30/2025	Quartzville Creek	Day	River	12
18	5/1/2025	5/3/2025	Middle Santiam	Day	Pole	18
18	5/1/2025	5/3/2025	Middle Santiam	Day	River	6
19	5/5/2025	5/7/2025	Quartzville Creek	Day	Pole	12
19	5/5/2025	5/7/2025	Quartzville Creek	Day	River	12
19	5/8/2025	5/9/2025	Quartzville Creek	Night	Pole	7
19	5/8/2025	5/9/2025	Quartzville Creek	Night	River	8
19	5/5/2025	5/6/2025	Middle Santiam	Night	Pole	13
19	5/8/2025	5/10/2025	Middle Santiam	Day	Pole	20
19	5/9/2025	5/10/2025	Middle Santiam	Day	River	4
20	5/13/2025	5/15/2025	Quartzville Creek	Day	Pole	12
20	5/13/2025	5/15/2025	Quartzville Creek	Day	River	12
20	5/15/2025	5/17/2025	Middle Santiam	Day	Pole	22
20	5/17/2025	5/17/2025	Middle Santiam	Day	River	2

 Table 7. Mean water temperature per sample week for riverine sampling.

Week	River	Mean Water Temperature $^\circ C$
4	Middle Santiam	4.45
5	Middle Santiam	3.01
5	Quartzville Creek	2.68

Week	River	Mean Water Temperature °C
6	Middle Santiam	3.75
6	Quartzville Creek	3.65
7	Middle Santiam	2.76
7	Quartzville Creek	2.60
8	Middle Santiam	5.14
8	Quartzville Creek	5.46
9	Middle Santiam	5.88
9	Quartzville Creek	6.32
10	Middle Santiam	5.77
10	Quartzville Creek	6.06
11	Middle Santiam	5.94
11	Quartzville Creek	5.74
12	Middle Santiam	5.38
12	Quartzville Creek	6.16
13	Middle Santiam	6.27
13	Quartzville Creek	6.50
14	Middle Santiam	6.10
14	Quartzville Creek	6.30
15	Middle Santiam	6.96
15	Quartzville Creek	7.13
16	Middle Santiam	7.76
16	Quartzville Creek	7.94
17	Middle Santiam	8.31
17	Quartzville Creek	8.53
18	Middle Santiam	9.35
18	Quartzville Creek	9.72
19	Middle Santiam	10.60
19	Quartzville Creek	10.99
20	Middle Santiam	9.82
20	Quartzville Creek	10.30

Table 8. Summary of total catch by river. CHS – Chinook salmon, RBT – *O. mykiss*, CUT – cutthroat trout, dace – unidentified dace, SCU – unidentified sculpin, NPM — northern pikeminnow, Sucker - *Sucker spp*, Lamprey - *Lamprey spp*.

Week	River	Day/ Night	CHS	RBT	CUT	DACE	SCU	NPM	Sucker	Lamprey
4	Middle Santiam	Day	4	0	0	1	0	0	0	0
5	Middle Santiam	Day	1	0	0	1	0	0	0	0
6	Quartzville Creek	Day	0	0	0	3	1	0	0	0
6	Middle Santiam	Day	6	0	0	1	0	0	0	0
7	Middle Santiam	Day	2	0	0	0	0	0	0	0
8	Quartzville Creek	Day	3	0	0	11	1	0	0	0
8	Middle Santiam	Day	6	0	0	0	0	0	0	0
9	Quartzville Creek	Day	1	0	0	26	4	0	0	0
9	Middle Santiam	Day	0	0	0	1	0	0	0	0
10	Quartzville Creek	Day	0	0	0	27	0	0	0	0

Week	River	Day/ Night	CHS	RBT	CUT	DACE	SCU	NPM	Sucker	Lamprey
10	Middle Santiam	Day	0	0	0	2	0	0	0	0
11	Quartzville Creek	Day	0	0	0	55	0	0	0	0
11	Quartzville Creek	Night	10	5	0	29	41	0	1	1
11	Middle Santiam	Night	2	4	0	4	1	0	1	2
11	Middle Santiam	Day	3	0	0	1	0	0	0	0
12	Quartzville Creek	Day	3	0	0	21	0	0	0	0
12	Middle Santiam	Day	0	0	0	0	0	0	0	0
13	Quartzville Creek	Day	0	0	0	3	0	0	0	0
13	Quartzville Creek	Night	0	4	0	7	2	0	0	0
13	Middle Santiam	Night	1	4	0	1	5	0	0	0
13	Middle Santiam	Day	0	0	0	1	0	0	0	0
14	Middle Santiam	Day	13	0	0	9	0	0	0	0
14	Quartzville Creek	Day	0	0	0	31	1	0	0	0
15	Middle Santiam	Day	19	0	0	0	2	0	0	0
15	Middle Santiam	Night	9	1	0	4	3	0	0	0
15	Quartzville Creek	Day	1	0	0	6	0	0	0	0
15	Quartzville Creek	Night	1	0	0	44	5	0	0	0
16	Middle Santiam	Day	3	0	0	0	0	0	0	0
16	Ouartzville Creek	Day	0	0	0	24	0	0	0	0
17	Middle Santiam	Day	0	0	0	0	0	0	0	0
17	Middle Santiam	Night	4	1	0	18	0	0	0	0
17	Ouartzville Creek	Day	1	0	0	21	2	3	0	0
17	Ouartzville Creek	Night	4	3	2	123	16	0	0	0
18	Quartzville Creek	Day	2	0	0	20	0	0	0	0
18	Middle Santiam	Day	0	0	0	0	0	0	0	0
19	Middle Santiam	Day	0	0	0	0	1	0	0	0
19	Middle Santiam	Night	2	2	0	13	1	0	0	0
19	Quartzville Creek	Day	0	0	0	15	0	0	0	0
19	Quartzville Creek	Night	12	18	1	134	26	14	0	0
20	Middle Santiam	Day	1	0	0	0	0	0	0	0
20	Quartzville Creek	Day	0	0	0	22	0	1	0	0

Table 9. Catch summary of target species by habitat unit type for riverine sampling. CHS-AD = ad clipped Chinook salmon, CHS-natural = natural origin Chinook salmon, RBT-AD = ad clipped O. *mykiss*, RBT-natural = natural origin O. *mykiss*.

Week	River	Species	Lifestage	Riffle	Run	Pool	Pooltail	Total
4	Middle Santiam	CHS-natural	fry	0	0	4	0	4
5	Middle Santiam	CHS-natural	fry	0	0	1	0	1
6	Quartzville Creek	No Catch	-	0	0	0	0	0
6	Middle Santiam	CHS-natural	fry	0	0	6	0	6
7	Middle Santiam	CHS-natural	fry	0	0	2	0	2
8	Quartzville Creek	CHS-natural	fry	0	0	3	0	3
8	Middle Santiam	CHS-natural	fry	0	0	7	0	7
9	Quartzville Creek	CHS-natural	fry	0	0	1	0	1
9	Middle Santiam	No Catch	-	0	0	0	0	0
10	Quartzville Creek	No Catch	-	0	0	0	0	0

Week	River	Species	Lifestage	Riffle	Run	Pool	Pooltail	Total
10	Middle Santiam	No Catch	-	0	0	0	0	0
11	Quartzville Creek	CHS-natural	fry	0	0	5	0	5
11	Quartzville Creek	CHS-natural	smolt	0	0	2	0	2
11	Quartzville Creek	CHS-AD	fry	0	0	3	0	3
11	Quartzville Creek	RBT-natural	juvenile	0	0	4	0	4
11	Quartzville Creek	RBT-natural	adult	0	0	1	0	1
11	Middle Santiam	CHS-natural	fry	0	1	2	0	3
11	Middle Santiam	CHS-AD	fry	0	0	1	0	1
11	Middle Santiam	CHS-AD	smolt	0	0	1	0	1
11	Middle Santiam	RBT-natural	juvenile	0	0	4	0	4
12	Quartzville Creek	CHS-natural	fry	0	0	2	0	2
12	Quartzville Creek	CHS-AD	fry	1	0	0	0	1
12	Middle Santiam	No Catch	-	0	0	0	0	0
13	Quartzville Creek	RBT-natural	juvenile	2	0	2	0	4
13	Middle Santiam	CHS-natural	fry	0	1	0	0	1
13	Middle Santiam	RBT-natural	juvenile	0	1	2	0	3
14	Middle Santiam	CHS-AD	Fry	0	2	0	0	2
14	Middle Santiam	CHS-AD	Parr	0	2	0	0	2
14	Middle Santiam	CHS-natural	Fry	0	5	1	0	6
14	Middle Santiam	CHS-natural	Parr	0	3	0	0	3
15	Middle Santiam	CHS-AD	Parr	0	3	0	0	3
15	Middle Santiam	CHS-AD	Smolt	0	1	2	0	3
15	Middle Santiam	CHS-natural	Fry	0	10	4	0	14
15	Middle Santiam	CHS-natural	Parr	0	5	3	0	8
15	Middle Santiam	RBT-natural	Smolt	0	1	0	0	1
15	Quartzville Creek	CHS-AD	Parr	0	0	1	0	1
15	Quartzville Creek	CHS-natural	Juvenile	0	0	1	0	1
16	Middle Santiam	CHS-natural	Fry	0	0	2	0	2
16	Middle Santiam	CHS-natural	Parr	0	1	0	0	1
16	Quartzville Creek	No Catch	-	0	0	0	0	0
17	Middle Santiam	CHS-natural	Fry	0	0	4	0	4
17	Middle Santiam	RBT-natural	Smolt	0	0	1	0	1
17	Quartzville Creek	CHS-natural	Fry	0	0	3	0	3
17	Quartzville Creek	CHS-natural	Parr	0	0	2	0	2
17	Quartzville Creek	RBT-natural	Smolt	0	2	1	0	3
18	Quartzville Creek	CHS-natural	Fry	0	1	1	0	2
18	Middle Santiam	No Catch	-	0	0	0	0	0
19	Middle Santiam	CHS-natural	Fry	0	0	2	0	2
19	Middle Santiam	RBT-natural	Smolt	0	1	1	0	2
19	Quartzville Creek	CHS-natural	Fry	0	1	1	0	2
19	Quartzville Creek	CHS-natural	Parr	0	0	8	0	8
19	Quartzville Creek	CHS-AD	Parr	0	0	1	0	1
19	Quartzville Creek	CHS-AD	Smolt	0	0	2	0	2
19	Quartzville Creek	RBT-natural	Juvenile	0	3	0	0	3
19	Quartzville Creek	RBT-natural	Smolt	0	6	9	0	15

Week	River	Species	Lifestage	Riffle	Run	Pool	Pooltail	Total
20	Middle Santiam	CHS-natural	Parr	0	0	1	0	1
20	Quartzville Creek	No Catch	-	0	0	0	0	0

Table 10. Summary of target species lengths, tags implanted and recaptures from riverinesampling. MS = Middle Santiam, QTZ = Quartzville Creek.

Wook	Divor	Species	Life Stage	catch	Min FI	Mean FI	Max FI	# Becans	#PIT tagged	Montalities
4	MC	CUS matural	Erre	2	22	25.22	40	<u>Accaps</u>	laggeu	Mortanties
4	MS	CHS-natural	Fry	5	32	35.35	40	0	0	0
5	MS	CHS-natural	Fry	1	39	39.00	39	1	0	0
6	QIZ	No Catch	- E	0	-	-	-	0	0	0
6 7	MS	CHS-natural	Fry	0	31	40.33	45	0	2	0
/ 0	MS	CHS notural	ГГУ Беги	2 7	33 24	33.30 27.20	30 42	0	0	0
0	OTZ	CHS notural	Fry	2	34	37.29	42	0	0	0
0		CHS natural	Fry	1	20	29.00	20	0	0	0
9	MS	No Catch	11y	0	<i>29</i>	29.00	29	0	0	0
10	OTZ	No Catch		0	_	_	_	0	0	0
10	MS	No Catch	-	0	-	_	-	0	0	0
11	MS	CHS-AD	Frv	1	47	47.00	47	1	0	0
11	MS	CHS-AD	Smolt	1	135	135.00	135	0	1	Ő
11	MS	CHS-natural	Frv	3	33	36.67	39	Ő	0	Ő
11	MS	RBT-natural	Juvenile	4	121	157.75	187	Ő	Ő	0 0
11	OTZ	CHS-AD	Frv	3	44	46.00	47	3	3	0
11	ÕTZ	CHS-natural	Fry	5	33	40.20	46	0	1	1
11	ÕTZ	CHS-natural	Smolt	2	109	116.50	124	0	2	0
11	QTZ	RBT-natural	Adult	1	205	205.00	205	0	0	0
11	QTZ	RBT-natural	Juvenile	4	92	94.75	99	0	0	0
12	QTZ	CHS-AD	Fry	1	35	35.00	35	0	0	0
12	QTZ	CHS-natural	Fry	2	38	41.00	44	0	0	0
12	MS	No Catch	-	0	-	-	-	0	0	0
13	MS	CHS-natural	Fry	1	43	43.00	43	0	0	0
13	MS	RBT-natural	Juvenile	4	115	129.50	150	1	3	0
13	QTZ	RBT-natural	Juvenile	4	125	140.50	160	0	4	0
14	MS	CHS-AD	Fry	2	43	45.00	47	0	0	0
14	MS	CHS-natural	Fry	1	37	37.00	37	0	0	0
14	MS	CHS-AD	Parr	2	53	54.00	55	1	0	0
14	MS	CHS-natural	Fry	5	39	40.60	42	1	0	0
14	MS	CHS-natural	Parr	3	41	46.00	54	1	1	0
15	MS	CHS-AD	Parr	3	52	55.00	58	3	0	0
15	MS	CHS-AD	Smolt	3	173	184.67	197	3	0	0
15	MS	CHS-natural	Fry	14	36	40.86	45	0	l r	0
15	MS	CHS-natural	Parr	8	44	4/.12	22 192	2	5	0
15	MS	RBI-natural	Smolt	1	183	183.00	183	0	1	0
15		CHS motions1	Parr	1	49	49.00	49	1	0	0
13	MC	CHS noturel	Free	1	30	30.00 40.00		0	0	0
10 16	MC	CHS_patural	Ffy Darr	ے 1	39 17	40.00	41 12	0	0	0
16	OTZ	No Catch	1 411	0	42	42.00	+2	U	U	0
17	MS	RBT-natural	Smolt	1	131	131	131	1	0	0
17	MS	CHS-natural	Frv	1 4	30	44 50	51	0	2	0
1/	1110	CIIS natural	1 I Y	- T	57	77.50	51	0	-	0

			Life		Min	Mean	Max	#	#PIT	
Week	River	Species	Stage	catch	FL	FL	FL	Recaps	tagged	Mortalities
17	QTZ	CHS-natural	Fry	3	38	45.33	60	1	0	0
17	QTZ	CHS-natural	Parr	2	45	45.50	46	0	0	0
17	QTZ	RBT-natural	Smolt	3	106	109.67	113	0	0	0
18	QTZ	CHS-natural	Fry	2	39	39.00	39	0	0	0
18	MS	No Catch	-	0	-	-	-	-	-	0
19	MS	CHS-natural	Fry	2	42	42.5	43	0	0	0
19	MS	RBT-natural	Smolt	2	128	128	128	0	2	0
19	QTZ	CHS-natural	Fry	2	41	42	41	0	0	0
19	QTZ	CHS-natural	Parr	7	49	53.5	58	0	7	1
19	QTZ	CHS-AD	Parr	1	56	56	56	1	0	0
19	QTZ	CHS-AD	Smolt	2	68	70	72	2	0	0
19	QTZ	RBT-natural	Juvenile	3	115	116.33	119	0	0	0
19	QTZ	RBT-natural	Smolt	15	111	131.67	173	0	0	0
20	MS	CHS-natural	Parr	1	49	49	49	0	1	0



APPENDIX A. RESERVOIR SAMPLING ZONES

Figure A1. Map of LOP Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.



Figure A2. Map of Green Peter Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.