

WILLAMETTE VALLEY FISH PASSAGE MONITORING – BULK MARKING & RESERVOIR DISTRIBUTION

Bi-Weekly Report: February 15, 2024 – February 29, 2024



Prepared for: United States Army Corps of Engineers

Prepared by: Cramer Fish Sciences

March 7, 2024

BULK MARKING SCHEDULE

Table 1. Tentative release schedule for brood year 2022. Green rows highlight the release groups that have been tagged and released so far this year. Orange rows highlight release groups that have been tagged but have not yet been released.

Release Year	Release Date (estimated)	Release Basin	Release Area	Release Location	Life stage	N
2023	February	North Santiam	Detroit Reservoir	Breitenbush River	fry	3750
2023	February	North Santiam	Detroit Reservoir	North Santiam River	fry	3750
2023	March	MF Willamette	Fall Creek Reservoir	Head of Reservoir	fry	5000
2023	March	MF Willamette	Lookout Point Reservoir	Head of Reservoir	fry	5000
2023	March	MF Willamette	Hills Creek Reservoir	Head of Reservoir	fry	5000
2023	March	SF McKenzie	Cougar Reservoir	Head of Reservoir	fry	5000
2023	March	SF McKenzie	Cougar Reservoir	Head of Reservoir	fry	5000
2023	March	MF Willamette	Fall Creek Reservoir	Head of Reservoir	fry	5000
2023	April	MF Willamette	Lookout Point Reservoir	Head of Reservoir	fry	5000
2023	April	North Santiam	Detroit Reservoir	Breitenbush River	fry	3750
2023	April	North Santiam	Detroit Reservoir	North Santiam River	fry	3750
2023	April	South Santiam	Green Peter Reservoir	Middle Santiam	fry	2500
2023	April	South Santiam	Green Peter Reservoir	Quartzville Creek	fry	2500
2023	April	MF Willamette	Hills Creek Reservoir	Head of Reservoir	fry	5000
2023	April	South Santiam	Green Peter Reservoir	Middle Santiam	fry	2500
2023	April	South Santiam	Green Peter Reservoir	Quartzville Creek	fry	2500
2023	August	South Santiam	Foster Reservoir	Tailrace	sub-yearling	1000
2023	August	South Santiam	Foster Reservoir	Head of Reservoir	sub-yearling	2000
2023	September	MF Willamette	Dexter Reservoir	Tailrace	sub-yearling	2000
2023	September	MF Willamette	Lookout Point Reservoir	Head of Reservoir	sub-yearling	5000
2023	September	MF Willamette	Lookout Point Reservoir	Forebay	sub-yearling	5000
2023	September	SF McKenzie	Cougar Reservoir	Head of Reservoir	sub-yearling	3000
2023	September	South Santiam	Green Peter Reservoir	Middle Santiam	sub-yearling	2500
2023	September	South Santiam	Green Peter Reservoir	Quartzville Creek	sub-yearling	2500
2023	October	North Santiam	Big Cliff Reservoir	Big Cliff Reservoir Tailrace	sub-yearling	8000
2023	October	North Santiam	Detroit Reservoir	Breitenbush River	sub-yearling	5000
2023	October	North Santiam	Detroit Reservoir	North Santiam River	sub-yearling	5000
2023	October	MF Willamette	Fall Creek Reservoir	Head of Reservoir	sub-yearling	5000
2023	October	MF Willamette	Fall Creek Reservoir	Tailrace	sub-yearling	1000
2023	October	SF McKenzie	Cougar Reservoir	Forebay	sub-yearling	5000
2023	October	SF McKenzie	Cougar Reservoir	Tailrace	sub-yearling	4000
2023	October	SF McKenzie	Cougar Reservoir	Head of Reservoir	sub-yearling	4000
2023	October	South Santiam	Green Peter Reservoir	Tailrace	sub-yearling	4000
2023	October	South Santiam	Green Peter Reservoir	Middle Santiam	sub-yearling	2500
2023	October	South Santiam	Green Peter Reservoir	Quartzville Creek	sub-yearling	2500
2023	October	South Santiam	Foster Reservoir	Tailrace	sub-yearling	4000
2023	October	South Santiam	Foster Reservoir	Head of Reservoir	sub-yearling	5000

Release Year	Release Date (estimated)	Release Basin	Release Area	Release Location	Life stage	N
2023	November	MF Willamette	Fall Creek Reservoir	Head of Reservoir	sub-yearling	5000
2023	November	MF Willamette	Fall Creek Reservoir	Tailrace	sub-yearling	1000
2023	November	North Santiam	Big Cliff Reservoir	Tailrace	sub-yearling	6000
2023	November	SF McKenzie	Cougar Reservoir	Forebay	sub-yearling	5000
2023	November	SF McKenzie	Cougar Reservoir	Tailrace	sub-yearling	4000
2023	November	SF McKenzie	Cougar Reservoir	Head of Reservoir	sub-yearling	4000
2023	November	MF Willamette	Hills Creek Reservoir	Head of Reservoir	sub-yearling	5000
2023	November	MF Willamette	Hills Creek Reservoir	Tailrace	sub-yearling	3000
2023	November	MF Willamette	Hills Creek Reservoir	Forebay or Mid Reservoir	sub-yearling	5000
2024	February	MF Willamette	Hills Creek Reservoir	Head of Reservoir	yearling	5000
2024	February	MF Willamette	Hills Creek Reservoir	Tailrace	yearling	3000
2024	February	MF Willamette	Hills Creek Reservoir	Forebay or Mid Reservoir	yearling	5000
2024	February	MF Willamette	Fall Creek Reservoir	Head of Reservoir	yearling	5000
2024	February	MF Willamette	Fall Creek Reservoir	Tailrace	yearling	1000
2024	March	MF Willamette	Lookout Point Reservoir	Head of Reservoir	yearling	5000
2024	March	MF Willamette	Dexter Reservoir	Tailrace	yearling	2000
2024	March	MF Willamette	Lookout Point Reservoir	Forebay	yearling	5000
2024	February	SF McKenzie	Cougar Reservoir	Forebay	yearling	2000
2024	February	SF McKenzie	Cougar Reservoir	Tailrace	yearling	1000
2024	February	SF McKenzie	Cougar Reservoir	Head of Reservoir	yearling	2000
2024	March	SF McKenzie	Cougar Reservoir	Forebay	yearling	2000
2024	March	SF McKenzie	Cougar Reservoir	Tailrace	yearling	1000
2024	March	SF McKenzie	Cougar Reservoir	Head of Reservoir	yearling	2000
2024	March	MF Willamette	Fall Creek Reservoir	Head of Reservoir	yearling	5000
2024	March	MF Willamette	Fall Creek Reservoir	Tailrace	yearling	1000
2024	March	MF Willamette	Lookout Point Reservoir	Head of Reservoir	yearling	5000
2024	March	MF Willamette	Dexter Reservoir	Tailrace	yearling	2000
2024	March	MF Willamette	Lookout Point Reservoir	Forebay	yearling	5000
2024	April	North Santiam	Big Cliff Reservoir	Tailrace	yearling	2000
2024	April	North Santiam	Detroit Reservoir	Breitenbush River	yearling	2000
2024	April	North Santiam	Detroit Reservoir	North Santiam River	yearling	2000
2024	April	South Santiam	Green Peter Reservoir	Tailrace	Yearling	1000
2024	April	South Santiam	Green Peter Reservoir	Forebay	Yearling	2000
2024	April	South Santiam	Green Peter Reservoir	Middle Santiam	Yearling	1000
2024	April	South Santiam	Green Peter Reservoir	Quartzville Creek	Yearling	1000
2024	April	South Santiam	Green Peter Reservoir	Mid Reservoir	Yearling	2000
2024	April	South Santiam	Foster Reservoir	Tailrace	Yearling	5000
2024	April	South Santiam	Foster Reservoir	Head of Reservoir	Yearling	5000
2024	April	South Santiam	Foster Reservoir	Tailrace	Yearling	2000
2024	April	South Santiam	Foster Reservoir	Head of Reservoir	Yearling	1000
2024	April	South Santiam	Foster Reservoir	Head of Reservoir	Yearling	2000

BULK MARKING SUMMARY

The most recent reporting period saw the release of PIT tagged juvenile Chinook salmon across 10 separate events within the study area. Detailed as follows:

- **Fall Creek Project Area:** A total of 5,989 yearlings were released, with 4,989 at the head of the reservoir and 1,000 in the Fall Creek Dam tailrace.
- **Green Peter Project Area:** Yearlings were released in various locations, totaling 7,044. Specifically, 2,019 yearlings were released at the head of the reservoir (distributed between the Middle Santiam and Quartzville Creek arms), 4,011 at mid-reservoir, and 1,014 into the Green Peter Dam tailrace. It's noteworthy that the release group of 4,011 at mid-reservoir includes an additional 2,000 yearlings initially intended for the forebay. Due to the inability of our crew to safely release fish at the current forebay elevation, these fish were redirected to the mid-reservoir site.
- **Lookout Point Project Area:** In this area, releases totaled 10,963 yearlings, with 4,987 at the head of the reservoir, 4,979 into the forebay, and 1,997 into the Lookout Point Dam tailrace.

Recaptures

A total of six fish from this project were detected and uploaded to PTAGIS during the most reporting period. There were two fish detected passing the Lebanon Dam Diversion Bypass and four fish detected at the Sauvie Island Diary Creek array. We estimate that a total of 3,025 PIT tagged fish 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	1/01/2024	1/31/2021	TBD	TBD	TBD	TBD

Table 3. Release summary statistics. Date of release, number of marked fish released, transport tank water temperature and the beginning and end of the transport, and water temperature at the release location.

Basin	Release Location	Release Date	Fish	Mean FL	Mean Weight	Lifestage
MFW	Hills Creek Head of Reservoir	5/18/2023 15:50	509	55.8	1.9	fry
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
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

Basin	Release Location	Release Date	Fish	Mean FL	Mean Weight	Lifestage
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	6/12/2023 15:00	9,649	67.4	3.2	fry
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
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
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	8/29/2023 11:30	5,200	67.9	3.6	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
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
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
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
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	10/2/2023 14:20	5,006	117.2	18.9	subyearling
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	10/2/2023 19:05	3,006	116.7	19	subyearling
SST	Green Peter Head of Reservoir - Quartzville Creek	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
MCK	Cougar Head of Reservoir - Cougar Crossing Bridge	10/18/2023 11:50	3,979	118.4	19.8	subyearling
MCK	Cougar Forebay	10/18/2023 18:00	5,010	120.8	21	subyearling

Basin	Release Location	Release Date	Fish	Mean FL	Mean Weight	Lifestage
MCK	Cougar Tailrace - USGS	10/19/2023 12:40	3,997	112.5	16.8	subyearling
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	11/6/2023 15:40	5,000	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	5,000	135.2	28.6	subyearling
MFW	Hills Creek Mid Reservoir - Packard Creek Boat Ramp	11/8/2023 15:15	4,999	145.3	36.9	subyearling
MFW	Hills Creek Dam Tailrace	11/9/2023 14:35	2,999	129.4	26.9	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	2,412	120.1	21.5	subyearling
NST	Big Cliff Tailrace - Packsaddle Boat Ramp	11/20/2023 16:50	5,998	112.4	16.6	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	33.7	yearling
MFW	LOP Head of Reservoir - Black Canyon	1/8/2024 15:40	3,790	143.3	33.7	yearling
MFW	LOP Head of Reservoir - Black Canyon	1/9/2024 16:15	5,115	143.3	33.7	yearling
MFW	LOP Head of Reservoir - Black Canyon	1/25/2024 11:30	7,632	143.6	34.3	subyearling
MFW	Hills Creek Dam Tailrace	1/31/2024 14:05	25,001	141.7	34.9	subyearling
MFW	Hills Creek Head of Reservoir	2/6/2024 11:15	4,997	153.8	40.9	subyearling
MFW	Hills Creek Mid Reservoir - Packard Creek Boat Ramp	2/7/2024 10:10	4,995	155.9	41.7	subyearling
MFW	Hills Creek Dam Tailrace	2/7/2024 15:20	2,997	151.7	43	subyearling
MFW	Fall Creek Head of Reservoir - Old Boat Ramp	2/20/2024 12:45	4,989	148.4	38.9	subyearling
MFW	Fall Creek Tailrace	2/20/2024 16:05	1,000	150.5	39.9	subyearling
SST	Green Peter Head of Reservoir - Middle Santiam Arm	2/21/2024 12:00	1,005	164.4	51.6	subyearling
SST	Green Peter Head of Reservoir - Quartzville Creek Arm	2/22/2024 11:45	1,014	150.8	40.2	subyearling
SST	Green Peter Mid Reservoir - Thistle Boat Ramp	2/22/2024 17:45	2,006	153.8	42.9	subyearling
SST	Green Peter Mid Reservoir - Thistle Boat Ramp	2/23/2024 10:40	2,005	159.4	46.5	subyearling
SST	Green Peter Tailrace - Sunnyside Boat Ramp	2/23/2024 14:15	1,014	163.4	50.1	subyearling
MFW	LOP Head of Reservoir - Black Canyon	2/28/2024 11:30	4,987	141.6	34.3	subyearling
MFW	LOP Forebay - Signal Point	2/28/2024 16:30	4,979	144.2	35.9	subyearling

Basin	Release Location	Release Date	Fish	Mean FL	Mean Weight	Lifestage
MFW	LOP Tailrace - Pengra	2/29/2024 11:00	1,997	149.7	39.2	subyearling

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	Season Total	Reporting Period Total
CGR - Cougar Dam	Screw Trap	1,637	0
FAL - Fall Creek Dam (USACE), MF Willamette River	Screw Trap	434	0
HCR - Hills Creek Dam, Middle Fork Willamette River	Screw Trap	239	0
LOP - Lookout Point Dam (USACE), MF Willamette River	Screw Trap	171	0
MCKESF - South Fork McKenzie River	Screw Trap	134	0
LD3 - Lebanon Dam Diversion Bypass	Passive	92	2
LD2 - Lebanon Dam North Ladder	Passive	52	0
LD1 - Lebanon Dam South Ladder	Passive	50	0
DEX - Dexter Dam (USACE), Middle Fork Willamette River	Screw Trap	42	0
WILRMF - Middle Fork Willamette River	Screw Trap	42	0
GPD - Green Peter Dam	Screw Trap	33	0
LD4 - Lebanon Dam Spillway	Passive	24	0
NSANTR - North Santiam River, Oregon	Bypass Sub-Sample	24	0
PD7 - Columbia River Estuary rkm 70	Passive	19	0
SID - Sauvie Island Dairy Creek	Passive	13	4
BCL - Big Cliff Dam - North Santiam River	Screw Trap	9	0
LOP - Lookout Point Dam (USACE), MF Willamette River	Gillnet Fishery or Research	6	0
NSANTR - North Santiam River, Oregon	Screw Trap	3	0
LOP - Lookout Point Dam (USACE), MF Willamette River	Fyke Net	1	0

Reservoir Distribution Summary

Reservoir sampling during the reporting period was conducted in the nearshore of Lookout Point and Green Peter reservoirs using Oneida lake traps and box minnow traps (Table 5). Each reservoir typically receives one week of sampling effort, consisting of 3 days of 24 hour trap sets, with one Oneida trap and 3 box minnow traps set in each reservoir longitudinal zone per day. There was an adjustment to the typical schedule on Green Peter Reservoir this reporting period. On the final scheduled day of sampling when the traps would regularly be checked and pulled from the reservoir (2/29/2024), crews were unable to access the boat launch to get on the reservoir due to downed trees across the access road and snow. After checking the weather report, which predicted snow continuing through the weekend, the decision was made to leave the traps fishing on the reservoir through the weekend and ODFW was alerted. The traps were successfully checked and removed the following Monday (3/4/2024).

Lookout Point Reservoir was sampled 2/19/2024 – 2/22/2024 (Table 5). Surface temperatures at trap locations averaged 8.9 C (Table 6, Figure 1). Traps were set at the surface in each reservoir zone (Lower, Middle, Upper). Over three days of sampling (n=9 Oneida sets, n=27 box minnow sets), one bluegill, 6 Chinook salmon, 1 cutthroat trout, 1 northern pikeminnow and 9 *O. mykiss* were captured (Table 7). Target species catch consisted of one yearling bulk marked hatchery Chinook salmon (recapture), 5 natural origin Chinook salmon yearlings (4 of which were given a PIT tag), and 9 natural origin juvenile *O. mykiss* (all were PIT tagged) (Table 8, Table 9).

Green Peter Reservoir was sampled 2/26/2024 – 4/4/2024 (Table 5). Surface temperatures at trap locations averaged 8.4 C (Table 6, Figure 2). Traps were set at the surface in each reservoir zone (Lower, Middle, Upper, Quartzville). Over seven days of sampling (n=12 Oneida sets, n=30 box minnow sets), 11 bluegill, 12 Chinook salmon and 3 *O. mykiss* were captured (Table 7). Target species catch consisted of 2 yearling bulk marked hatchery Chinook salmon (recaptures), 8 natural origin Chinook salmon fry (all given a VIE tag), 2 natural origin Chinook salmon yearlings (both given a PIT tag), 2 natural origin *O. mykiss* fry (one given VIE tag), and one natural origin yearling *O. mykiss* (given PIT tag) (Table 8, Table 9).

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 Peter	Box minnow	30	1680
9	2/26/2024	3/4/2024	Green Peter	Oneida	12	670

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

Table 7. Summary of catch by reservoir. BLC - Black Crappie, BLG - Bluegill, CHS – Chinook salmon, CUT - Cutthroat trout, LMB - Largemouth bass, LSS - Large-scale sucker, NPM - Northern Pike Minnow, SMB - Smallmouth Bass, WAL – Walleye, LRY - Lamprey.

Week	Reservoir	Species	Catch
6	Lookout Point	CHS	4
6	Lookout Point	CUT	2
6	Lookout Point	NPM	1
6	Lookout Point	RBT	2
6	Lookout Point	SCU	1
7	Green Peter	BLG	8
7	Green Peter	CHS	7
7	Green Peter	CUT	2
7	Green Peter	LRY	1
7	Green Peter	NPM	1
7	Green Peter	RBT	6
8	Lookout Point	BLG	1
8	Lookout Point	CHS	6
8	Lookout Point	CUT	1
8	Lookout Point	NPM	1
8	Lookout Point	RBT	9
9	Green Peter	BLG	11
9	Green Peter	CHS	12
9	Green Peter	RBT	3

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

Table 9. Summary of target species lengths, tags implanted and recaptures.

Week	Reservoir	Species	Lifestage	Catch	length_min	length_mean	length_max	# VIE		
								tagged	# PIT tagged	# recap
6	Lookout Point	CHS-AD	yearling	1	117	117	117	0	0	1
6	Lookout Point	CHS-natural	yearling	3	80	84	88	0	3	0
6	Lookout Point	RBT-natural	yearling	2	79	88	97	0	1	0
7	Green Peter	CHS-natural	fry	7	37	40.6	46	7	0	0
7	Green Peter	RBT-natural	adult	1	305	305	305	0	1	0
7	Green Peter	RBT-natural	fry	3	35	36.7	38	3	0	0
7	Green Peter	RBT-natural	yearling	2	149	168.5	188	0	2	0
8	Lookout Point	CHS-AD	yearling	1	174	174	174	0	0	1
8	Lookout Point	CHS-natural	yearling	5	73	87.6	101	0	4	0
8	Lookout Point	RBT-natural	yearling	9	103	153.2	206	0	9	0
9	Green Peter	CHS-AD	yearling	2	83	89	95	0	1*	2
9	Green Peter	CHS-natural	fry	8	36	41.6	51	8	0	0
9	Green Peter	CHS-natural	yearling	2	117	118.5	120	0	2	0
9	Green Peter	RBT-natural	fry	2	34	35	36	1	0	0
9	Green Peter	RBT-natural	yearling	1	169	169	169	0	1	0

*One recaptured fish was inadvertently tagged with a 2nd PIT tag.

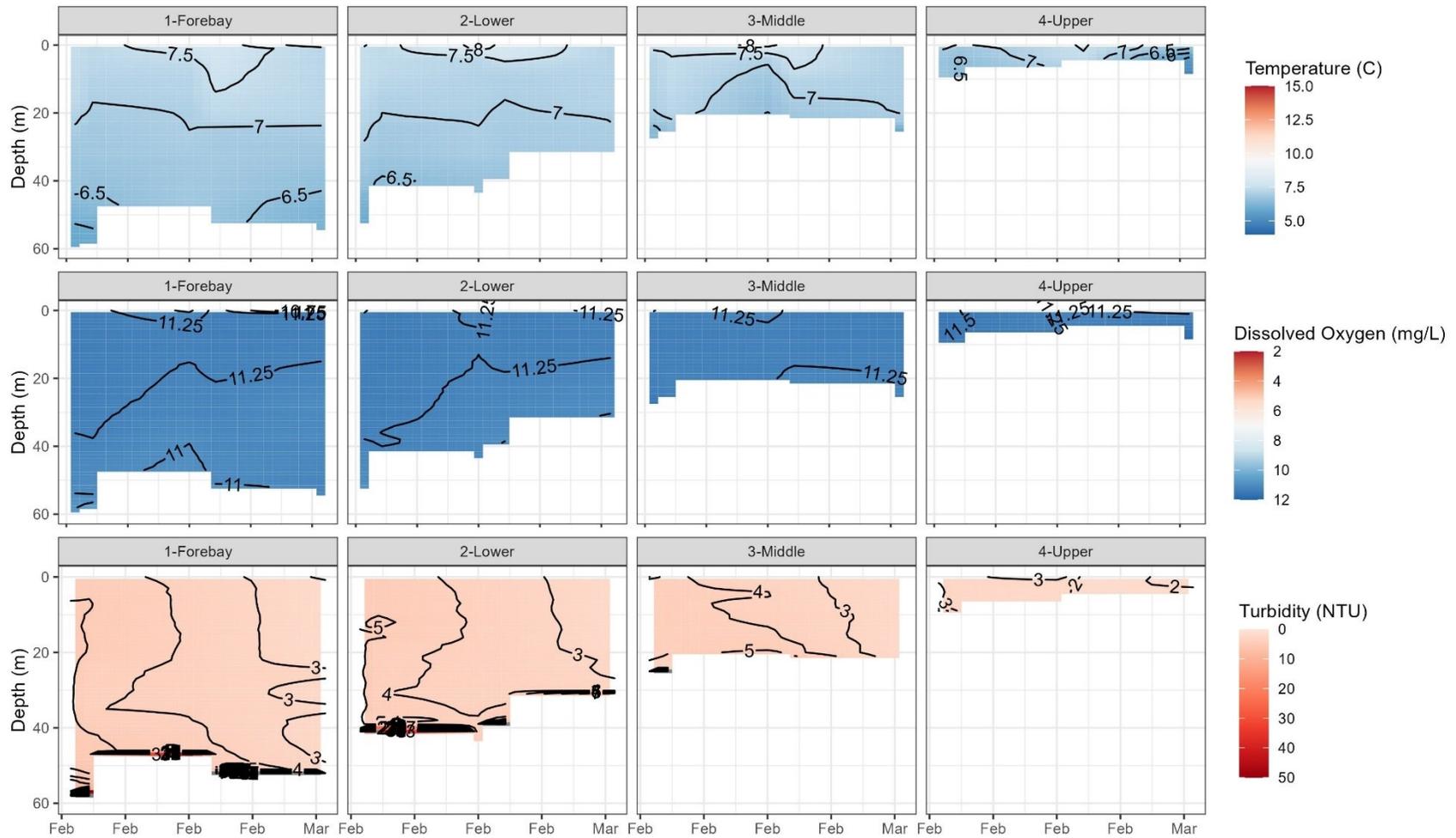


Figure 1. Lookout Point 2024 limnology data.

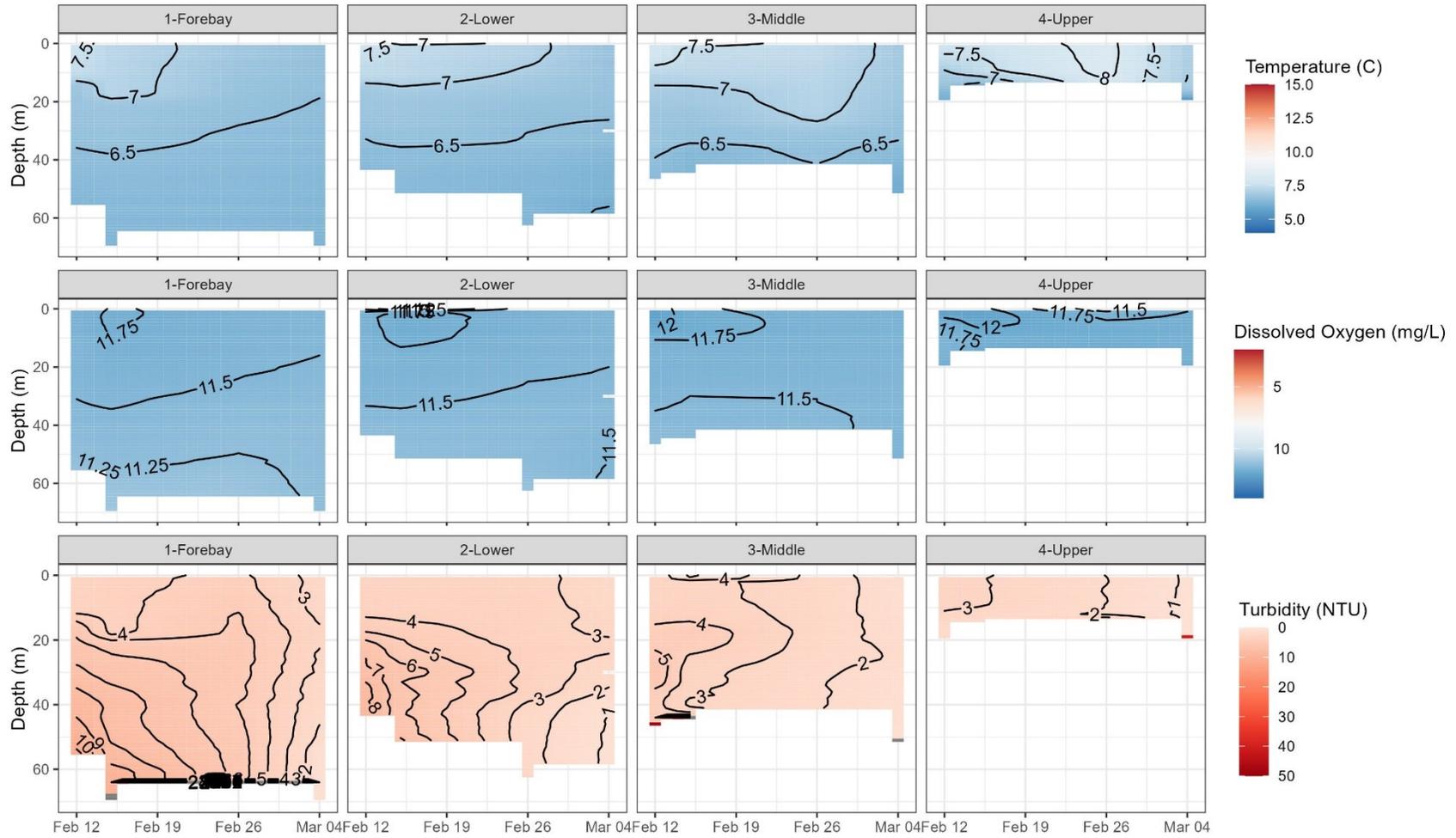


Figure 2. Green Peter 2024 limnology data.

Appendix A. Release Site Maps

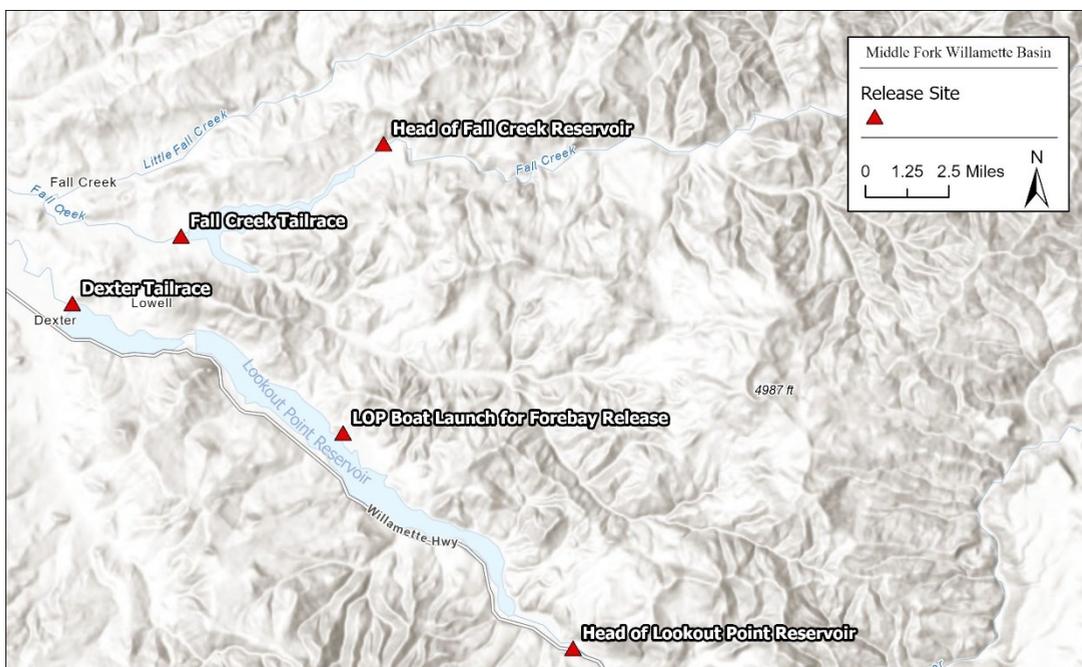


Figure 1. Map of Lookout Point, Dexter tailrace and Fall Creek release locations within the Middle Fork Willamette Basin.

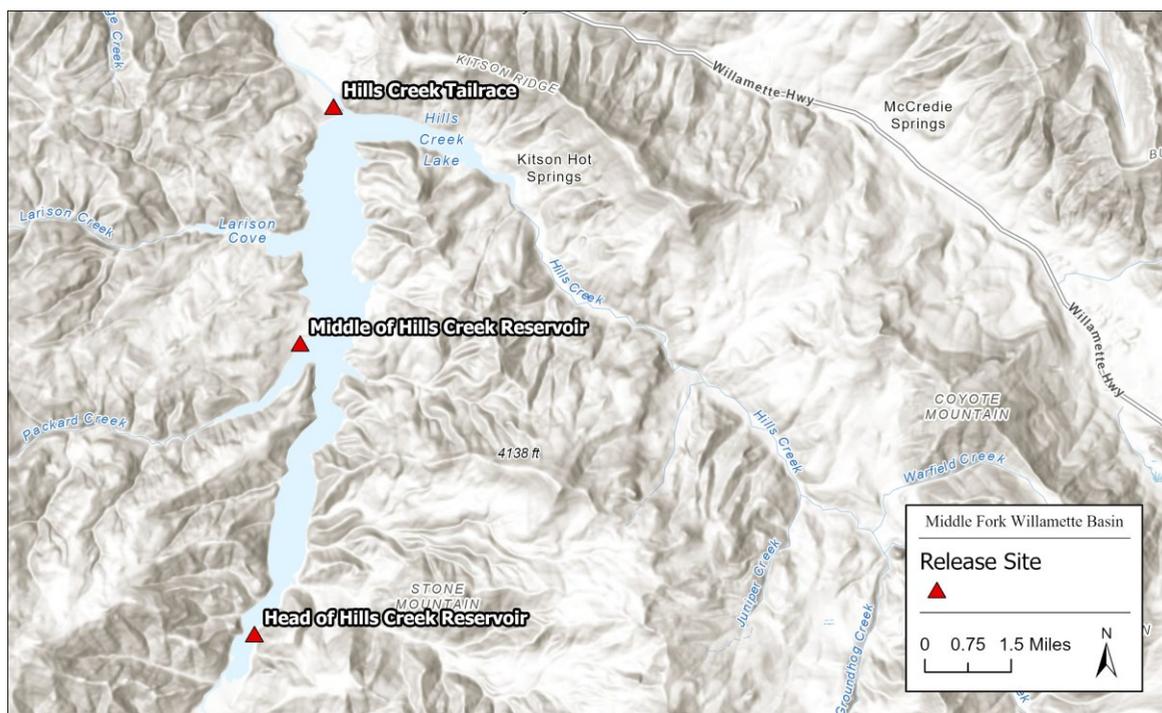


Figure 2. Map of Hills Creek Reservoir release locations within the Middle Fork Willamette Basin.

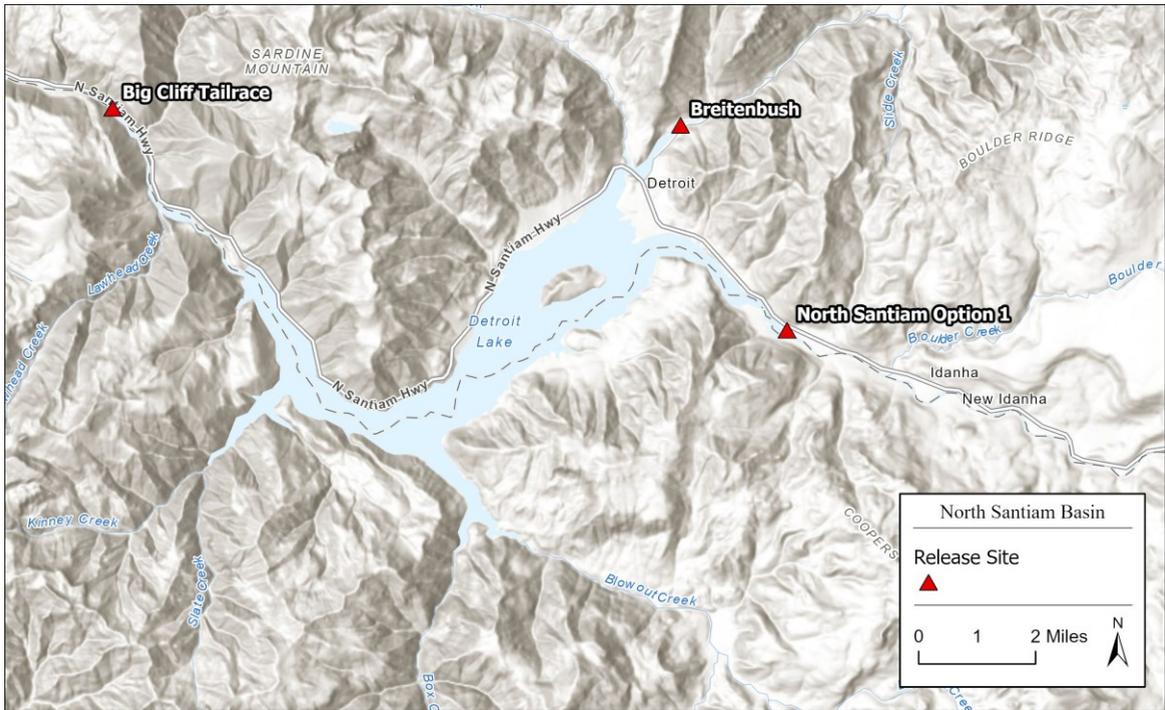


Figure 3. Map of release locations within the North Santiam Basin.

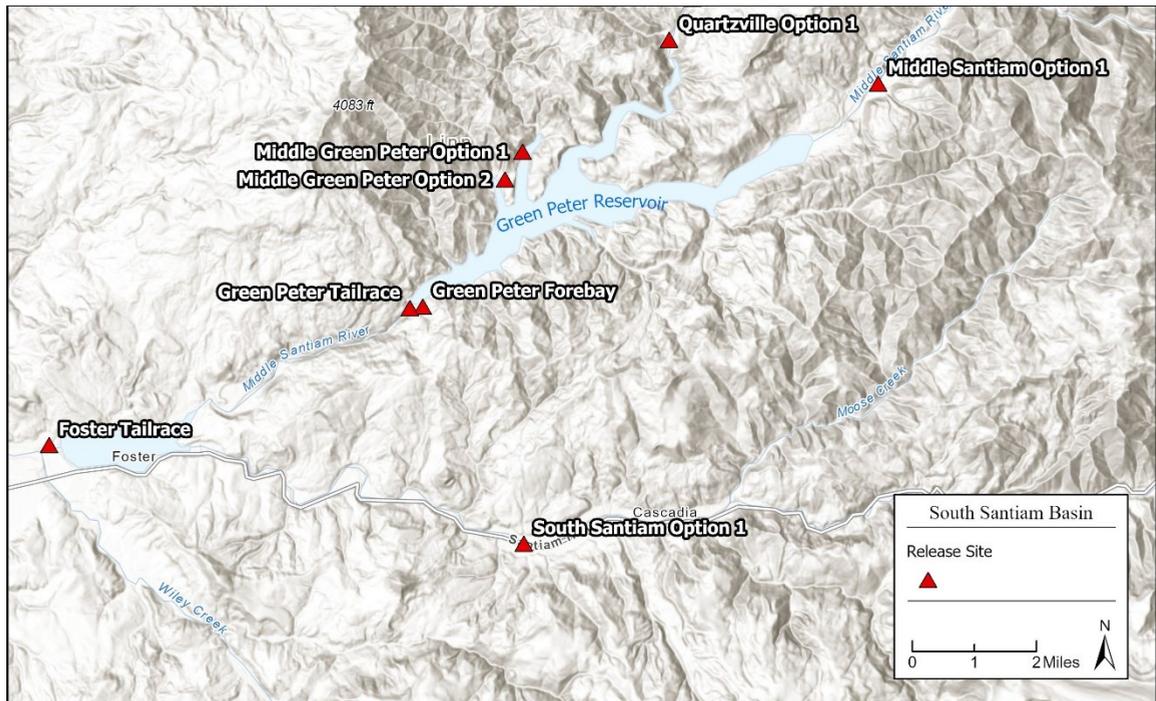


Figure 4. Map of release locations in the Middle/South Santiam basin including Green Peter Reservoir.

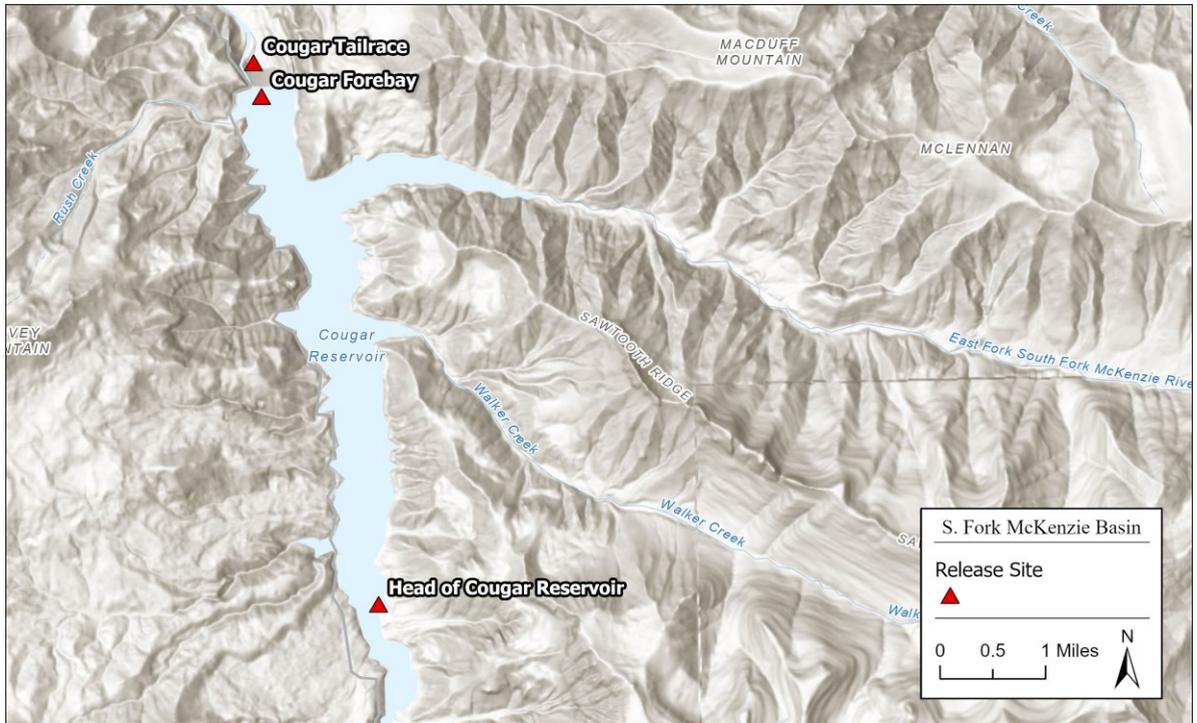


Figure 5. Map of release locations at Cougar Reservoir.

Appendix B. Reservoir Sampling Zones

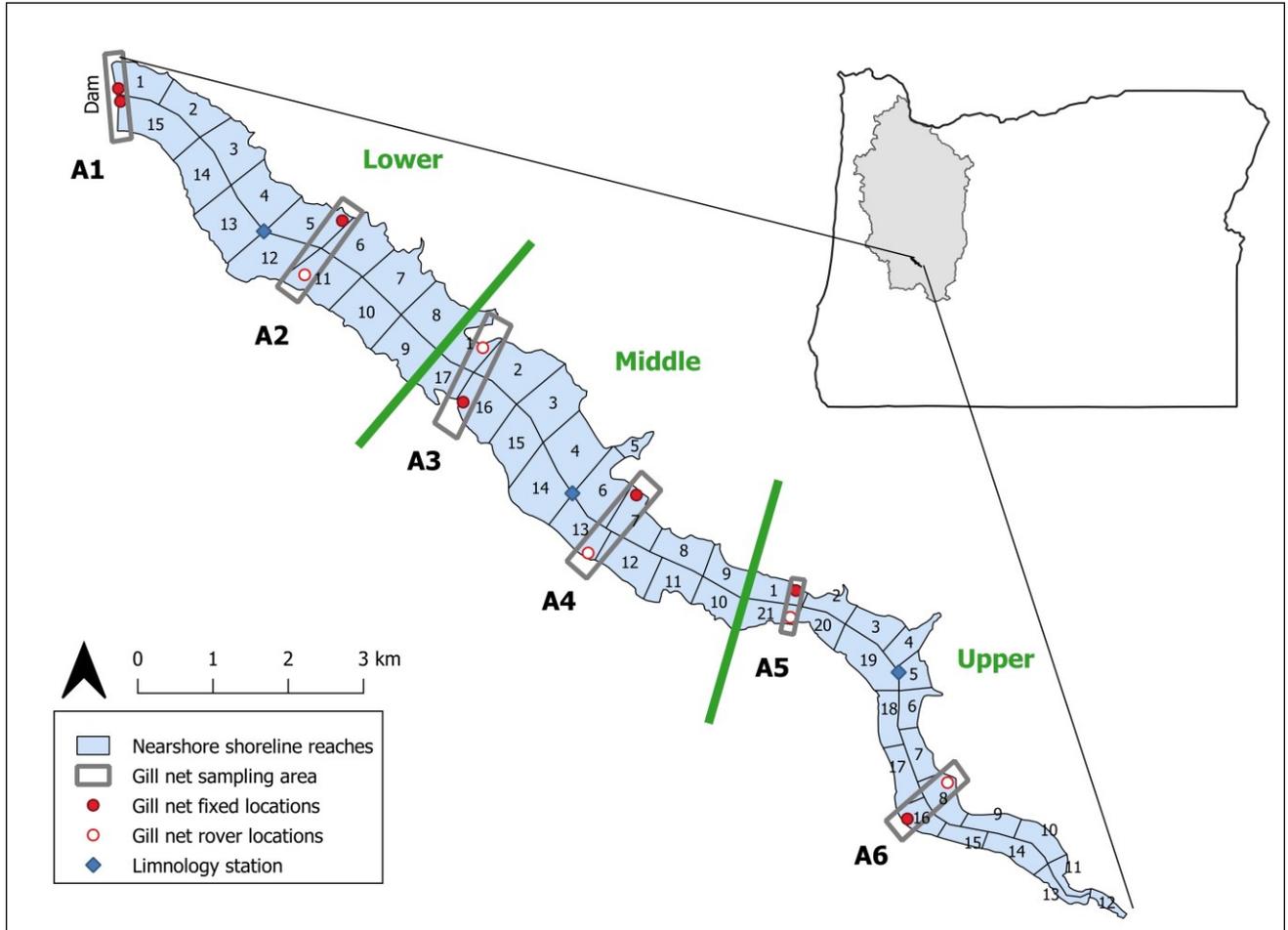


Figure 6. Map of Lookout Point Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.

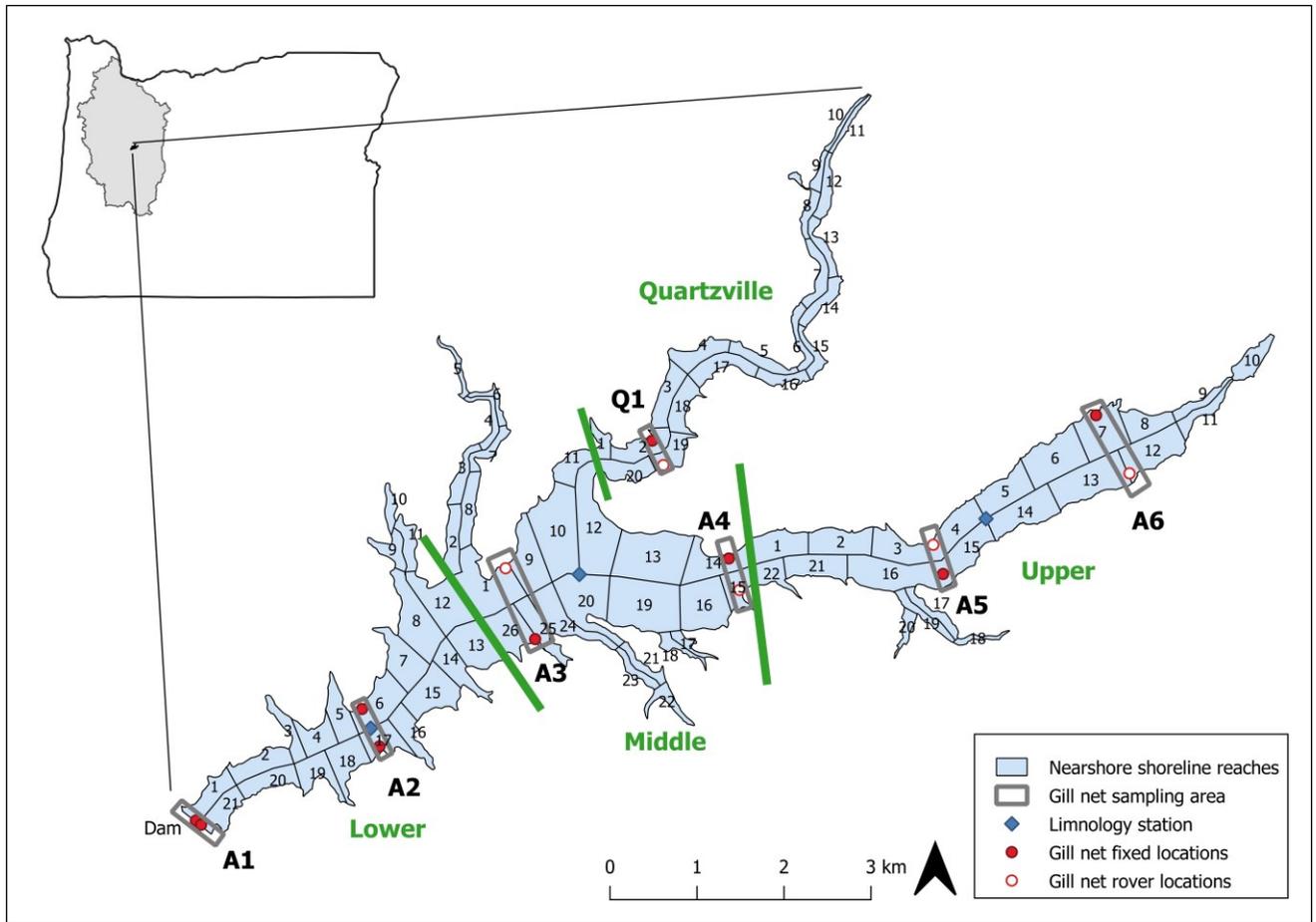


Figure 7. Map of Green Peter Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.