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Willamette Valley Fish Passage Monitoring – Reservoir Distribution & Riverine Sampling

Bi-Weekly Report: May 16 – May 31, 2025

Prepared for: United States Army Corps of Engineers

Prepared by: Cramer Fish Sciences

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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 05/19/25 and pulled for the week on 05/22/25. During the sampling week, the average surface temperature was 15 °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 5/19: n=12 Oneida sets, n=30 box minnow sets), three hatchery subyearling Chinook salmon, seventeen subyearling natural origin Chinook salmon, one yearling natural origin Chinook salmon, one dace, 27 northern pikeminnow, one cutthroat, one smallmouth bass, and ten bluegill were captured (Tables 1, 3-5). The hatchery Chinook salmon (recaptures from the bulk marking project) had an average fork length of 90.3 mm and were captured in the Lower reservoir zone. The natural origin subyearling Chinook salmon had an average fork length of 87.8 mm and were primarily caught in the Quartzville and Lower reservoir zones. The natural origin yearling Chinook salmon had a fork length of 235 mm and was caught in the Upper reservoir zone. Sixteen of the captured salmonids of natural origin were implanted with PIT tags. One of the natural origin subyearling Chinook salmon was identified as a recapture, however the tag code corresponded to an *O. mykiss* tagged by the seining crew in Quartzville creek. We are working to identify where the error has occurred.

On Lookout Point Reservoir, traps were deployed on 05/27/2025 and pulled for the week on 05/30/2025. During the sampling week, average surface temperatures were 16.7 °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 juvenile natural origin *O. mykiss*, two northern pikeminnow, 104 sculpin, one dace, one black crappie, and thirteen white crappie were captured (Tables 1, 3-5). The *O. mykiss* had a fork length of 61 mm and was captured in the Upper reservoir zone. It was not tagged because surface temperatures exceeded our permit tagging temperature threshold. The majority of the sculpin caught were <25 mm and appeared to be young of the year. There were 16 sculpin mortalities, which exceeded our permitted take allowance for that species. A permit modification was submitted to increase our incidental mortality rate for sculpin, which was approved on 6/3/2025.

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

Week	Start	End	Reservoir	Net Type	Effort (# sets)	Effort (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

Week	Start	End	Reservoir	Net Type	Effort (# sets)	Effort (hrs)
12	3/17/2025	3/20/2025	Lookout Point	oneida	6	218
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
21	5/19/2025	5/22/2025	Green Peter	box minnow	30	711
21	5/19/2025	5/22/2025	Green Peter	oneida	12	285
22	5/27/2025	5/30/2025	Lookout Point	box minnow	27	650
22	5/27/2025	5/30/2025	Lookout Point	oneida	9	222

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
21	Green Peter	15
22	Lookout Point	16.7

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
21	Green Peter	21	0	1	0	1	27	0	0	10	0	0	0	0	1	0	0	0	0	0
22	Lookout Point	0	1	0	0	1	2	0	104	0	0	0	0	0	0	0	1	13	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

Week	Reservoir	Species	Lifestage	LOWER	MIDDLE	UPPER	QUARTZVILLE
8	Lookout Point	RBT-natural	Juvenile	0	1	0	0
9	Green Peter	CHS-natural	Fry	0	8	11	1
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
21	Green Peter	CHS-AD	Sub-Yearling	3	0	0	0
21	Green Peter	CHS-natural	Sub-Yearling	10	1	0	6
21	Green Peter	CHS-natural	Yearling	0	0	1	0
22	Lookout Point	RBT-natural	Juvenile	0	0	1	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).

Week	Reservoir	Species	Lifestage	Catch	Min FL (mm)	Mean FL (mm)	Max FL (mm)	# VIE tagged	# PIT 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
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

Week	Reservoir	Species	Lifestage	Catch	Min FL (mm)	Mean FL (mm)	Max FL (mm)	# VIE tagged	# PIT tagged	# Recap	Mortalities
20	Lookout Point	CHS-natural	Sub-Yearling	1	103	103	103	0	1	0	0
21	Green Peter	CHS-AD	Sub-Yearling	3	82	90.3	95	0	0	3	0
21	Green Peter	CHS-natural	Sub-Yearling	17	68	87.8	101	0	16	1	0
21	Green Peter	CHS-natural	Yearling	1	235	235	235	0	0	0	0
22	Lookout Point	RBT-natural	Juvenile	1	61	61	61	0	0	0	0

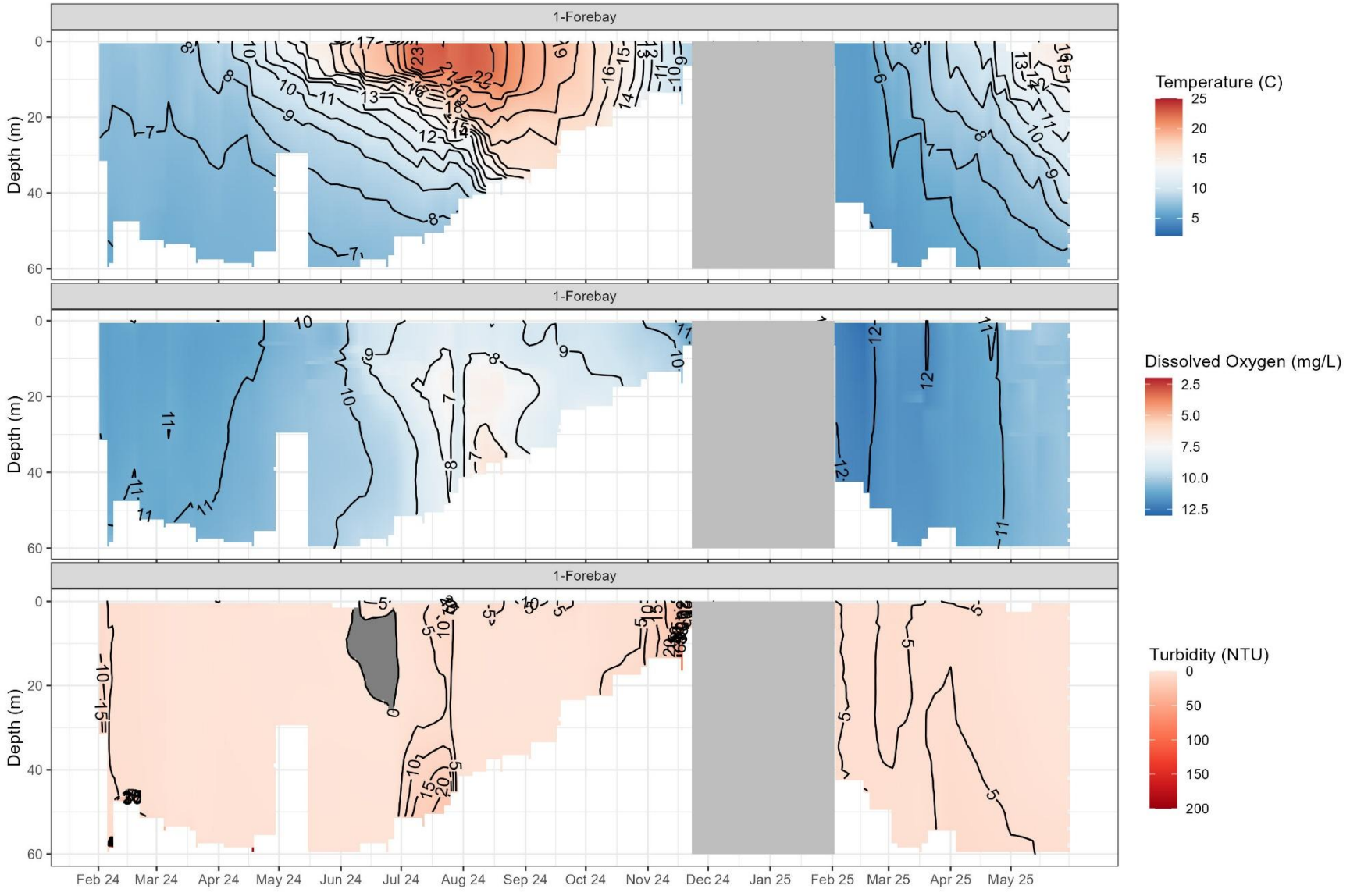

Figure 1. Lookout Point limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.

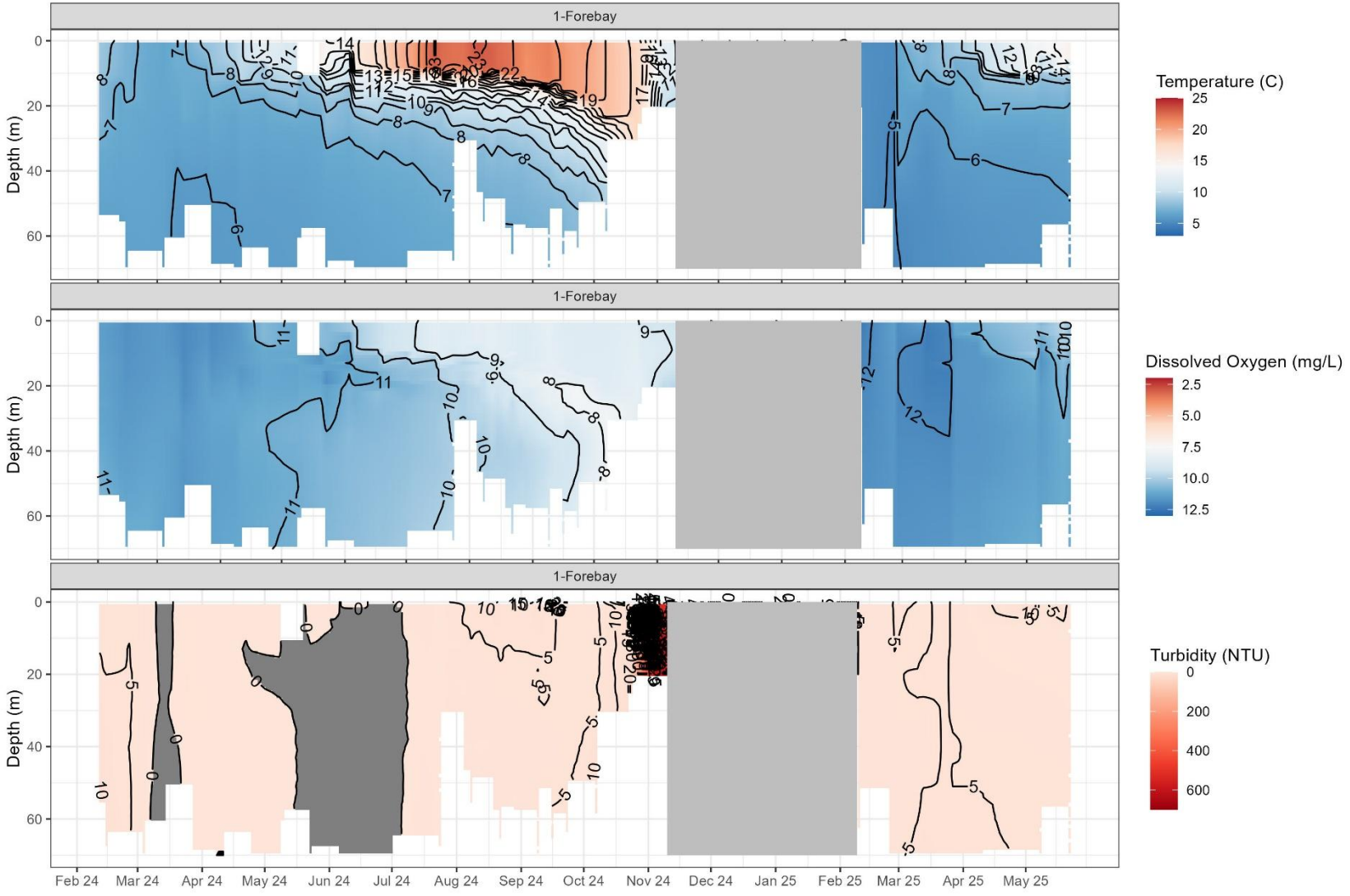

Figure 2. Green Peter limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.

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 5/19 to 5/22/2025 (Week 21) and from 5/27 to 5/29/2025 (Week 22). Over this period the average water temperature was 9.79 C and 13.49 C for weeks 21 and 22, respectively (Table 7). Week 21 consisted of three days (5/19 to 5/21/2025) and one night (5/22/2025) of sampling effort. During the three days of sampling (n = 12 pole seine hauls, n = 12 river seine hauls), 16 dace were captured (Tables 6, 8-10). On 5/22/2025, one juvenile dace was killed whilst hauling a river seine. Night sampling was only conducted on one of the two allotted days because of staffing issues. During the one-night effort (n = 4 pole seine hauls, n = 4 river seine hauls), two natural-origin Chinook salmon, four natural-origin *O. mykiss*, one cutthroat trout, fifty dace, seven sculpin, and one northern pikeminnow were captured (Tables 6, 8-10). Both Chinook salmon captured were parr (mean FL = 63). Only one of the two natural-origin Chinook salmon was PIT tagged. Of the four natural-origin *O. mykiss* captured, two were smolts (mean FL = 168.5), one was a parr (FL = 134mm), and one was a juvenile (FL = 149mm) that did not show signs of smoltification. All *O. mykiss* were implanted with PIT tags. Week 22 consisted of three days (5/27 to 5/29/2025) of sampling effort. During the three days of sampling (n = 8 pole seine hauls, n = 8 river seine hauls), one natural-origin Chinook salmon, twenty-six dace and one sculpin were captured (Tables 6, 8-10). The natural-origin Chinook salmon was a parr (FL = 51mm) and was implanted with a PIT tag. It is important to mention we have amended table 10 from the last reporting period to accurately reflect the number of *O.mykiss* and Chinook salmon captured and tagged on Week 19 on Quartzville Creek.

Middle Santiam River

The Middle Santiam River was sampled for this reporting period from 5/15 to 5/17/2025 (Week 20), 5/19 to 5/20/2025, and 5/22 to 5/24/2025 (Week 21), as well as from 5/29 to 5/31/2025 (Week 22). Over this period the average water temperature was 9.69 C and 13.23 C for weeks 21 and 22, respectively (Table 7). Week 20 catch and effort data was covered in the last biweekly reporting period. Week 21 consisted of two nights (5/19 to 5/20/2025) of sampling effort (n = 12 pole seine hauls, n = 4 river seine hauls) and three days (5/22 to 5/24/2025) of sampling effort (n = 18 pole seine hauls, n = 6 river seine hauls) (Table 6). During the two nights of sampling, five Chinook salmon, five *O. mykiss*, thirteen dace, and four sculpin were caught (Tables 6, 8-10). Of the five Chinook salmon caught, three were natural-origin fry (mean FL = 51.67mm) and two were natural-origin parr (mean FL = 56.5mm). Of the five *O. mykiss* caught, four were natural-origin smolts (mean FL = 131.33mm) and one was a natural-origin parr, which escaped before a length and weight could be taken. Tables 6, 8-10). All salmonids caught during night efforts received a PIT tag. During the three days of sampling (n = 18 pole seine hauls, n = 6 river seine hauls), six natural-origin Chinook salmon parr (mean FL = 51.5mm) were captured. Of the natural-origin Chinook salmon, four were PIT tagged and two were recaptures from previous seining events. Week 22 consisted of three days (5/29 to 5/31/2025) of sampling effort. During the three days of sampling (n = 22 pole seine hauls, n = 2 river seine hauls), one dace was captured (Tables 6, 8-10).

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

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
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

Week	Start	End	River	Day/ Night	Seine Type	Effort (# Hauls)
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
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	5/6/2025	Middle Santiam	Night	Pole	13
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	5/8/2025	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
21	5/19/2025	5/20/2025	Middle Santiam	Night	Pole	12
21	5/19/2025	5/20/2025	Middle Santiam	Night	River	4

Week	Start	End	River	Day/ Night	Seine Type	Effort (# Hauls)
21	5/22/2025	5/24/2025	Middle Santiam	Day	Pole	18
21	5/22/2025	5/24/2025	Middle Santiam	Day	River	6
21	5/19/2025	5/21/2025	Quartzville Creek	Day	Pole	12
21	5/19/2025	5/21/2025	Quartzville Creek	Day	River	12
21	5/22/2025	5/22/2025	Quartzville Creek	Night	Pole	4
21	5/22/2025	5/22/2025	Quartzville Creek	Night	River	4
22	5/27/2025	5/29/2025	Quartzville Creek	Day	Pole	8
22	5/27/2025	5/29/2025	Quartzville Creek	Day	River	8
22	5/29/2025	5/31/2025	Middle Santiam	Day	Pole	22
22	5/31/2025	5/31/2025	Middle Santiam	Day	River	2

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

Week	River	Mean Water Temperature °C
4	Middle Santiam	4.45
5	Middle Santiam	3.01
5	Quartzville Creek	2.68
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

Week	River	Mean Water Temperature °C
19	Quartzville Creek	10.99
20	Middle Santiam	9.82
20	Quartzville Creek	10.30
21	Middle Santiam	9.69
21	Quartzville Creek	9.79
22	Middle Santiam	13.23
22	Quartzville Creek	13.49

Table 8. Summary of total catch by river. CHS – Chinook salmon, RBT – *O. mykiss*, CUT – Cutthroat trout, DACE – Unidentified Dace, SCU – Unidentified Sculpin, NPM — *P. oregonensis,* 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
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	Quartzville 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	Quartzville Creek	Day	1	0	0	21	2	3	0	0
17	Quartzville Creek	Night	4	3	2	123	16	0	0	0
18	Quartzville Creek	Day	2	0	0	20	0	0	0	0

Week	River	Day/ Night	CHS	RBT	CUT	DACE	SCU	NPM	Sucker	Lamprey
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
21	Middle Santiam	Day	6	0	0	0	0	0	0	0
21	Middle Santiam	Night	5	5	0	13	4	0	0	0
21	Quartzville Creek	Day	0	0	0	16	0	0	0	0
21	Quartzville Creek	Night	2	4	1	50	7	1	0	0
22	Middle Santiam	Day	0	0	0	1	0	0	0	0
22	Quartzville Creek	Day	1	0	0	26	1	0	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
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

Week	River	Species	Lifestage	Riffle	Run	Pool	Pooltail	Total
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
19	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	0	1	0	1
19	Quartzville Creek	CHS-natural	Juvenile	0	1	0	0	1
19	Quartzville Creek	CHS-natural	Parr	0	0	8	0	8
19	Quartzville Creek	CHS-natural	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
20	Middle Santiam	CHS-natural	Parr	0	0	1	0	1
21	Middle Santiam	CHS - natural	Fry	0	1	2	0	3
21	Middle Santiam	CHS - natural	Parr	0	0	8	0	8
21	Middle Santiam	RBT - natural	Parr	0	0	1	0	1
21	Middle Santiam	RBT - natural	Smolt	0	0	3	1	4
21	Quartzville Creek	CCT - natural	Juvenile	0	0	1	0	1
21	Quartzville Creek	CHS - natural	Parr	0	0	2	0	2
21	Quartzville Creek	RBT - natural	Parr	0	0	1	0	1
21	Quartzville Creek	RBT - natural	Smolt	0	0	2	0	2
21	Quartzville Creek	RBT - natural	Juvenile	0	0	1	0	1
22	Quartzville Creek	CHS - natural	Parr	0	0	1	0	1
22	Middle Santiam	No Catch	-	0	0	0	0	0

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

Week	River	Species	Life Stage	catch	Min FL	Mean FL	Max FL	# Recaps	#PIT tagged
4	MS	CHS-natural	Fry	3	32	35.33	40	0	0
5	MS	CHS-natural	Fry	1	39	39.00	39	1	0
6	QTZ	No Catch	-	0	-	-	-	0	0
6	MS	CHS-natural	Fry	6	37	40.33	45	0	2
7	MS	CHS-natural	Fry	2	35	35.50	36	0	0
8	MS	CHS-natural	Fry	7	34	37.29	42	0	0
8	QTZ	CHS-natural	Fry	3	31	34.00	37	0	0
9	QTZ	CHS-natural	Fry	1	29	29.00	29	0	0
9	MS	No Catch	-	0	-	-	-	0	0
10	QTZ	No Catch	-	0	-	-	-	0	0
10	MS	No Catch	-	0	-	-	-	0	0
11	MS	CHS-AD	Fry	1	47	47.00	47	1	0
11	MS	CHS-AD	Smolt	1	135	135.00	135	0	1
11	MS	CHS-natural	Fry	3	33	36.67	39	0	0
11	MS	RBT-natural	Juvenile	4	121	157.75	187	0	0
11	QTZ	CHS-AD	Fry	3	44	46.00	47	3	3
11	QTZ	CHS-natural	Fry	5	33	40.20	46	0	1
11	QTZ	CHS-natural	Smolt	2	109	116.50	124	0	2
11	QTZ	RBT-natural	Adult	1	205	205.00	205	0	0
11	QTZ	RBT-natural	Juvenile	4	92	94.75	99	0	0
12	QTZ	CHS-AD	Fry	1	35	35.00	35	0	0
12	QTZ	CHS-natural	Fry	2	38	41.00	44	0	0
12	MS	No Catch	-	0	-	-	-	0	0
13	MS	CHS-natural	Fry	1	43	43.00	43	0	0
13	MS	RBT-natural	Juvenile	4	115	129.50	150	1	3
13	QTZ	RBT-natural	Juvenile	4	125	140.50	160	0	4
14	MS	CHS-AD	Fry	2	43	45.00	47	0	0
14	MS	CHS-natural	Fry	1	37	37.00	37	0	0
14	MS	CHS-AD	Parr	2	53	54.00	55	1	0
14	MS	CHS-natural	Fry	5	39	40.60	42	1	0
14	MS	CHS-natural	Parr	3	41	46.00	54	1	1
15	MS	CHS-AD	Parr	3	52	55.00	58	3	0
15	MS	CHS-AD	Smolt	3	173	184.67	197	3	0
15	MS	CHS-natural	Fry	14	36	40.86	45	0	1
15	MS	CHS-natural	Parr	8	44	47.12	55	2	5
15	MS	RBT-natural	Smolt	1	183	183.00	183	0	1
15	QTZ	CHS-AD	Parr	1	49	49.00	49	1	0
15	QTZ	CHS-natural	Juvenile	1	30	30.00	30	0	0
16	MS	CHS-natural	Fry	2	39	40.00	41	0	0
16	MS	CHS-natural	Parr	1	42	42.00	42	0	0
16	QTZ	No Catch	-	0	-	-	-	-	-
17	MS	RBT-natural	Smolt	1	131	131	131	1	0
17	MS	CHS-natural	Fry	4	39	44.50	51	0	2
17	QTZ	CHS-natural	Fry	3	38	45.33	60	1	0
17	QTZ	CHS-natural	Parr	2	45	45.50	46	0	0
17	QTZ	RBT-natural	Smolt	3	106	109.67	113	0	0

Week	River	Species	Life Stage	catch	Min FL	Mean FL	Max FL	# Recaps	#PIT tagged
18	QTZ	CHS-natural	Fry	2	39	39.00	39	0	0
19	MS	No Catch	-	0	-	-	-	-	-
19	MS	CHS-natural	Fry	2	42	42.5	43	0	0
19	MS	RBT-natural	Smolt	2	128	128	128	0	2
19	QTZ	CCT - Natural	Adult	1	195	195	195	0	0
19	QTZ	CHS - Natural	Fry	1	41	41	41	0	0
19	QTZ	CHS - Natural	Juvenile	1	43	43	43	0	0
19	QTZ	CHS - Natural	Parr	8	49	53.5	58	1	5
19	QTZ	CHS - Natural	Smolt	2	68	70	72	2	0
19	QTZ	RBT - Natural	Juvenile	3	115	116.33	119	0	3
19	QTZ	RBT - Natural	Smolt	15	111	131.67	173	0	14
20	MS	CHS - Natural	Parr	1	49	49	49	0	1
21	MS	CHS - Natural	Fry	3	45	51.67	57	0	3
21	MS	CHS - Natural	Parr	8	50	52.75	63	2	6
21	MS	RBT - Natural	Parr	1	-	-	-	0	1
21	MS	RBT - Natural	Smolt	4	107	131.33	155	0	4
21	QTZ	CCT - Natural	Juvenile	1	135	135	135	0	0
21	QTZ	CHS - Natural	Parr	2	59	63	67	0	1
21	QTZ	RBT - Natural	Juvenile	1	149	149	149	0	1
21	QTZ	RBT - Natural	Parr	1	134	134	134	0	1
21	QTZ	RBT - Natural	Smolt	2	142	168.5	195	0	2
22	QTZ	CHS - Natural	Parr	1	51	51	51	0	1
22	MS	No Catch	-	0	-	-	-	-	-

APPENDIX A. RESERVOIR SAMPLING ZONES

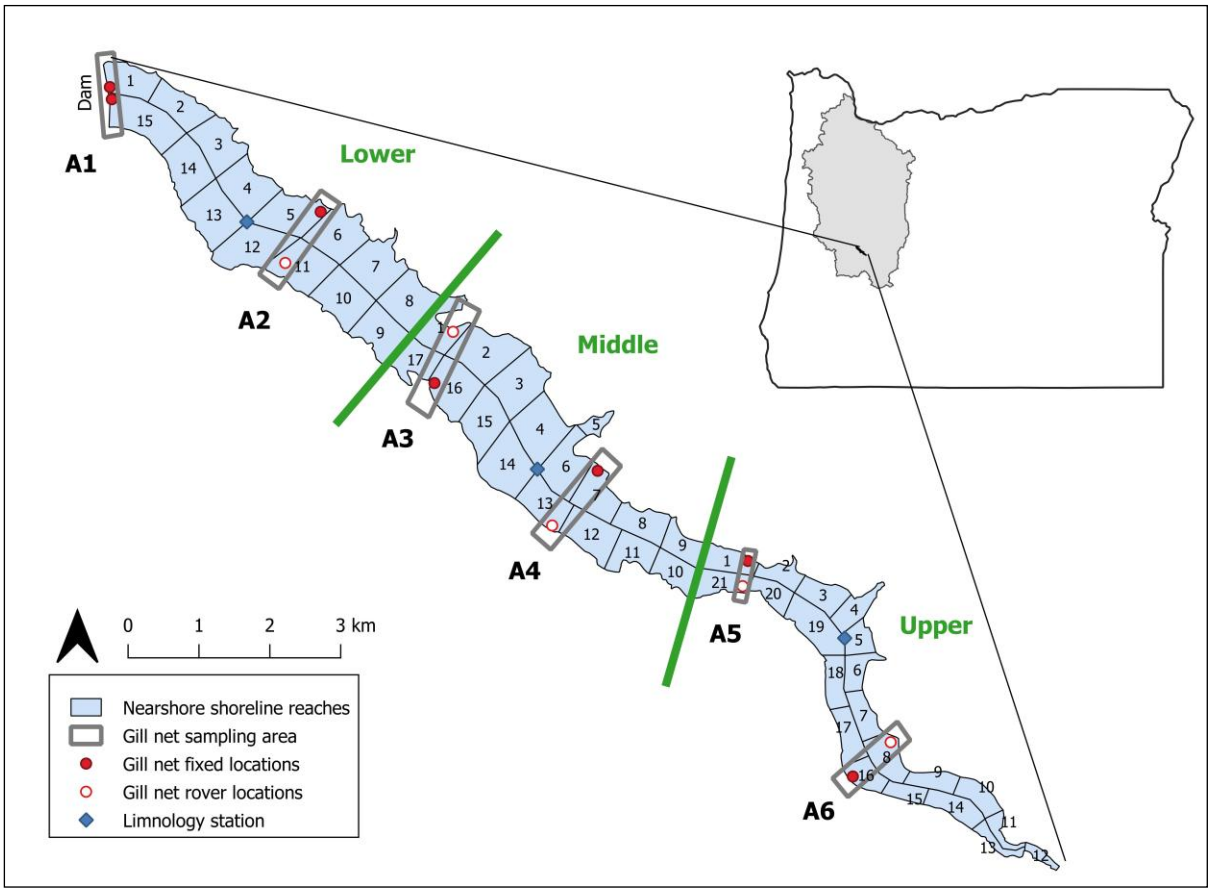

Figure A1. Map of LOP Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.

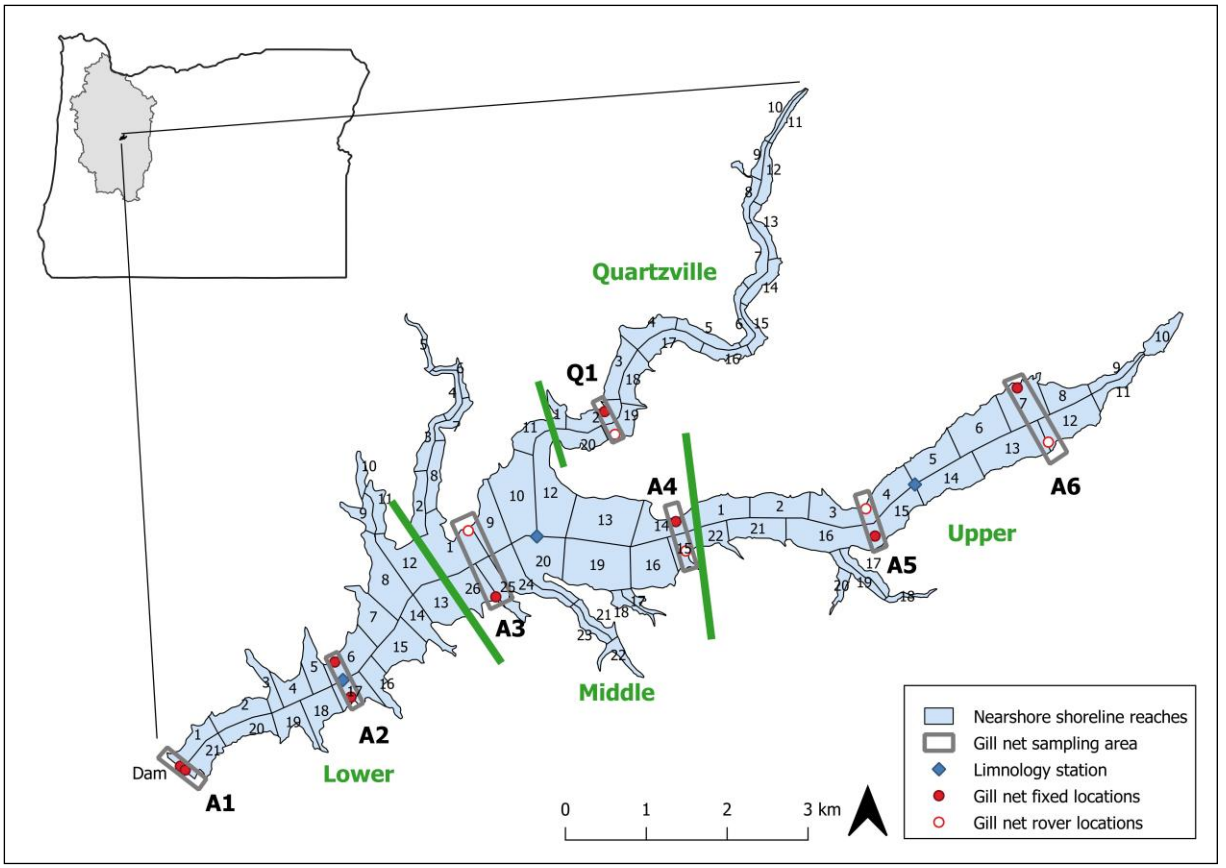

Figure A2. Map of Green Peter Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.