

WILLAMETTE VALLEY FISH PASSAGE MONITORING – BULK MARKING & RESERVOIR DISTRIBUTION

Bi-Weekly Report: September 1, 2024 – September 15, 2024

Prepared for: United States Army Corps of Engineers

Prepared by: Cramer Fish Sciences

September 22, 2024

BULK MARKING SCHEDULE

Table 1. Tentative release schedule for brood years 2022 and 2023. Green rows highlight the release groups that have been tagged and released. Orange rows highlight release groups that have been tagged but have not yet been released. Date estimate is a rough estimate of when fish should be released to meet the intended target.

2023					
MF Willamette					
Date Estimate	Release Location	Target	Lifestage	#	Tag
Spring 2023	Head of Fall Creek Dam reservoir	Prior to reaching target elevation of 728 feet	fry	10000	8 mm
Spring 2023	Head of Lookout Point Dam reservoir	30 day spill operations	fry	10000	8 mm
Spring 2023	Head of Hills Creek Dam reservoir	Observed fry migration and RO operations	fry	10000	8 mm
9/15/2023	Dexter Dam Tailrace	Fall deep drawdown	subyearling	2000	12 mm
9/15/2023	Head of Lookout Point Dam reservoir	Fall deep drawdown	subyearling	5000	12 mm
9/15/2023	Lookout Point Dam Forebay	Fall deep drawdown	subyearling	5000	12 mm
10/15/2023	Fall Creek Dam Head of Reservoir	2-3 weeks prior to drawdown	subyearling	5000	12 mm
10/15/2023	Fall Creek Dam tailrace	2-3 weeks prior to drawdown	subyearling	1000	12 mm
11/15/2023	Fall Creek Dam Head of Reservoir	Midway between start of drawdown and streambed elevation	subyearling	5000	12 mm
11/15/2023	Fall Creek Dam tailrace	Midway between start of drawdown and streambed elevation	subyearling	1000	12 mm
11/16/2023	Hills Creek Dam Head of Reservoir	Prior to start of fall/winter RO operations	subyearling	5000	12 mm
11/16/2023	Hills Creek Dam tailrace	Prior to start of fall/winter RO operations	subyearling	3000	12 mm
11/16/2023	Hills Creek forebay or mid-reservoir	Prior to start of fall/winter RO operations	subyearling	5000	12 mm
North Santiam					
Spring 2023	Breitenbush River	Prior to beginning of spill	fry	7500	8 mm
Spring 2023	North Santiam River	Prior to beginning of spill	fry	7500	8 mm
10/1/2023	Big Cliff Dam Tailrace	Prior to Detroit Reservoir reaching 1520 feet	subyearling	8000	12 mm
10/1/2023	Breitenbush River	Prior to Detroit Reservoir reaching 1520 feet	subyearling	5000	12 mm
10/1/2023	North Santiam River	Prior to Detroit Reservoir reaching 1520 feet	subyearling	5000	12 mm

11/15/2023	Big Cliff Dam Tailrace	When Detroit reaches 1465 feet	subyearling	6000	12 mm
SF McKenzie					
Spring 2023	Cougar Dam Head of Reservoir	Prior to start of spring drawdown	fry	5000	8 mm
Spring 2023	Cougar Dam Head of Reservoir	After start of drawdown but prior to reaching 1520 feet	fry	5000	8 mm
9/15/2023	Cougar Dam Head of Reservoir	Prior to start of drawdown	subyearling	3000	12 mm
10/15/2023	Cougar Dam Forebay	Prior to reaching target elevation of 1505 feet	subyearling	5000	12 mm
10/15/2023	Cougar Dam Tailrace	Prior to reaching target elevation of 1505 feet	subyearling	4000	12 mm
10/15/2023	Cougar Head of Reservoir	Prior to reaching target elevation of 1505 feet	subyearling	4000	12 mm
11/15/2023	Cougar Dam Forebay	At 1532 feet when RO is prioritized for day and night spill	subyearling	5000	12 mm
11/15/2023	Cougar Dam Tailrace	At 1532 feet when RO is prioritized for day and night spill	subyearling	4000	12 mm
11/15/2023	Cougar Head of Reservoir	At 1532 feet when RO is prioritized for day and night spill	subyearling	4000	12 mm
South Santiam					
Spring 2023	Green Peter Head of Reservoir in Middle Santiam River	Spill operation block	fry	5000	8 mm
Spring 2023	Green Peter Head of Reservoir in Quartzville Creek	Spill operation block	fry	5000	8 mm
8/30/2023	South Santiam River - Foster Dam Tailrace	Undefined - Late August	subyearling	1000	12 mm
8/30/2023	South Santiam River above Foster Dam	Undefined - Late August	subyearling	2000	12 mm
9/15/2023	Green Peter Reservoir - Head of Reservoir, Middle Santiam River	Fall Operations at Green Peter Dam	subyearling	2500	12 mm
9/15/2023	Green Peter Reservoir - Head of Reservoir, Quartzville Creek	Fall Operations at Green Peter Dam	subyearling	2500	12 mm
10/15/2023	Green Peter Dam Tailrace	Prior to Green Peter reaching 887 feet.	subyearling	4000	12 mm
10/15/2023	Green Peter Reservoir - Head of Reservoir, Middle Santiam River	Prior to Green Peter reaching 887 feet.	subyearling	2500	12 mm

10/15/2023	Green Peter Reservoir - Head of Reservoir, Quartzville Creek	Prior to Green Peter reaching 887 feet.	subyearling	2500	12 mm
10/15/2023	South Santiam River - Foster Dam Tailrace	Fall operations at Foster Dam	subyearling	4000	12 mm
10/15/2023	South Santiam River above Foster Dam	Fall operations at Foster Dam	subyearling	5000	12 mm
2024					
MF Willamette					
2/1/2024	Hills Creek Dam Head of Reservoir	Prior to end of fall/winter RO operations	yearling	5000	12 mm
2/1/2024	Hills Creek Dam tailrace	Prior to end of fall/winter RO operations	yearling	3000	12 mm
2/1/2024	Hills Creek forebay or mid-reservoir	Prior to end of fall/winter RO operations	yearling	5000	12 mm
2/28/2024	Fall Creek Dam Head of Reservoir	Prior to beginning of refill	yearling	5000	12 mm
2/28/2024	Fall Creek Dam Tailrace	Prior to beginning of refill	yearling	1000	12 mm
2/28/2024	Head of Lookout Point Dam reservoir	Prior to 30-day spill	yearling	5000	12 mm
2/28/2024	Dexter Dam Tailrace	Prior to 30-day spill	yearling	2000	12 mm
2/28/2024	Lookout Point Dam Forebay	Prior to 30-day spill	yearling	5000	12 mm
3/31/2024	Fall Creek Dam Head of Reservoir	After refill is completed	yearling	5000	12 mm
3/31/2024	Fall Creek Dam Tailrace	After refill is completed	yearling	1000	12 mm
4/1/2024	Head of Lookout Point Dam reservoir	After 30-day spill/beginning of nighttime spill	yearling	5000	12 mm
4/1/2024	Dexter Dam Tailrace	After 30-day spill/beginning of nighttime spill	yearling	2000	12 mm
4/1/2024	Lookout Point Dam Forebay	After 30-day spill/beginning of nighttime spill	yearling	5000	12 mm
North Santiam					
2/1/2024	North Santiam River	Prior to start of Detroit refill	fry	3750	8 mm
2/1/2024	Breitenbush River	Prior to start of Detroit refill	fry	3750	8 mm
4/1/2024	Breitenbush River	Prior to start of Detroit spill	fry	3750	8 mm
4/1/2024	North Santiam River	Prior to start of Detroit spill	fry	3750	8 mm
4/1/2024	Big Cliff Dam Tailrace	Prior to Detroit reaching 1541 feet (spillway crest elevation)	yearling	2000	12 mm

4/1/2024	Breitenbush River	Prior to Detroit reaching 1541 feet (spillway crest elevation)	yearling	2000	12 mm
4/1/2024	North Santiam River	Prior to Detroit reaching 1541 feet (spillway crest elevation)	yearling	2000	12 mm
10/1/2024	Big Cliff Dam Tailrace	Prior to Detroit Reservoir reaching 1520 feet	subyearling	8000	12 mm
10/1/2024	Breitenbush River	Prior to Detroit Reservoir reaching 1520 feet	subyearling	5000	12 mm
10/1/2024	North Santiam River	Prior to Detroit Reservoir reaching 1520 feet	subyearling	5000	12 mm
11/15/2024	Big Cliff Dam Tailrace	When Detroit reaches 1465 feet	subyearling	6000	12 mm
SF McKenzie					
2/28/2024	Cougar Dam Forebay	Prior to beginning of spring drawdown	yearling	2000	12 mm
2/28/2024	Cougar Dam Tailrace	Prior to beginning of spring drawdown	yearling	1000	12 mm
2/28/2024	Cougar Head of Reservoir	Prior to beginning of spring drawdown	yearling	2000	12 mm
3/30/2024	Cougar Dam Forebay	After start of drawdown but prior to reaching 1520 feet	yearling	2000	12 mm
3/30/2024	Cougar Dam Tailrace	After start of drawdown but prior to reaching 1520 feet	yearling	1000	12 mm
3/30/2024	Cougar Head of Reservoir	After start of drawdown but prior to reaching 1520 feet	yearling	2000	12 mm
South Santiam					
4/1/2024	Green Peter Head of Reservoir in Middle Santiam River	At the start of the first spring spill block	fry	2500	8 mm
4/1/2024	Green Peter Head of Reservoir in Quartzville Creek	At the start of the first spring spill block	fry	2500	8 mm
4/1/2024	Green Peter Dam Tailrace	At the start of Green Peter spring spill	yearling	1000	12 mm
4/1/2024	Green Peter Reservoir - Forebay	At the start of Green Peter spring spill	yearling	2000	12 mm
4/1/2024	Green Peter Reservoir - Head of Reservoir, Middle Santiam River	At the start of Green Peter spring spill	yearling	1000	12 mm
4/1/2024	Green Peter Reservoir - Head of Reservoir, Quartzville Creek	At the start of Green Peter spring spill	yearling	1000	12 mm
4/1/2024	Green Peter Reservoir - mid reservoir	At the start of Green Peter spring spill	yearling	2000	12 mm

4/1/2024	South Santiam River - Foster Dam Tailrace	Prior to start of Foster refill	yearling	4000	12 mm
4/1/2024	South Santiam River above Foster Dam	Prior to start of Foster refill	yearling	5000	12 mm
4/20/2024	South Santiam River - Foster Dam Tailrace	Post refill operations	yearling	2000	12 mm
4/20/2024	South Santiam River above Foster Dam	Post refill operations	yearling	1000	12 mm
4/15/2024	Green Peter Head of Reservoir in Middle Santiam River	At the start of the second spring spill block	fry	2500	8 mm
4/15/2024	Green Peter Head of Reservoir in Quartzville Creek	At the start of the second spring spill block	fry	2500	8 mm
8/30/2024	South Santiam River - Foster Dam Tailrace	Undefined - Late August	subyearling	1000	12 mm
8/30/2024	South Santiam River above Foster Dam	Undefined - Late August	subyearling	2000	12 mm
9/15/2024	Green Peter Reservoir - Head of Reservoir, Middle Santiam River	Fall Operations at Green Peter Dam	subyearling	2500	12 mm
9/15/2024	Green Peter Reservoir - Head of Reservoir, Quartzville Creek	Fall Operations at Green Peter Dam	subyearling	2500	12 mm
10/15/2024	Green Peter Dam Tailrace	Prior to Green Peter reaching 887 feet.	subyearling	4000	12 mm
10/15/2024	Green Peter Reservoir - Head of Reservoir, Middle Santiam River	Prior to Green Peter reaching 887 feet.	subyearling	2500	12 mm
10/15/2024	Green Peter Reservoir - Head of Reservoir, Quartzville Creek	Prior to Green Peter reaching 887 feet.	subyearling	2500	12 mm
10/15/2024	South Santiam River - Foster Dam Tailrace	Fall operations at Foster Dam	subyearling	4000	12 mm
10/15/2024	South Santiam River above Foster Dam	Fall operations at Foster Dam	subyearling	5000	12 mm

BULK MARKING SUMMARY

All brood year 2023 South Santiam stock juvenile Chinook salmon have been PIT tagged and are rearing at Willamette Hatchery. We have also tagged 18,000, out of a total of 30,000, brood year 2023 North Santiam juvenile Chinook salmon. We are planning on tagging the remaining 12,000 North Santiam stock in late September. The North Santiam stock fish are rearing at Marion Forks Hatchery.

We released a total of 4,981 PIT tagged subyearling Chinook salmon into the Green Peter project area during the most recent reporting period. The release took place across two days (September 9 and September 10) at the head of reservoir and was split between the Middle Santiam River (n = 2,493) and Quartzville Creek (n = 2,488). This release is intended to target the beginning of the fall drawdown.

Recaptures

A total of two PIT tagged juvenile Chinook salmon from this project were redetected and uploaded to PTAGIS during the most reporting period. We estimate that a total of 5,112 PIT tags from this project have been detected since we began releasing fish in May of 2023 (Table 4).

Table 2. Bulk marking summary statistics. Total number of fish marked (N), mean fork length (FL), mean weight, start date of marking, end date of marking, total mortalities from start of tagging to release, mortality percentage, total shed tags from start of tagging to release, and shed tag percentage.

Mark Group	N	Mean FL (mm)	Mean Weight (g)	Date Start	Date End	Mort	Mort. %	Sheds	Shed %
Green Peter Head of Reservoir - Middle Santiam	5,071	56.2	NA	5/15/2023	5/16/2023	74	1.46	32	0.63
Green Peter Head of Reservoir - Quartzville Creek	5,203	58.5	NA	5/17/2023	5/18/2023	18	0.35	19	0.37
Lookout Point Head of Reservoir	10,041	63.1	2.9	5/22/2023	5/24/2023	39	0.39	53	0.53
Hills Creek Head of Reservoir	10,117	64.7	2.9	5/30/2023	6/1/2023	22	0.22	9	0.09
Fall Creek Head of Reservoir	10,040	67.4	3.2	6/1/2023	6/7/2023	68	0.68	30	0.3
Detroit Head of Reservoir Breitenbush Arm	7,530	66.9	3.6	6/13/2023	6/14/2023	82	1.09	24	0.32
Detroit Head of Reservoir - North Santiam Arm	7,528	66.9	3.6	6/14/2023	6/15/2023	83	1.10	25	0.32
Cougar Head of Reservoir	5,626	67.7	3.5	6/20/2023	6/20/2023	475	8.40	44	0.78
North Santiam – Fall 23 & Spring 24 Bulk Group	30,680	67.3	3.5	6/26/2023	7/20/2023	3,437	10.6	99	0.32
M.F. Willamette – Fall 23 & Spring 24 Bulk Group	85,233	NA	NA	7/26/2023	12/7/2023	380	0.45	340	0.40
South Santiam – Fall 23 & Spring 2024 Bulk Group	43,407	NA	NA	8/14/2023	12/20/2023	128	0.29	101	0.23
McKenzie– Fall 23 & Spring 24 Bulk Group	45,210	NA	NA	8/30/2023	2/14/2024	987	2.18	60	0.13
M.F. Willamette – Additional 51,000 Group	51,000	145.1	35.9	1/1/2024	1/31/2021	NA	NA	NA	NA
Green Peter Head of Reservoir	5,006	50.1	1.4	3/1/2024	3/3/2024	17	0.33	13	0.25
Green Peter Head of Reservoir	5,000	54.9	1.7	3/18/2024	3/19/2024	12	0.23	20	0.39
Detroit Head of Reservoir North Santiam Arm	7,500	46.7	1.2	5/13/2024	5/15/2024	58	0.77	70	0.93
Detroit Head of Reservoir Breitenbush Arm	7,500	46.7	1.2	5/15/2024	5/17/2024	58	0.77	63	0.84
South Santiam – Fall 24 and Spring 25 Bulk Group	45,000	NA	NA	6/26/2024	7/11/2024	TBD	TBD	TBD	TBD
North Santiam – Fall 24 and Spring 25 Bulk Group	18,000	NA	NA	7/15/2024	7/19/2024	TBD	TBD	TBD	TBD

Table 3. PIT tagged juvenile Chinook salmon release group summary statistics.

Basin	Release Location	Release Date	N	Mean Length	Mean Weight	Lifestage
MFW	Hills Creek Head of Reservoir	5/18/2023 15:50	509	55.8	1.9	Fry

MFW	LOP Head of Reservoir - Black Canyon	5/30/2023 10:30	9,647	63.1	2.9	Fry
MFW	Hills Creek Head of Reservoir	6/5/2023 10:30	9,784	64.7	2.8	Fry
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	6/12/2023 15:00	9,638	67.4	3.2	Fry
MFW	LOP Head of Reservoir - Black Canyon	9/18/2023 8:15	4,998	122.9	23.8	Subyearling
MFW	LOP Forebay - Signal Point	9/18/2023 17:00	5,002	128.3	25.1	Subyearling
MFW	LOP Tailrace - Pengra	9/19/2023 11:30	2,011	128.4	25.2	Subyearling
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	9/28/2023 14:45	5,006	133.5	29.1	Subyearling
MFW	Fall Creek Tailrace	9/28/2023 19:15	1,001	134.8	29.8	Subyearling
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	11/6/2023 15:40	4,999	139.4	32.2	Subyearling
MFW	Fall Creek Tailrace	11/6/2023 19:00	1,000	134.9	30.2	Subyearling
MFW	Hills Creek Head of Reservoir	11/7/2023 15:45	4,997	135.2	28.6	Subyearling
MFW	Hills Creek Mid Reservoir - Packard Creek Boat Ramp	11/8/2023 15:15	4,998	145.3	36.9	Subyearling
MFW	Hills Creek Dam Tailrace	11/9/2023 14:35	2,969	129.6	27	Subyearling
MFW	LOP Head of Reservoir - Black Canyon	1/3/2024 16:45	4,634	143.3	33.7	Yearling
MFW	LOP Head of Reservoir - Black Canyon	1/4/2024 16:30	4,828	143.3		Yearling
MFW	LOP Head of Reservoir - Black Canyon	1/8/2024 15:40	3,789	143.3		Yearling
MFW	LOP Head of Reservoir - Black Canyon	1/9/2024 16:15	5,115	143.3		Yearling
MFW	LOP Head of Reservoir - Black Canyon	1/25/2024 11:30	7,617	143.6	34.3	Yearling
MFW	Hills Creek Dam Tailrace	1/31/2024 14:05	24,861	141.6	34.7	Yearling
MFW	Hills Creek Head of Reservoir	2/6/2024 11:15	4,963	153.8	40.9	Yearling
MFW	Hills Creek Mid Reservoir - Packard Creek Boat Ramp	2/7/2024 10:10	5,000	155.9	41.7	Yearling
MFW	Hills Creek Dam Tailrace	2/7/2024 15:20	2,998	151.3	42.8	Yearling
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	2/20/2024 12:45	4,993	148.4	38.9	Yearling
MFW	Fall Creek Tailrace	2/20/2024 16:05	1,002	150.5	39.9	Yearling
MFW	LOP Head of Reservoir - Black Canyon	2/28/2024 11:30	4,994	141.5	34.2	Yearling
MFW	LOP Forebay - Signal Point	2/28/2024 16:30	4,988	144.2	35.9	Yearling
MFW	LOP Tailrace - Pengra	2/29/2024 11:00	1,998	149.7	39.2	Yearling
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	4/2/2024 11:00	2,500	146	37.1	Yearling

MFW	Fall Creek Head of Reservoir - Old Boat Ramp	4/3/2024 10:55	2,497	154.6	43.2	Yearling
MFW	Fall Creek Tailrace	4/3/2024 14:05	999	159.5	44.5	Yearling
MFW	LOP Head of Reservoir - Black Canyon	4/9/2024 10:35	2,499	150.9	41.2	Yearling
MFW	LOP Head of Reservoir - Black Canyon	4/9/2024 13:00	2,499	150.9		Yearling
MFW	LOP Forebay - Signal Point	4/10/2024 11:00	2,500	150.7	39.7	Yearling
MFW	LOP Forebay - Signal Point	4/11/2024 11:55	2,500	150.7		Yearling
MFW	LOP Tailrace - Pengra	4/11/2024 15:25	2,000	149	38.9	Yearling
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	8/29/2023 11:30	5,198	67.9	3.6	Fry
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	10/2/2023 14:20	5,005	117.2	18.9	Subyearling
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	10/2/2023 19:05	3,006	116.7	19	Subyearling
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	10/18/2023 11:50	3,977	118.4	19.8	Subyearling
MCK	Cougar Forebay	10/18/2023 18:00	5,010	120.8	21	Subyearling
MCK	Cougar Tailrace - USGS	10/19/2023 12:40	4,000	112.5	16.8	Subyearling
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	11/13/2023 13:15	3,999	121.3	23	Subyearling
MCK	Cougar Forebay	11/14/2023 15:15	4,995	124.6	23.8	Subyearling
MCK	Cougar Tailrace - USGS	11/15/2023 11:45	2,411	120.1	21.5	Subyearling
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	3/8/2024 11:20	4,799	136.9	31	Yearling
MCK	Cougar Forebay	3/11/2024 11:25	4,800	136.5	29.5	Yearling
MCK	Cougar Tailrace - USGS	3/11/2024 15:10	2,081	129.5	25.4	Yearling
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	5/22/2023 13:00	5,171	58.5		Fry
SST	Green Peter Head of Reservoir - Middle Santiam Arm	5/22/2023 20:30	4,961	56.2		Fry
SST	Foster Tailrace - South Santiam Hatchery	8/23/2023 16:30	1,030	115.7	18.2	Subyearling
SST	Foster Reservoir Head of Reservoir - Cascadia Covered Bridge	8/24/2023 10:00	2,059	105.6	14.5	Subyearling
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	9/20/2023 14:00	2,518	113.5	19.5	Subyearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	9/21/2023 13:40	2,508	117.1	20.7	Subyearling
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	10/3/2023 12:45	2,502	122.8	25.1	Subyearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	10/4/2023 14:40	2,516	119.6	23.8	Subyearling
SST	Green Peter Tailrace - Sunnyside Boat Ramp	10/9/2023 16:05	4,002	125.9	26.4	Subyearling

SST	Foster Reservoir Head of Reservoir - Cascadia Covered Bridge	10/10/2023 14:20	5,000	125.8	24.5	Subyearling
SST	Foster Tailrace - South Santiam Hatchery	10/11/2023 15:20	4,000	135.2	31.8	Subyearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	2/21/2024 12:00	1,004	164.4	51.6	Yearling
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	2/22/2024 11:45	1,014	150.8	40.2	Yearling
SST	Green Peter Mid Reservoir - Thistle Boat Ramp	2/22/2024 17:45	2,006	153.8	42.9	Yearling
SST	Green Peter Mid Reservoir - Thistle Boat Ramp	2/23/2024 10:40	2,003	159.4	46.5	Yearling
SST	Green Peter Tailrace - Sunnyside Boat Ramp	2/23/2024 14:15	1,014	163.4	50.1	Yearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	3/6/2024 15:30	2,506	50.1	1.4	Fry
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	3/6/2024 17:30	2,500	51.3	1.4	Fry
SST	Foster Reservoir Head of Reservoir - Cascadia Covered Bridge	3/26/2024 13:30	2,997	156.3	44.1	Yearling
SST	Foster Reservoir Head of Reservoir - Cascadia Covered Bridge	3/27/2024 11:00	3,001	145.3	38	Yearling
SST	Foster Tailrace - South Santiam Hatchery	3/28/2024 13:30	3,005	154.6	43.8	Yearling
SST	Foster Tailrace - South Santiam Hatchery	4/1/2024 12:55	2,991	156	44.3	Yearling
SST	Foster Reservoir Head of Reservoir - Cascadia Covered Bridge	4/4/2024 13:15	1,908	145.4	37.2	Yearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	4/12/2024 11:50	2,350	52.4	1.5	Fry
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	4/12/2024 13:15	2,500	54.9	1.7	Fry
SST	Foster Reservoir Head of Reservoir - Cascadia Covered Bridge	8/27/2024 13:40	2,000	54.9		Fry
SST	Foster Tailrace - South Santiam Hatchery	8/27/2024 18:55	992	54.9		Fry
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	9/9/2024 17:55	2,488	120.5	18.4	Subyearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	9/10/2024 16:35	2,493	122.4	19.7	Subyearling
NST	Marion Forks Hatchery Escape	6/16/2023 12:00	1,247	66.5	3.4	Fry
NST	Detroit Head of Reservoir - Breitenbush River	7/13/2023 8:45	7,000	66.8	3.6	Fry
NST	Detroit Head of Reservoir - North Santiam River	7/13/2023 11:35	6,638	67	3.6	Fry
NST	Detroit Head of Reservoir - Breitenbush River	9/26/2023 10:45	5,002	106.5	11.8	Subyearling
NST	Detroit Head of Reservoir - North Santiam River	9/26/2023 16:00	4,997	102.6	10.4	Subyearling
NST	Big Cliff Tailrace - Packsaddle Boat Ramp	9/27/2023 15:30	8,009	106.5	11.9	Subyearling
NST	Big Cliff Tailrace - Packsaddle Boat Ramp	11/20/2023 16:50	5,998	112.4	16.6	Subyearling
NST	Detroit Head of Reservoir - North Santiam River	3/20/2024 14:45	2,000	128.4	25.5	Yearling

NST	Detroit Head of Reservoir - Breitenbush River	3/21/2024 11:15	2,000	124	21.3	Yearling
NST	Big Cliff Tailrace - Packsaddle Boat Ramp	3/21/2024 16:30	1,998	129.4	24.1	Yearling
NST	Detroit Head of Reservoir - North Santiam River	5/20/2024 12:00	7,533	47	1.2	Fry
NST	Detroit Head of Reservoir - Breitenbush River	5/20/2024 18:00	7,494	47	1.2	Fry

Table 4. PIT tag recovery summary at established interrogation sites, rotary screw traps (RST), and reservoir sampling locations. Recoveries during screw trap efficiency testing that were recaptured during the test (i.e., within one week of release) are not included in this table.

Observation Location	Capture Method	Total	Reporting Period
Cougar Dam	Screw Trap	2,226	0
Fall Creek Dam	Screw Trap	647	0
Hills Creek Dam	Screw Trap	222	0
Lookout Point Dam	Screw Trap	208	0
TWX - Estuary Towed Array (Exp.)	Towed Array	208	0
PD6 - Columbia River Estuary rkm 68	Instream Array	203	0
LD3 - Lebanon Dam Diversion Bypass	Instream Array	152	1
PD5 - Columbia River Estuary rkm 62	Instream Array	141	0
MCKESF - South Fork McKenzie River	Screw Trap	134	0
GPD - Green Peter Dam	Screw Trap	118	0
LD1 - Lebanon Dam South Ladder	Instream Array	116	1
Dexter Dam	Screw Trap	93	0
HCRREG – Hills Creek Regulating Outlet Channel	Screw Trap	87	0
Big Cliff Dam	Screw Trap	85	0
PD7 - Columbia River Estuary rkm 70	Instream Array	84	0
LD2 - Lebanon Dam North Ladder	Instream Array	82	0
PD8 - Columbia River Estuary rkm 82	Instream Array	62	0
LD4 - Lebanon Dam Spillway	Instream Array	52	0

MSANTR - Middle Santiam River, Oregon	Screw Trap	50	0
WILRMF - Middle Fork Willamette River	Screw Trap	42	0
SID - Sauvie Island Dairy Creek	Instream Array	26	0
SSANTR - South Santiam River, Oregon	Screw Trap	26	0
NSANTR - North Santiam River, Oregon	Bypass Sub-Sample	25	0
Lookout Point Dam	Research Net	6	0
MSANTR - Middle Santiam River, Oregon	Research Net	5	0
NSANTR - North Santiam River, Oregon	Screw Trap	3	0
WILRMF - Middle Fork Willamette River	Research Net	3	0
QUARTC - Quartzville Creek, tributary to Middle Santiam River	Research Net	2	0
Lookout Point Dam	Research Net	1	0
ML1 - Lower Mill Creek (MILL4C)	Instream Array	1	0

RESERVOIR DISTRIBUTION SUMMARY

During the reporting period, reservoir sampling was conducted in the offshore environments of Lookout Point and Green Peter reservoirs using small mesh gill nets (3/8 – 1 inch) (Table 5). Lookout Point Reservoir was sampled during the week of September 2, 2024 and Green Peter was sampled during the week of September 9, 2024.

Sampling effort on Lookout Point Reservoir during the week of September 2, 2024 was restricted to the lower zone due to the thermocline being down at 30 meters and shallow water depths in the upper and middle zones. Sampling consisted of two days of 24-hour trap sets, requiring three days on the water. Gill nets were set at stations in zone A1 at a depth of 30 – 32 meters. Over three days of sampling (n=6 gill net sets), three hatchery origin subyearling Chinook salmon, 194 smallmouth bass, three largemouth bass, 36 black crappie, and 1,387 white crappie were captured (Tables 7–9).. None of the hatchery Chinook salmon encountered had PIT tags.

During the week of September 9, 2024, sampling at Green Peter Reservoir involved three days of 24-hour gill net sets, requiring four days on the water. Each day, eight gill nets were deployed along the reservoir’s longitudinal axis at designated fixed sites (Lower: A1, A2; Middle: A3, A4; Upper: A5, A6; Quartzville: Q1). To increase sample size, a rover net was also set at a different fixed site each day, bringing the total to nine nets per day. Nets were set at 15m depth to target 15C on the thermal profile (Figure 2). Across three days (27 net sets), the catch included three hatchery subyearling Chinook salmon, 23 natural origin juvenile Chinook salmon, 84 hatchery origin *Oncorhynchus mykiss*, 10 natural origin *O. mykiss*, 19 bluegill, 12 yellow bullhead, 17 smallmouth bass, and 3 largemouth bass (Tables 7–9).

No target species were tagged during this reporting period as surface temperatures at capture locations exceeded 17C, the upper limit for tagging as directed by our sampling permit.

Table 5. Start and end date by statistical week.

Week	Start	End	Reservoir	Net Type	Effort (# sets)	Effort (hrs)
6	2/5/2024	2/8/2024	Lookout	Box minnow	21	501
6	2/5/2024	2/8/2024	Lookout	Oneida	7	166
7	2/12/2024	2/15/2024	Green	Box minnow	30	710
7	2/12/2024	2/15/2024	Green	Oneida	12	283
8	2/19/2024	2/22/2024	Lookout	Box minnow	27	608
8	2/19/2024	2/22/2024	Lookout	Oneida	9	203
9	2/26/2024	3/4/2024	Green	Box minnow	30	1680
9	2/26/2024	3/4/2024	Green	Oneida	12	670
10	3/5/2024	3/7/2024	Lookout	Box minnow	18	422
10	3/5/2024	3/7/2024	Lookout	Oneida	6	138
11	3/11/2024	3/14/2024	Green	Box minnow	30	715
11	3/11/2024	3/14/2024	Green	Oneida	12	283
12	3/18/2024	3/21/2024	Lookout	Box minnow	27	621

Week	Start	End	Reservoir	Net Type	Effort (# sets)	Effort (hrs)
12	3/18/2024	3/21/2024	Lookout	Oneida	9	206
13	3/25/2024	3/28/2024	Green	Box minnow	30	700
13	3/25/2024	3/28/2024	Green	Oneida	12	280
14	4/1/2024	4/4/2024	Lookout	box minnow	27	629
14	4/1/2024	4/4/2024	Lookout	oneida	9	208
15	4/8/2024	4/11/2024	Green	box minnow	30	711
15	4/8/2024	4/11/2024	Green	oneida	12	283
16	4/15/2024	4/18/2024	Lookout	box minnow	27	632
16	4/15/2024	4/18/2024	Lookout	oneida	9	209
17	4/22/2024	4/25/2024	Green	box minnow	30	708
17	4/22/2024	4/25/2024	Green	oneida	12	280
18	4/29/2024	5/2/2024	Lookout	box minnow	27	657
18	4/29/2024	5/2/2024	Lookout	oneida	9	217
19	5/8/2024	5/10/2024	Green	box minnow	20	465
19	5/8/2024	5/10/2024	Green	oneida	8	188
20	5/13/2024	5/16/2024	Lookout	box minnow	27	636
20	5/13/2024	5/16/2024	Lookout	oneida	9	208
21	5/20/2024	5/23/2024	Green	box minnow	30	707
21	5/20/2024	5/23/2024	Green	oneida	12	283
22	5/27/2024	5/30/2024	Lookout	box minnow	27	558
22	5/27/2024	5/30/2024	Lookout	oneida	9	207
23	6/3/2024	6/6/2024	Green	box minnow	30	689
23	6/3/2024	6/6/2024	Green	oneida	12	277
24	6/10/2024	6/13/2024	Lookout	box minnow	27	619
24	6/10/2024	6/13/2024	Lookout	oneida	9	209
25	6/17/2024	6/20/2024	Green	gill net 80'	26	620
26	6/24/2024	6/27/2024	Lookout	gill net 80'	24	552
27	7/1/2024	7/4/2024	Green	gill net 80'	27	632
28	7/9/2024	7/12/2024	Lookout	gill net 80'	24	547
29	7/15/2024	7/18/2024	Green	gill net 80'	27	648
30	7/22/2024	7/25/2024	Lookout	gill net 80'	24	546
30	7/24/2024	7/25/2024	Green	gill net 80'	8	172
31	7/29/2024	7/31/2024	Lookout	gill net 80'	16	495
31	7/30/2024	7/31/2024	Green	gill net 80'	9	238
32	8/5/2024	8/11/2024	Lookout	gill net 80'	7	106
32	8/5/2024	8/11/2024	Green	gill net 80'	26	604
33	8/12/2024	8/18/2024	Lookout	gill net 80'	10	230
33	8/12/2024	8/18/2024	Green	gill net 80'	27	637
34	8/19/2024	8/25/2024	Lookout	gill net 80'	9	211
34	8/19/2024	8/25/2024	Green	gill net 80'	27	649
35	8/26/2024	9/1/2024	Green	gill net 80'	26	626

Week	Start	End	Reservoir	Net Type	Effort (# sets)	Effort (hrs)
36	9/2/2024	9/8/2024	Lookout	gill net 80'	6	144
37	9/9/2024	9/15/2024	Green	gill net 80'	27	627

Table 6. Mean surface water temperature measure during each trap net deployment.

Week	Reservoir	Mean Water Surface Temperature °C
6	Lookout Point	8.0
7	Green Peter	8.2
8	Lookout Point	8.9
9	Green Peter	8.4
10	Lookout Point	8.3
11	Green Peter	8.5
12	Lookout Point	9.6
13	Green Peter	9.7
14	Lookout Point	10.6
15	Green Peter	12.2
16	Lookout Point	11.7
17	Green Peter	13.6
18	Lookout Point	13.6
19	Green Peter	15.1
20	Lookout Point	16.1
21	Green Peter	16.8
22	Lookout Point	17.4
23	Green Peter	18.1
24	Lookout Point	20.3
25	Green Peter	19.5
26	Lookout Point	21.1
27	Green Peter	21.9
28	Lookout Point	24.9
29	Green Peter	25.3
30	Lookout Point	24.4
30	Green Peter	24
31	Lookout Point	23.9
31	Green Peter	24.3
32	Lookout Point	23.1
32	Green Peter	24.9
33	Lookout Point	23.2
33	Green Peter	23.9
34	Lookout Point	21.6

Week	Reservoir	Mean Water Surface Temperature °C
34	Green Peter	23.2
35	Green Peter	22.3
36	Lookout Point	20.7
37	Green Peter	21.7

Table 7. Summary of total catch by reservoir. CHS – Chinook salmon, RBT – *O. mykiss*, CUT - Cutthroat trout, NPM - Northern Pikeminnow, SCU – Sculpin, BLG - Bluegill, LWB – Western Brook Lamprey, BBH- Brown bullhead, YBH – Yellow bullhead, LSS - Large-scale sucker, SMB - Smallmouth Bass, LMB – largemouth bass, BLC – black crappie, WHC – white crappie, WAL – walleye, UNID – unidentified. *Unidentified larval centrarchid.

Week	Reservoir	CHS	RBT	CUT	NPM	SCU	BLG	LWB	BBH	YBH	LSS	SMB	LMB	BLC	WHC	WAL	UNID
6	Lookout Point	4	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0
7	Green Peter	7	6	2	1	0	8	1	0	0	0	0	0	0	0	0	0
8	Lookout Point	6	9	1	1	0	1	0	0	0	0	0	0	0	0	0	0
9	Green Peter	12	3	0	0	0	11	0	0	0	0	0	0	0	0	0	0
10	Lookout Point	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11	Green Peter	19	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0
12	Lookout Point	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
13	Green Peter	1	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0
14	Lookout Point	1	7	0	3	0	0	0	9	0	3	0	0	0	0	0	0
15	Green Peter	9	2	4	0	0	5	0	0	0	0	2	0	0	0	0	0
16	Lookout Point	2	2	2	0	0	0	0	0	0	1	0	0	0	0	0	0
17	Green Peter	0	1	2	3	0	6	0	0	0	0	0	0	0	0	0	0
18	Lookout Point	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0
19	Green Peter	1	1	0	3	0	5	0	0	0	0	0	0	0	0	0	0
20	Lookout Point	2	6	0	5	0	2	0	0	0	0	0	0	0	0	0	0
21	Green Peter	3	0	1	17	0	8	0	0	0	0	0	0	0	0	0	0
22	Lookout Point	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0
23	Green Peter	6	0	0	3	0	52	0	0	0	0	1	0	0	0	0	0
24	Lookout Point	0	2	0	0	264	3	0	0	0	0	1	0	0	0	0	116*
25	Green Peter	19	55	0	2	0	0	0	0	0	0	0	0	0	0	0	0
26	Lookout Point	8	2	0	0	0	0	0	0	0	1	2	0	4	0	0	0
27	Green Peter	1	21	0	0	0	0	0	0	0	0	1	0	0	0	0	0
28	Lookout Point	14	8	0	0	0	0	0	0	0	0	2	1	1	2	6	0
29	Green Peter	1	29	0	0	0	0	0	0	1	0	2	0	0	0	0	0

Week	Reservoir	CHS	RBT	CUT	NPM	SCU	BLG	LWB	BBH	YBH	LSS	SMB	LMB	BLC	WHC	WAL	UNID
30	Lookout Point	8	14	0	15	0	0	0	0	0	1	92	0	0	275	0	0
30	Green Peter	2	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Lookout Point	9	20	0	4	0	0	0	1	0	1	227	2	296	608	40	0
31	Green Peter	0	21	0	0	0	0	0	0	0	0	2	0	0	0	0	0
32	Lookout Point	7	2	0	0	0	0	0	0	0	0	514	5	0	546	0	0
32	Green Peter	3	98	0	3	0	2	0	0	1	0	9	0	0	0	0	0
33	Lookout Point	14	12	0	0	0	0	0	0	0	0	880	3	608	2875	0	0
33	Green Peter	24	90	0	0	0	1	0	0	1	1	7	0	0	0	0	0
34	Lookout Point	14	8	0	0	0	0	0	0	0	0	232	1	97	1508	0	0
34	Green Peter	4	61	0	1	0	6	0	0	4	0	4	0	0	0	0	0
35	Green Peter	10	62	0	2	0	5	0	0	5	0	25	0	0	0	0	0
36	Lookout Point	3	0	0	0	0	0	0	0	0	0	194	3	36	1387	0	0
37	Green Peter	26	94	0	0	0	19	0	0	12	0	17	3	0	0	0	0

Table 8. Catch summary of target species 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	yearling	1	1	0	0
6	Lookout Point	CHS-AD	yearling	0	1	0	0
6	Lookout Point	CHS-natural	yearling	0	2	1	0
7	Green Peter	CHS-natural	fry	1	5	1	0
7	Green Peter	RBT-natural	adult	1	0	0	0
7	Green Peter	RBT-natural	yearling	1	0	0	1
7	Green Peter	RBT-natural	fry	0	0	3	0
8	Lookout Point	RBT-natural	yearling	2	4	3	0
8	Lookout Point	CHS-AD	yearling	0	1	0	0
8	Lookout Point	CHS-natural	yearling	0	1	4	0
9	Green Peter	CHS-AD	yearling	1	0	0	1
9	Green Peter	CHS-natural	fry	0	2	5	1
9	Green Peter	CHS-natural	yearling	0	1	1	0
9	Green Peter	RBT-natural	fry	0	0	1	1
9	Green Peter	RBT-natural	yearling	0	0	1	0
10	Lookout Point	RBT-natural	yearling	0	1	0	0
10	Lookout Point	CHS-natural	fry	0	0	1	0
10	Lookout Point	RBT-natural	Adult	0	0	1	0
11	Green Peter	CHS-AD	fry	1	3	11	3
11	Green Peter	CHS-natural	fry	0	0	1	0
12	Lookout Point	CHS-natural	fry	0	1	0	0
12	Lookout Point	CHS-natural	yearling	0	1	0	0
12	Lookout Point	RBT-natural	yearling	0	1	1	0
13	Green Peter	RBT-natural	yearling	1	0	0	0
13	Green Peter	CHS-AD	parr	0	0	0	1
14	Lookout Point	RBT-natural	yearling	4	1	2	0
14	Lookout Point	CHS-natural	yearling	0	0	1	0
15	Green Peter	CHS-natural	fry	0	0	0	3
15	Green Peter	CHS-natural	parr	0	1	5	0
15	Green Peter	RBT-AD	adult	0	1	0	0
15	Green Peter	RBT-natural	yearling	0	0	1	0
16	Lookout Point	CHS-AD	yearling	1	0	0	0
16	Lookout Point	CHS-natural	parr	0	1	0	0
16	Lookout Point	RBT-natural	yearling	0	1	1	0
17	Green Peter	RBT-AD	adult	1	0	0	0
18	Lookout Point	RBT-natural	yearling	1	1	3	0
19	Green Peter	CHS-natural	parr	0	0	0	1

Week	Reservoir	Species	Lifestage	LOWER	MIDDLE	UPPER	QUARTZVILLE
19	Green Peter	RBT-natural	yearling	0	0	0	1
20	Lookout Point	CHS-natural	fry	0	0	2	0
20	Lookout Point	RBT-AD	yearling	0	0	1	0
20	Lookout Point	RBT-natural	yearling	0	0	5	0
21	Green Peter	CHS-natural	subyearling	0	1	0	1
21	Green Peter	CHS-AD	subyearling	0	0	1	0
22	Lookout Point	RBT-natural	yearling	0	1	2	0
23	Green Peter	CHS-natural	subyearling	1	0	1	0
23	Green Peter	CHS-natural	yearling	1	0	0	0
23	Green Peter	CHS-AD	subyearling	0	0	3	0
24	Lookout Point	RBT-natural	yearling	1	0	1	0
25	Green Peter	CHS-AD	subyearling	1	0	0	0
25	Green Peter	CHS-natural	subyearling	4	4	7	1
25	Green Peter	CHS-natural	yearling	0	0	2	0
25	Green Peter	RBT-AD	adult	7	11	33	0
25	Green Peter	RBT-natural	yearling	1	0	2	0
25	Green Peter	RBT-natural	adult	0	0	1	0
26	Lookout Point	CHS-AD	subyearling	1	0	0	0
26	Lookout Point	CHS-natural	subyearling	7	0	0	0
26	Lookout Point	RBT-AD	adult	1	0	0	0
26	Lookout Point	RBT-natural	adult	0	0	1	0
27	Green Peter	RBT-AD	adult	7	2	12	0
27	Green Peter	CHS-natural	subyearling	0	0	1	0
28	Lookout Point	CHS-AD	subyearling	4	0	5	0
28	Lookout Point	CHS-natural	subyearling	1	1	2	0
28	Lookout Point	CHS-natural	yearling	1	0	0	0
28	Lookout Point	RBT-AD	adult	1	0	0	0
28	Lookout Point	RBT-natural	adult	4	0	2	0
28	Lookout Point	RBT-natural	yearling	0	0	1	0
29	Green Peter	RBT-AD	adult	7	4	15	0
29	Green Peter	RBT-natural	yearling	1	1	0	1
29	Green Peter	CHS-natural	subyearling	0	0	0	1
30	Lookout Point	CHS-AD	subyearling	6	0	0	0
30	Lookout Point	CHS-natural	subyearling	1	0	0	0
30	Lookout Point	CHS-natural	yearling	1	0	0	0
30	Lookout Point	RBT-AD	adult	4	1	1	0
30	Lookout Point	RBT-natural	adult	5	1	1	0
30	Lookout Point	RBT-natural	yearling	0	0	1	0
30	Green Peter	RBT-AD	adult	3	1	11	3
30	Green Peter	RBT-natural	yearling	1	0	0	0
30	Green Peter	CHS-natural	subyearling	0	2	0	0
30	Green Peter	RBT-natural	adult	0	0	1	0

Week	Reservoir	Species	Lifestage	LOWER	MIDDLE	UPPER	QUARTZVILLE
31	Lookout Point	CHS-AD	subyearling	2	0	1	0
31	Lookout Point	CHS-AD	yearling	1	0	0	0
31	Lookout Point	CHS-natural	subyearling	2	1	0	0
31	Lookout Point	CHS-natural	yearling	2	0	0	0
31	Lookout Point	RBT-AD	adult	1	0	0	0
31	Lookout Point	RBT-natural	adult	18	1	0	0
31	Green Peter	RBT-AD	adult	16	1	2	0
31	Green Peter	RBT-natural	adult	1	0	0	0
31	Green Peter	RBT-natural	yearling	1	0	0	0
32	Lookout Point	CHS-AD	subyearling	1	6	0	0
32	Lookout Point	RBT-natural	adult	2	0	0	0
32	Green Peter	CHS-AD	subyearling	2	0	0	0
32	Green Peter	CHS-natural	subyearling	1	0	0	0
32	Green Peter	RBT-AD	adult	44	13	31	1
32	Green Peter	RBT-AD	yearling	1	0	0	0
32	Green Peter	RBT-natural	adult	4	0	1	0
32	Green Peter	RBT-natural	yearling	3	0	0	0
33	Lookout Point	CHS-AD	subyearling	11	0	0	0
33	Lookout Point	CHS-natural	subyearling	3	0	0	0
33	Lookout Point	RBT-AD	adult	2	0	0	0
33	Lookout Point	RBT-natural	adult	10	0	0	0
33	Green Peter	CHS-AD	subyearling	1	0	0	0
33	Green Peter	CHS-natural	subyearling	7	11	2	3
33	Green Peter	RBT-AD	NA	37	15	19	6
33	Green Peter	RBT-natural	adult	9	1	0	0
33	Green Peter	RBT-natural	yearling	3	0	0	0
34	Lookout Point	CHS-AD	subyearling	10	0	0	0
34	Lookout Point	CHS-AD	yearling	1	0	0	0
34	Lookout Point	CHS-natural	subyearling	3	0	0	0
34	Lookout Point	RBT-AD	adult	2	0	0	0
34	Lookout Point	RBT-natural	adult	5	0	0	0
34	Lookout Point	RBT-natural	yearling	1	0	0	0
34	Green Peter	RBT-AD	adult	32	17	6	4
34	Green Peter	RBT-natural	adult	1	1	0	0
34	Green Peter	CHS-AD	yearling	0	1	0	0
34	Green Peter	CHS-natural	subyearling	0	1	1	1
35	Green Peter	CHS-AD	subyearling	1	2	0	0
35	Green Peter	CHS-natural	subyearling	2	4	1	0
35	Green Peter	RBT-AD	adult	26	17	7	8
35	Green Peter	RBT-natural	adult	1	2	0	0
35	Green Peter	RBT-natural	yearling	1	0	0	0
36	Lookout Point	CHS-AD	subyearling	3	0	0	0

Week	Reservoir	Species	Lifestage	LOWER	MIDDLE	UPPER	QUARTZVILLE
37	Green Peter	CHS-AD	subyearling	2	0	1	0
37	Green Peter	CHS-natural	subyearling	14	1	2	5
37	Green Peter	CHS-natural	yearling	1	0	0	0
37	Green Peter	RBT-AD	Adult	30	38	7	8
37	Green Peter	RBT-natural	adult	5	5	0	0

Table 9. Summary of target species lengths, tags implanted and recaptures. LOP – Lookout Point Reservoir, GPR – Green Peter Reservoir.

Week	Reservoir	Species	Lifestage	Catch	length_min	length_mean	length_max	# VIE tagged	# PIT tagged	# recap
6	LOP	CHS-AD	yearling	1	117	117	117	0	0	1
6	LOP	CHS-natural	yearling	3	80	84	88	0	3	0
6	LOP	RBT-natural	yearling	2	79	88	97	0	1	0
7	GPR	CHS-natural	fry	7	37	40.6	46	7	0	0
7	GPR	RBT-natural	adult	1	305	305	305	0	1	0
7	GPR	RBT-natural	fry	3	35	36.7	38	3	0	0
7	GPR	RBT-natural	yearling	2	149	168.5	188	0	2	0
8	LOP	CHS-AD	yearling	1	174	174	174	0	0	1
8	LOP	CHS-natural	yearling	5	73	87.6	101	0	4	0
8	LOP	RBT-natural	yearling	9	103	153.2	206	0	9	0
9	GPR	CHS-AD	yearling	2	83	89	95	0	1*	2
9	GPR	CHS-natural	fry/parr	8	36	41.6	51	8	0	0
9	GPR	CHS-natural	yearling	2	117	118.5	120	0	2	0
9	GPR	RBT-natural	fry	2	34	35	36	1	0	0
9	GPR	RBT-natural	yearling	1	169	169	169	0	1	0
10	LOP	CHS-natural	fry/parr	1	47	47.0	47	1	0	0
10	LOP	RBT-natural	adult	1	296	296.0	296	0	1	0
10	LOP	RBT-natural	yearling	1	108	108.0	108	0	1	0
11	GPR	CHS-AD	fry/parr	1	56	56.0	56	0	0	1
11	GPR	CHS-natural	fry/parr	18	34	41.7	58	11	4	0
12	LOP	CHS-natural	fry	1	38	38	38	1	0	0
12	LOP	CHS-natural	yearling	1	97	97	97	0	1	0
12	LOP	RBT-natural	yearling	2**	107	126.5	146	0	0	0
13	GPR	CHS-AD	fry/parr	1	58	58	58	0	0	1
13	GPR	RBT-natural	yearling	1**	157	157	157	0	0	0
14	LOP	CHS-natural	yearling	1	93	93	93	0	1	0
14	LOP	RBT-natural	yearling	7**	96	148	174	0	0	0
15	GPR	CHS-natural	fry	3	32	37.7	42	2	0	0
15	GPR	CHS-natural	parr	6	51	59.8	74	0	6	0
15	GPR	RBT-AD	adult	1	229	229	229	0	0	0

Week	Reservoir	Species	Lifestage	Catch	length_min	length_mean	length_max	# VIE tagged	# PIT tagged	# recap
15	GPR	RBT-natural	yearling	1**	149	149	149	0	0	0
16	LOP	CHS-AD	yearling	1	119	119	119	0	0	1
16	LOP	CHS-natural	parr	1	73	73	73	0	1	0
16	LOP	RBT-natural	yearling	2	145	165.5	186	0	1	0
17	GPR	RBT-AD	adult	1	290	290	290	0	0	0
18	LOP	RBT-natural	yearling	5	135	143.8	157	1	5	0
19	GPR	CHS-natural	parr	1	50	50	50	0	1	0
19	GPR	RBT-natural	yearling	1	116	116	116	0	1	0
20	LOP	CHS-natural	fry	2	43	43.5	44	0	1	0
20	LOP	RBT-AD	yearling	1	169	169	169	0	1	0
20	LOP	RBT-natural	yearling	5	96	120	138	0	4	0
21	GPR	CHS-AD	subyear	1	140	140	140	0	0	1
21	GPR	CHS-natural	subyear	2	65	84	103	0	0	0
22	LOP	RBT-natural	yearling	3	130	137.3	146	0	0	0
23	GPR	CHS-AD	subyear	3	96	104	113	0	0	2
23	GPR	CHS-natural	subyear	2	85	86.5	88	0	0	0
23	GPR	CHS-natural	yearling	1	169	169	169	0	0	0
24	LOP	RBT-natural	yearling	2	131	136.5	142	0	0	0
25	GPR	CHS-AD	subyear	1	134	134	134	0	0	1
25	GPR	CHS-natural	subyear	16	84	106.2	135	0	0	0
25	GPR	CHS-natural	yearling	2	157	172.5	188	0	0	0
25	GPR	RBT-AD	adult	51	213	269.2	320	0	0	0
25	GPR	RBT-natural	adult	1	205	205	205	0	0	0
25	GPR	RBT-natural	yearling	3	158	176.7	190	0	0	0
26	LOP	CHS-AD	subyear	1	103	103	103	0	0	0
26	LOP	CHS-natural	subyear	7	81	112.4	134	0	0	0
26	LOP	RBT-AD	adult	1	320	320	320	0	0	0
26	LOP	RBT-natural	adult	1	255	255	255	0	0	0
27	GPR	CHS-natural	subyear	1	100	100	100	0	0	0
27	GPR	RBT-AD	adult	21	224	287.3	315	0	0	0
28	LOP	CHS-AD	subyear	9	86	107.6	141	0	0	0
28	LOP	CHS-natural	subyear	4	102	123.8	149	0	0	0
28	LOP	CHS-natural	yearling	1	249	249	249	0	0	0
28	LOP	RBT-AD	adult	1	304	304	304	0	0	0
28	LOP	RBT-natural	adult	6	203	252.7	312	0	0	0
28	LOP	RBT-natural	yearling	1	169	169	169	0	0	0
29	GPR	CHS-natural	subyear	1	98	98	98	0	0	0
29	GPR	RBT-AD	adult	26	257	297	329	0	0	0
29	GPR	RBT-natural	yearling	3	166	174.3	187	0	0	0
30	LOP	CHS-AD	subyear	6	116	132.5	153	0	0	0
30	LOP	CHS-natural	subyear	1	141	141	141	0	0	0

Week	Reservoir	Species	Lifestage	Catch	length_min	length_mean	length_max	# VIE tagged	# PIT tagged	# recap
30	LOP	CHS-natural	yearling	1	150	150	150	0	0	0
30	LOP	RBT-AD	adult	6	265	325.3	375	0	0	0
30	LOP	RBT-natural	adult	7	211	318.3	485	0	0	0
30	LOP	RBT-natural	yearling	1	158	158	158	0	0	0
30	GPR	CHS-natural	subyear	2	146	159	172	0	0	0
30	GPR	RBT-AD	adult	18	277	299.2	330	0	0	0
30	GPR	RBT-natural	adult	1	264	264	264	0	0	0
30	GPR	RBT-natural	yearling	1	197	197	197	0	0	0
31	LOP	CHS-AD	subyear	3	101	123	143	0	0	0
31	LOP	CHS-AD	yearling	1	214	214	214	0	0	0
31	LOP	CHS-natural	subyear	3	125	136	148	0	0	0
31	LOP	CHS-natural	yearling	2	235	252.5	270	0	0	0
31	LOP	RBT-AD	adult	1	374	374	374	0	0	0
31	LOP	RBT-natural	adult	19	207	273.8	370	0	0	0
31	GPR	RBT-AD	adult	19	268	301.1	334	0	0	0
31	GPR	RBT-natural	adult	1	263	263	263	0	0	0
31	GPR	RBT-natural	yearling	1	176	176	176	0	0	0
32	LOP	CHS-AD	subyear	7	136	142	156	0	0	0
32	LOP	RBT-natural	adult	2	243	244	245	0	0	0
32	GPR	CHS-AD	subyear	2	185	190	195	0	0	2
32	GPR	CHS-natural	subyear	1	185	185	185	0	0	0
32	GPR	RBT-AD	adult	89	270	305.1	335	0	0	0
32	GPR	RBT-AD	yearling	1	175	175	175	0	0	0
32	GPR	RBT-natural	adult	5	225	256.4	315	0	0	0
32	GPR	RBT-natural	yearling	3	201	213.7	225	0	0	0
33	LOP	CHS-AD	subyear	11	133	155.8	176	0	0	0
33	LOP	CHS-natural	subyear	3	141	152.7	166	0	0	0
33	LOP	RBT-AD	adult	2	320	335	350	0	0	0
33	LOP	RBT-natural	adult	10	218	279.1	365	0	0	0
33	GPR	CHS-AD	subyear	1	194	194	194	0	0	1
33	GPR	CHS-natural	subyear	23	162	189.5	208	0	0	1
33	GPR	RBT-AD	NA	77	262	307.8	343	0	0	0
33	GPR	RBT-natural	adult	10	232	270.4	321	0	0	0
33	GPR	RBT-natural	yearling	3	142	174	196	0	0	0
34	LOP	CHS-AD	subyear	10	144	159.8	182	0	0	0
34	LOP	CHS-AD	yearling	1	220	220	220	0	0	0
34	LOP	CHS-natural	subyear	3	117	152.3	180	0	0	1
34	LOP	RBT-AD	adult	2	370	402	434	0	0	0
34	LOP	RBT-natural	adult	5	204	236.4	304	0	0	0
34	LOP	RBT-natural	yearling	1	198	198	198	0	0	0
34	GPR	CHS-AD	yearling	1	223	223	223	0	0	0

Week	Reservoir	Species	Lifestage	Catch	length_min	length_mean	length_max	# VIE tagged	# PIT tagged	# recap
34	GPR	CHS-natural	subyear	3	155	174.3	188	0	0	0
34	GPR	RBT-AD	Adult	59	269	308.8	349	0	0	0
34	GPR	RBT-natural	adult	2	243	246.5	250	0	0	0
35	GPR	CHS-AD	subyear	3	183	192.3	202	0	0	1
35	GPR	CHS-natural	subyear	7	193	200	206	0	0	0
35	GPR	RBT-AD	Adult	58	270	311.5	354	0	0	0
35	GPR	RBT-natural	adult	3	247	254.7	268	0	0	0
35	GPR	RBT-natural	yearling	1	245	245	245	0	0	0
36	LOP	CHS-AD	subyear	3	139	149.7	166	0	0	0
37	GPR	CHS-AD	subyear	3	112	175.7	220	0	0	1
37	GPR	CHS-natural	subyear	22	200	218.2	241	0	0	0
37	GPR	CHS-natural	yearling	1	270	270	270	0	0	0
37	GPR	RBT-AD	Adult	83	275	318	355	0	0	0
37	GPR	RBT-AD	Juvenile	1	154	154	154	0	0	0
37	GPR	RBT-natural	adult	10	234	269.8	337	0	0	0

*One recaptured fish was inadvertently tagged with a 2nd PIT tag. ** Not tagged, awaiting permit modification to allow for tagging RBT (modification has since been granted effective 4/16/2024).

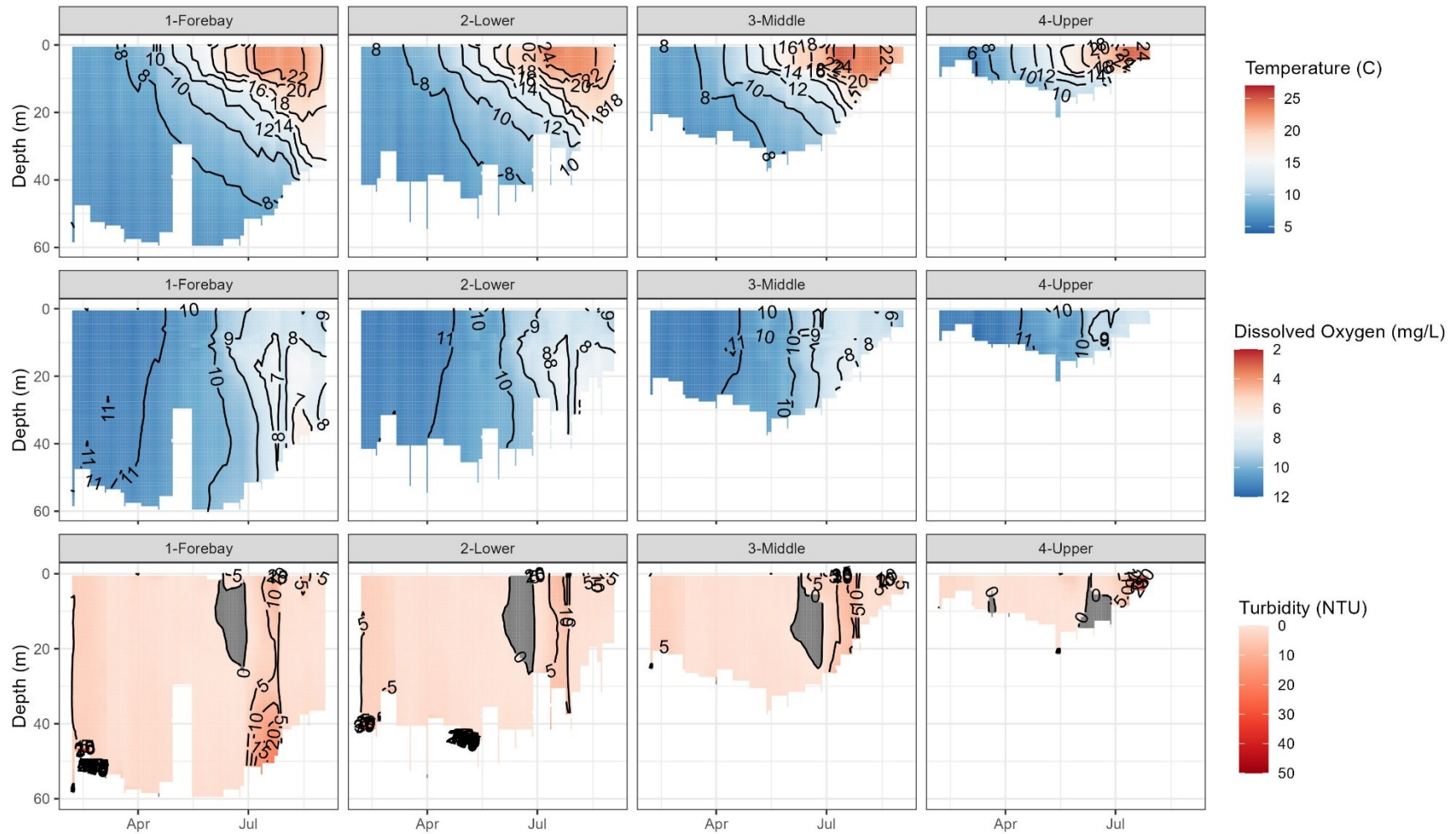


Figure 1. LOP 2024 limnology data. Note that turbidity data in gray are suspect due to a sensor malfunction/calibration issue. Readings in gray were slightly negative (erroneous) but secchi measurements taken concurrently support that turbidity was near zero.

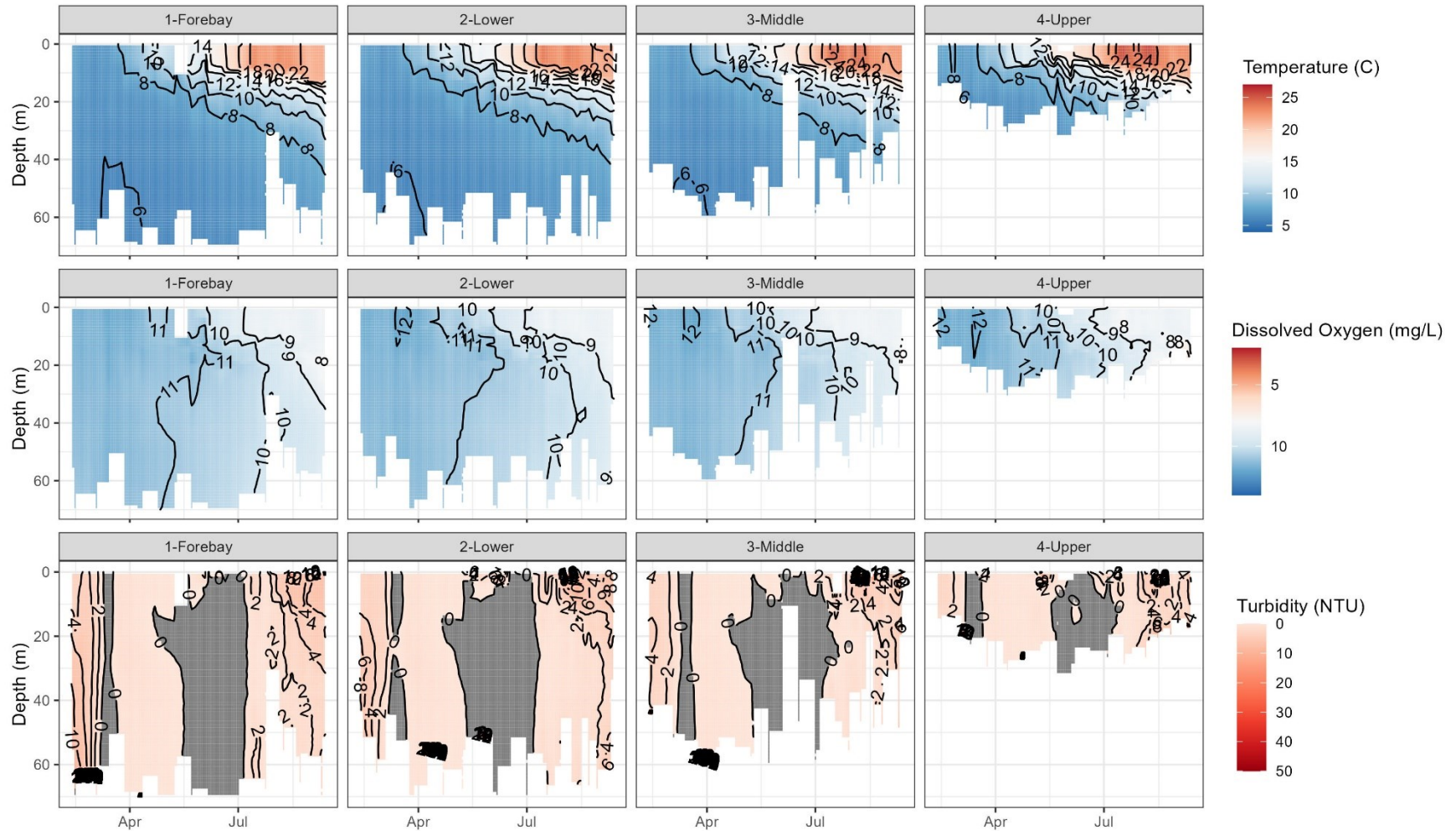


Figure 2. Green Peter 2024 limnology data. Note that turbidity data in gray are suspect due to a sensor malfunction/calibration issue. Readings in gray were slightly negative (erroneous) but secchi measurements taken concurrently support that turbidity was near zero.

Appendix A. Release Site Maps

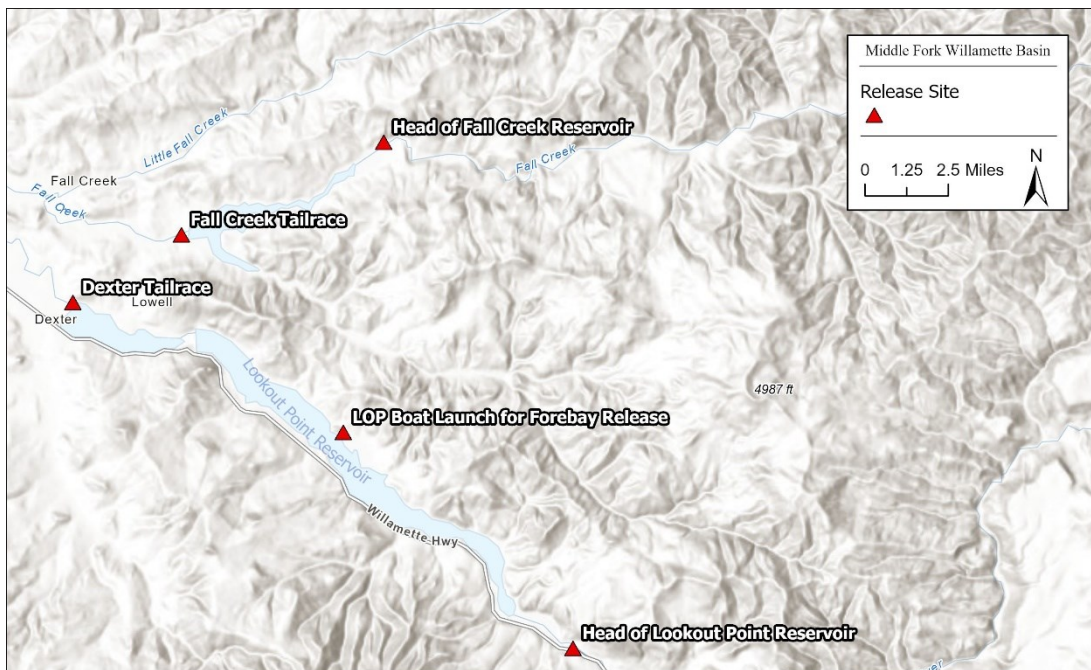


Figure A1. Map of LOP, Dexter tailrace and Fall Creek release locations within the Middle Fork Willamette Basin.

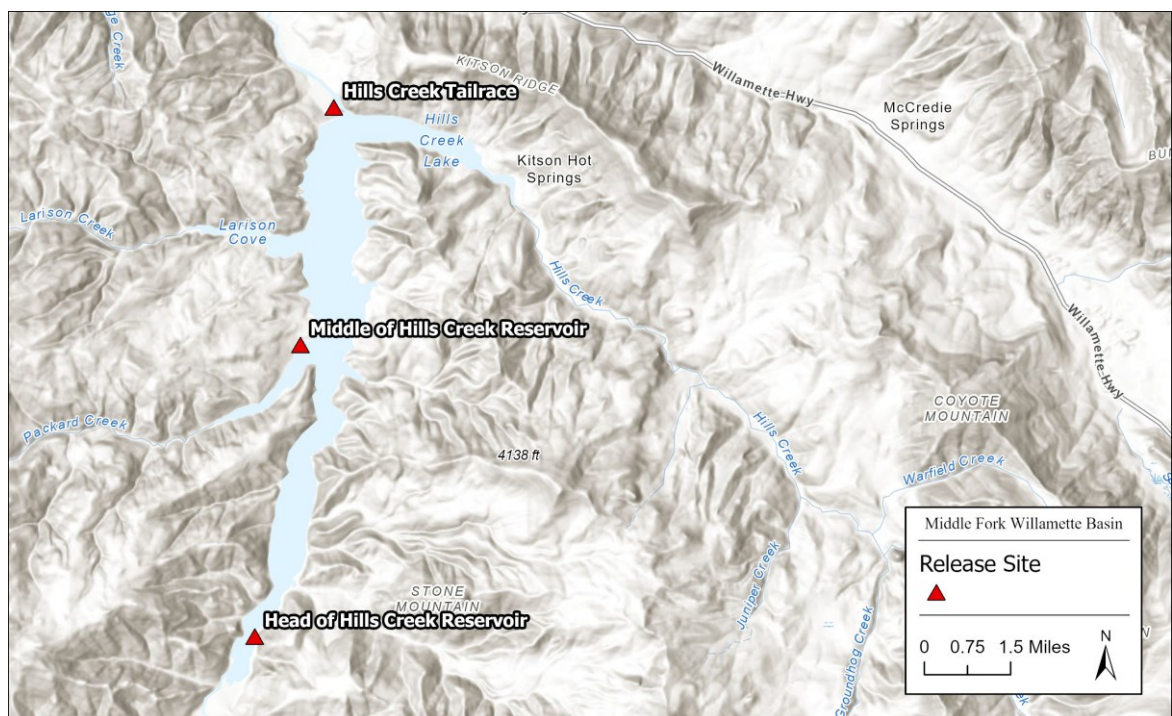


Figure A2. Map of Hills Creek Reservoir release locations within the Middle Fork Willamette Basin.

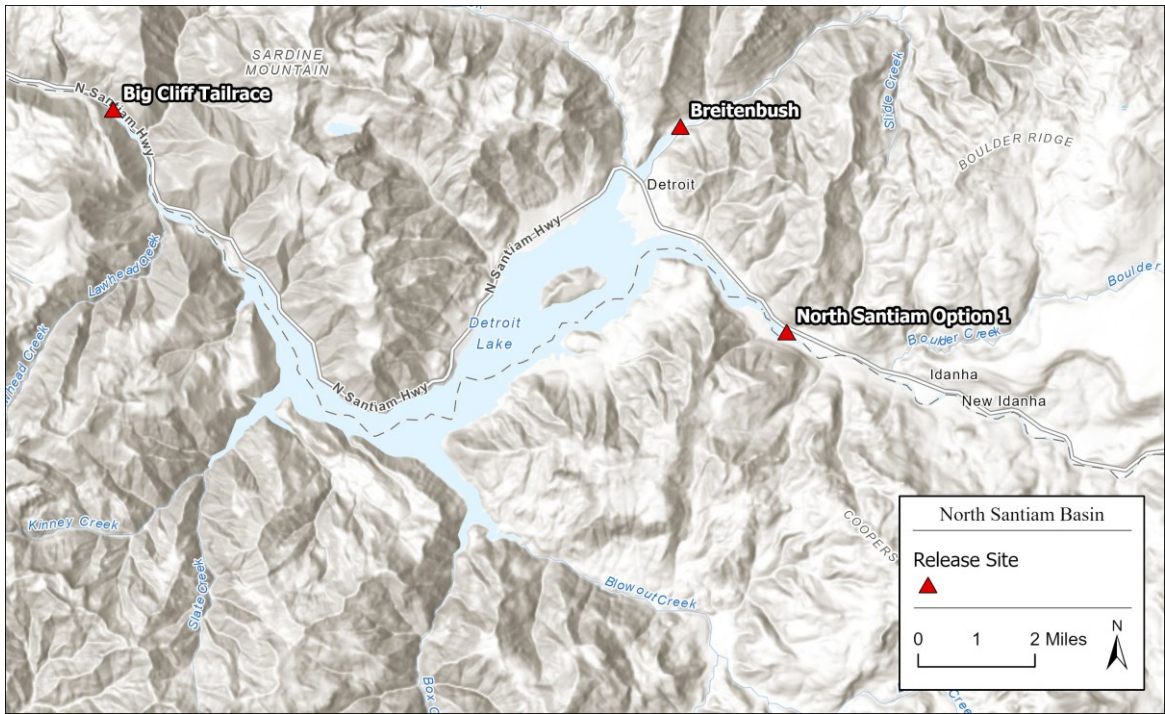


Figure A3. Map of release locations within the North Santiam Basin.

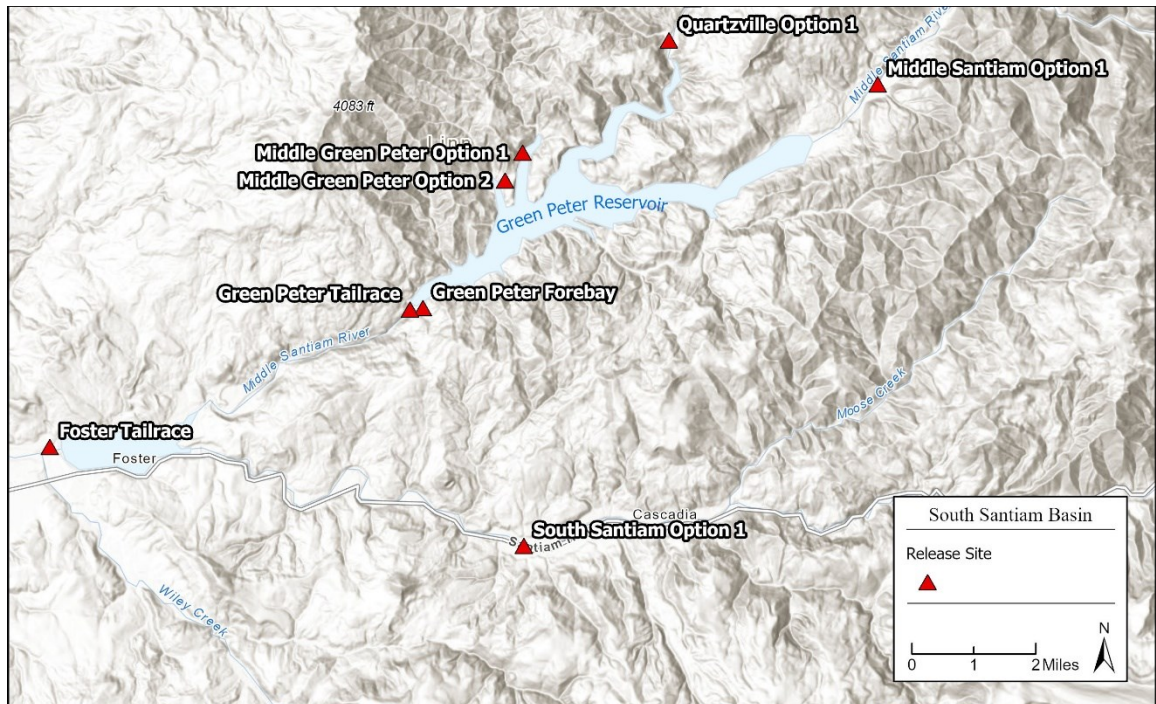


Figure A4. Map of release locations in the Middle/South Santiam basin including Green Peter Reservoir.

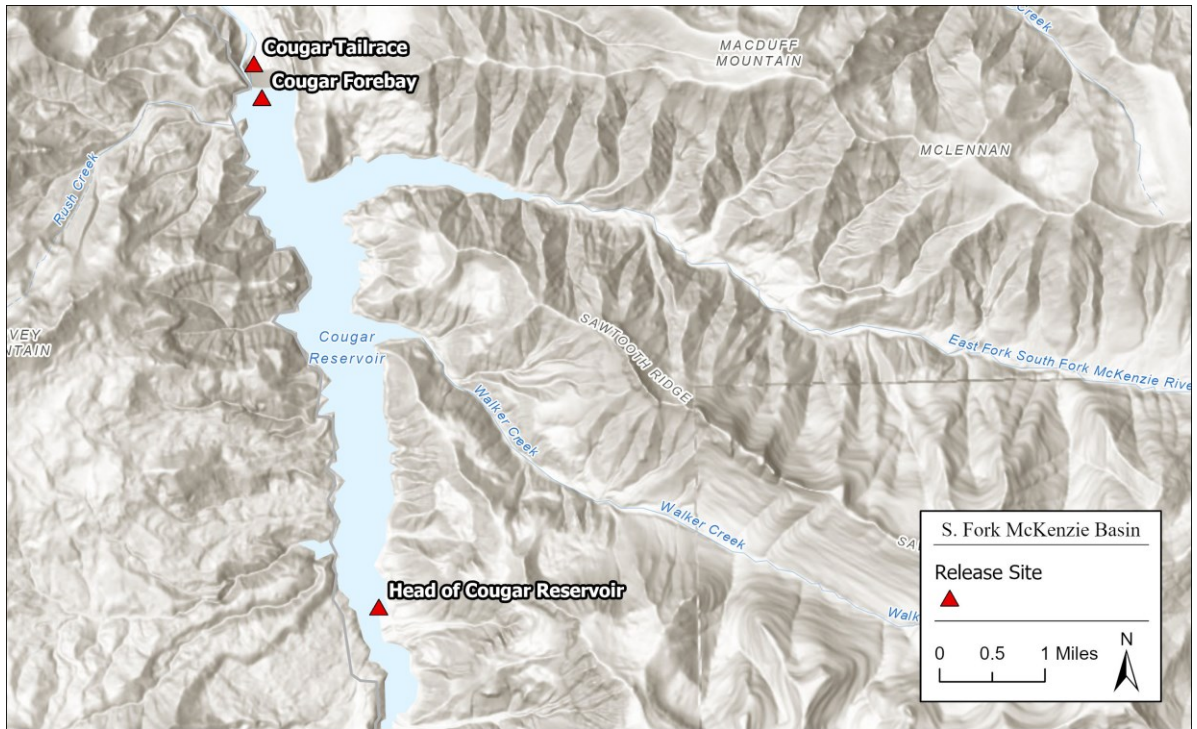


Figure A5. Map of release locations at Cougar Reservoir.

Appendix B. Reservoir Sampling Zones

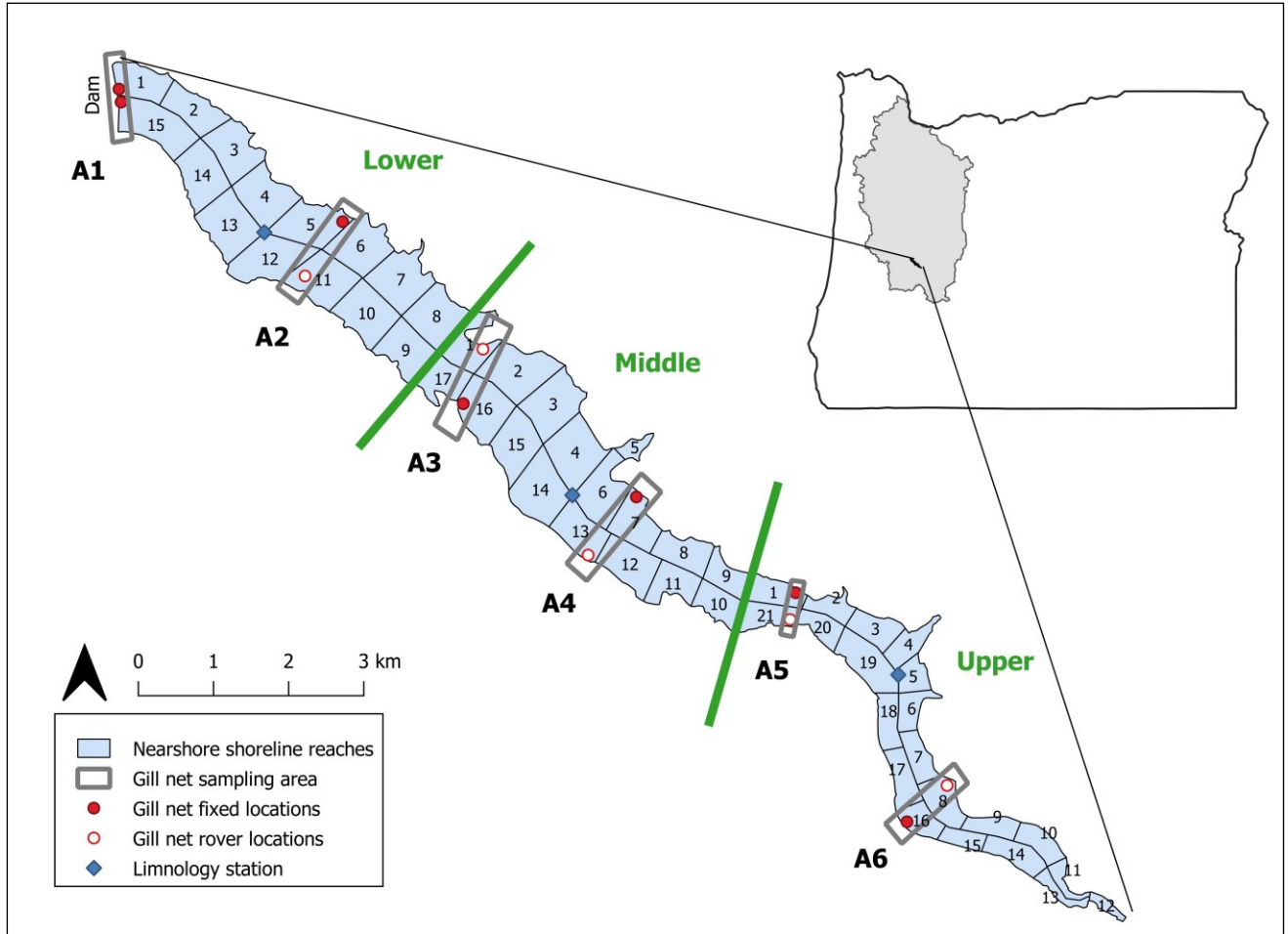


Figure B1. Map of LOP Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.

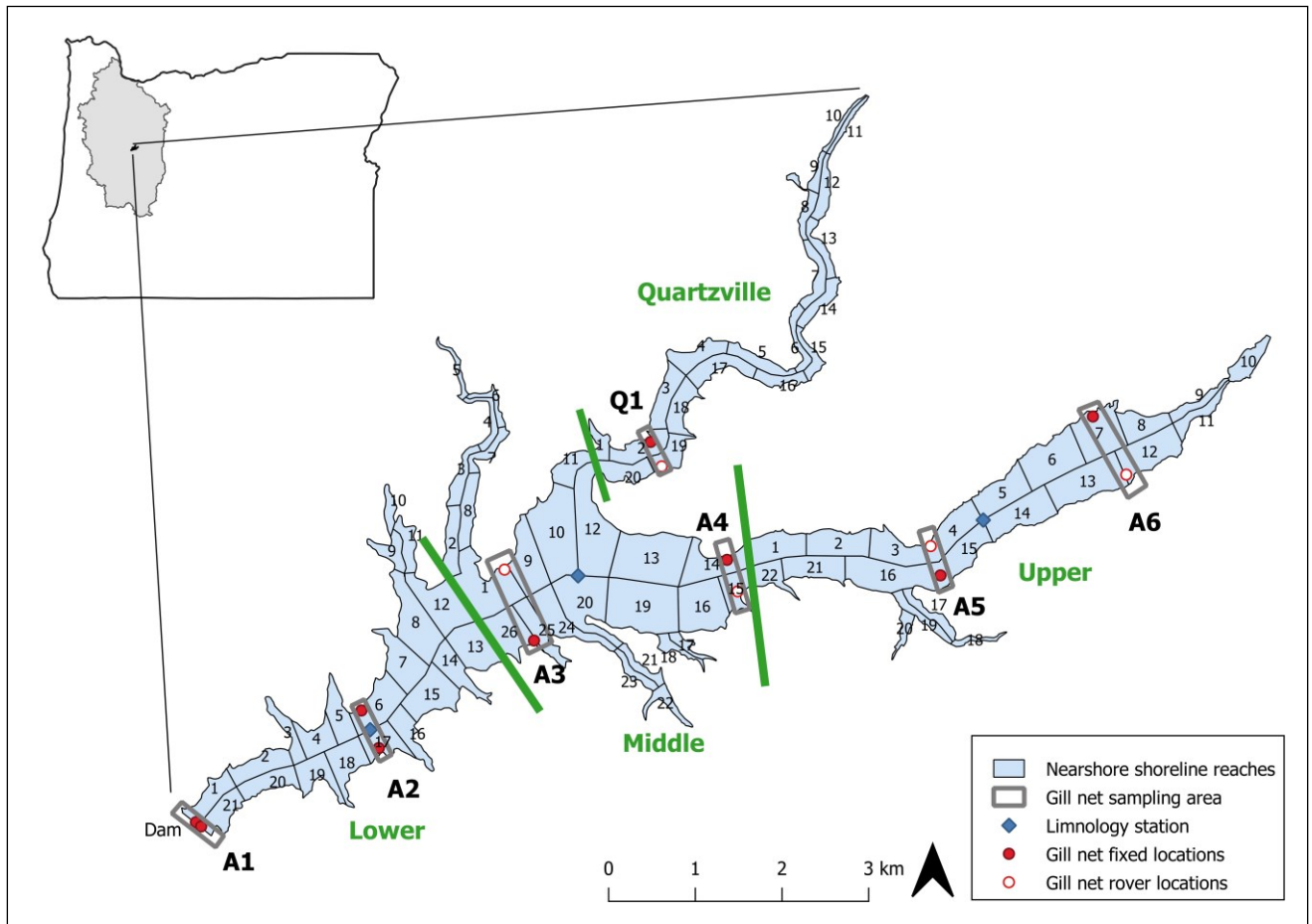


Figure B2. Map of Green Peter Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.

Appendix C. Hatchery Fish Sourced from ODFW Hatcheries

Table C1. Total brood year 2023 ODFW hatchery fish used for rotary screw trap efficiency tests (EAS) and for the bulk marking project (CFS) through June 2024.

Brood Year 2023 - Juvenile Chinook for RM&E							
Subbasin	Life Stage	Pickup Timing Bulk Releases ¹	Total Allocation ²	Total Used (EAS)	Total Used (CFS)	Total Used	Total Remaining
North Santiam (21H)	Fry	Late February - April 2024	16500		15027	15027	1473
	Subyearling	September - November 2024	47000	4035		4035	42965
	Yearling	February 2025	17000			0	17000
	All	NA	80500	4035	15027	19062	61438
South Santiam (24H)	Fry	Late February - April 2024	11000		9856	9856	1144
	Subyearling	August - October 2024	70000	6,750		6750	63250
	Yearling	February 2025	40000			0	40000
	All	NA	121000	6750	9856	16606	104394
McKenzie (23H)	Fry	February-April 2024	1,900			0	1900
	Subyearling	September-November 2024	4,500	2500		2500	2000
	Yearling	February-March 2025	0			0	0
	All	NA	6400	2500	0	2500	3900
M. Fork Willamette (22H)	Fry	February-May 2024	0			0	0
	Subyearling	August-November 2024	8,000	7250		7250	750
	Yearling	January-February 2025	0			0	0
	All	NA	8000	7250	0	7250	750

1 - Stated pickup timing is for bulk release groups. Fish will be picked up at least once per month year-round for screw trap efficiency trials.

2 - Total numbers includes all fish needed for RM&E purposes per Brood Year (i.e., annual basis) and will come from a combination of 'routine production' and 'additional production for RM&E'. Numbers have been rounded up for general planning purposes as 'extra' fish are needed to account for tagging and holding studies.