

# **WILLAMETTE VALLEY FISH PASSAGE MONITORING –RESERVOIR DISTRIBUTION & RIVERINE SAMPLING**

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Bi-Weekly Report: February 01 – February 15, 2025



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## RESERVOIR DISTRIBUTION SUMMARY

Reservoir sampling during the reporting period was conducted in the nearshore areas of Lookout Point and Green Peter reservoirs using Oneida lake traps and box minnow traps (Table 1). Each reservoir was sampled every other week. One Oneida trap and 3 box minnow traps were set in each reservoir longitudinal zone per sampling day. The number of sampling days varied between reservoirs for this reporting period due to adverse weather conditions and a vehicle break-in.

At Lookout Point Reservoir, traps were deployed on 02/03/2025 and pulled on 02/04/2025. Further sampling was suspended for the remainder of the week due to forecast adverse weather conditions (snow and ice) and the need for vehicle repairs caused by a break-in while parked at the Signal Point Boat Launch on 2/03/2025. During the period when sampling occurred, average surface temperatures were 4.3 C (Table 2; Figure 1). Traps were set at the surface in each reservoir zone (Lower, Middle, and Upper). During the sampling day (n=2 Oneida sets, n=5 box minnow sets), one adult natural origin *O. mykiss* was captured in the upper reservoir zone (Tables 1, 3-5). No Chinook salmon were captured.

At Green Peter Reservoir, week six sampling was cut short by one day from the target of three set days (traps were deployed on 02/10/2025 and pulled on 02/12/2025) due to impending adverse weather conditions (snow and ice storm). Over this period, average surface temperatures were 4.8 C (Table 2; Figure 2). Traps were set at the surface in each reservoir zone (Lower, Middle, Upper, and Quartzville). Over the sampling period (n=8 Oneida sets, n=18 box minnow sets), 11 Chinook salmon (10 fry and one yearling), one adult *O. mykiss*, one cutthroat trout, and one bluegill were captured. The yearling Chinook salmon and adult *O. mykiss* were both of hatchery origin, and were captured in the middle reservoir zone, while the 10 Chinook salmon fry were captured in the upper zone (Tables 1, 3-5). No target species were of suitable size and body condition to tag in Green Peter Reservoir this reporting period.

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

Week	Start	End	Reservoir	Net Type	Effort (# sets)	Effort (hrs)
5	2/3/2025	2/4/2025	Lookout Point	box minnow	5	118
5	2/3/2025	2/4/2025	Lookout Point	oneida	2	47
6	2/10/2025	2/12/2025	Green Peter	box minnow	18	414
6	2/10/2025	2/12/2025	Green Peter	oneida	8	187

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

Week	Reservoir	Mean Water Surface Temperature °C
5	Lookout Point	4.3
6	Green Peter	4.8

Table 3. Summary of total catch by reservoir. CHS – Chinook salmon, RBT – *O. mykiss*, CUT - Cutthroat trout, KOK – Kokanee, 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	KOK	NPM	SCU	BLG	LWB	BBH	YBH	LSS	SMB	LMB	BLC	WHC	WAL	UNID
5	Lookout Point	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Green Peter	11	1	1	0	0	0	1	0	0	0	0	0	0	0	0	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
5	Lookout Point	RBT-natural	Adult	0	0	1	0
6	Green Peter	CHS-AD	Yearling	0	1	0	0
6	Green Peter	CHS-natural	Fry	0	0	10	0
6	Green Peter	RBT-AD	Adult	0	1	0	0

Table 5. Summary of Chinook salmon and *O. mykiss* lengths, tags implanted, recaptures and sampling mortalities. LOP – Lookout Point Reservoir, GPR – Green Peter Reservoir. FL = fork length.

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

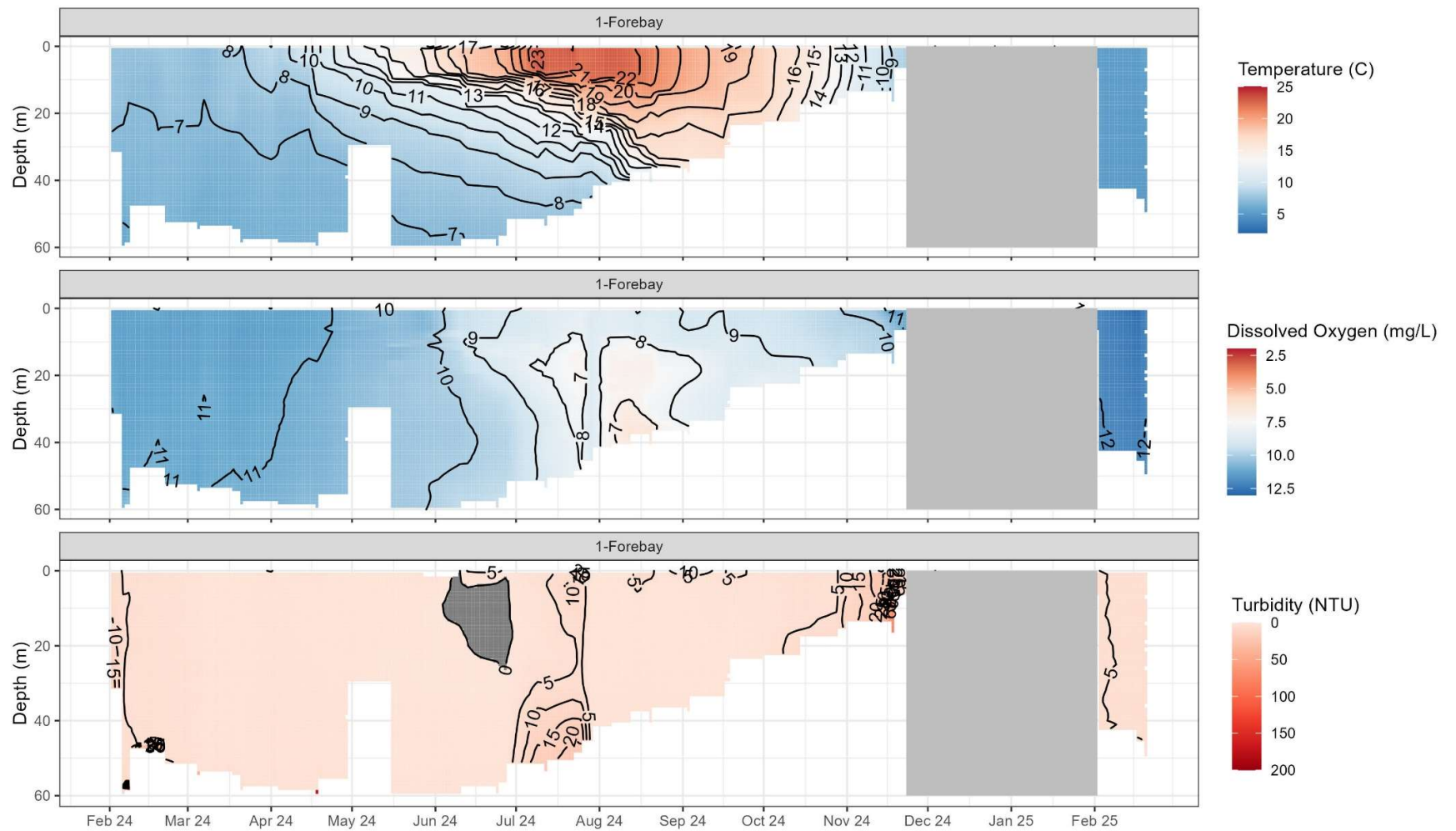


Figure 1. Lookout Point limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.

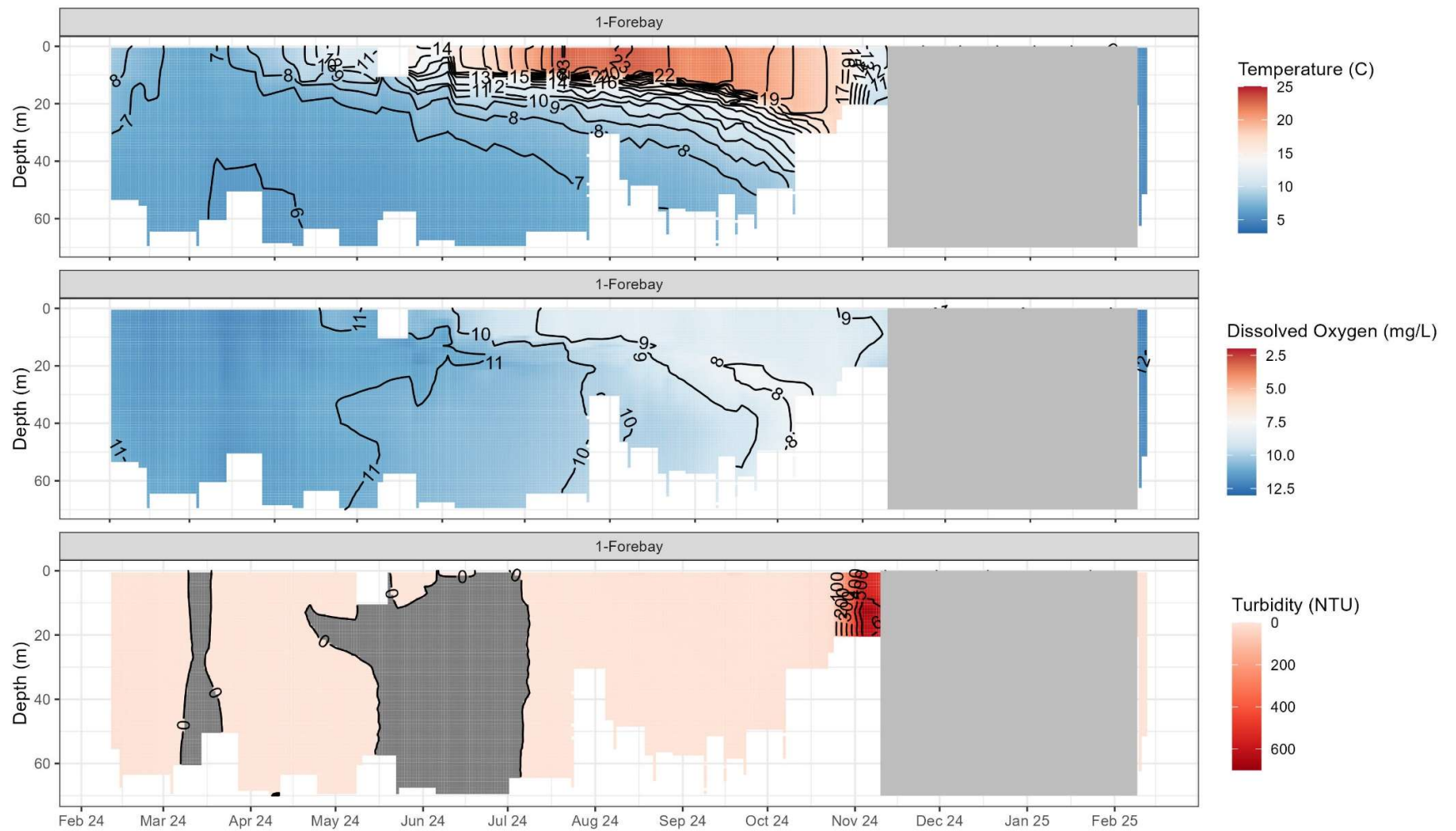


Figure 2. Green Peter limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.



## RIVERINE SAMPLING SUMMARY

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Riverine sampling was conducted on a weekly basis during the reporting for the Middle Santiam River using beach seines. Sampling on Quartzville Creek during the reporting period was limited to two days of beach seine effort as site access was restricted by the landslide on Quartzville Creek Road and adverse snow conditions on the alternate Rocky Top logging road access route. As of 2/20/2025, the landslide has been cleared and regular weekly sampling of Quartzville Creek will be recommenced starting 2/24/2025.

Field crews were able to access and sample Quartzville Creek on 2/3/2025 and 2/4/2025. These sample days were the first time CFS was able to assess the sites since the first site visit with USACE, CFS, and partner groups that took place on 12/10/2024. Seines were conducted along with some additional site scouting. Week 5 effort consisted of 18 seine hauls over two days (Table 6). Eleven hauls were performed with the 9.1 m pole seine and seven hauls were conducted with the 20 m river seine. The water temperature averaged 3.64 C (Table 7). Over two days of sampling (n=11 pole seine hauls, n=7 river seine hauls), no juvenile Chinook salmon were captured. Four non-target fish were caught, consisting of 3 unidentified dace, and an unidentified sculpin. During week 6, access was attempted via the Campbell Global Rocky Top logging road. Conditions on the road were poor, with 12-18 inches of uncleared snow causing hazardous driving conditions. For safety reasons, the survey was called off for the week. CFS technicians assisted the EAS Middle Santiam seine crew and provided support for other MATOC Willamette Valley projects (i.e., bulk marking and reservoir distribution studies).

The Middle Santiam River was sampled this reporting period from 2/5/2025 through 2/7/2025 and 2/11/2025 through 2/13/2025 (Table 6). Week 5 effort on the Middle Santiam consisted of 21 hauls over three days. The water temperature for the week averaged 3.75 C (Table 7). Over three days of sampling (n=17 pole seine hauls, n=4 river seine hauls), 6 juvenile Chinook salmon, and 1 juvenile unidentified dace were captured (Tables 6, 8, 9). Chinook salmon catch consisted of six natural origin fry, two of which were implanted with PIT tags (Table 10). During week 5, river seine gear trials (n=4) were conducted in the large pool upstream of the rotary screw trap (RST) while the trap's cone was raised. This location was selected as it was the only pool of sufficient size near the study reach to test the river seine. Fish captured during these trials were immediately released back into the same unit to minimize disturbance. River seine gear trials were coordinated with EAS biologists to ensure no bias was introduced to RST results. After completion of the trials, the reach boundary was extended down to the reservoir full pool boundary to create pool sites suitable for the river seine, which will be used moving forward. Week 6 effort on the Middle Santiam consisted of 18 hauls over three days. The water temperature for the week averaged 2.76 C (Table 7). Over three days of sampling (n=17 pole seine hauls, n=1 river seine hauls), 2 natural origin Chinook salmon fry were captured (Tables 6, 8, 9). No Chinook salmon were tagged during week 6. There were no recaptures during the reporting period.

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

Week	Start	End	River	Seine Type	Effort (# Hauls)
3	1/23/2025	1/24/2025	Middle Santiam	Pole	17
3	1/23/2025	1/24/2025	Middle Santiam	River	0
4	1/29/2025	1/31/2025	Middle Santiam	Pole	18
4	1/29/2025	1/31/2025	Middle Santiam	River	0
5	2/3/2025	2/4/2025	Quartzville Creek	Pole	11
5	2/3/2025	2/4/2025	Quartzville Creek	River	7
5	2/5/2025	2/7/2025	Middle Santiam	Pole	17
5	2/5/2025	2/7/2025	Middle Santiam	River	4
6	2/11/2025	2/14/2025	Middle Santiam	Pole	17
6	2/11/2025	2/14/2025	Middle Santiam	River	1

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

Week	River	Mean Water Temperature °C
3	Middle Santiam	4.45
4	Middle Santiam	3.01
5	Quartzville Creek	3.64
5	Middle Santiam	3.75
6	Middle Santiam	2.76

Table 8. Summary of total catch by river. CHS – Chinook salmon, RBT – *O. mykiss*, DACE – Unidentified Dace, SCU – Unidentified Sculpin.

Week	River	CHS	RBT	DACE	SCU
3	Middle Santiam	4	0	1	0
4	Middle Santiam	1	0	1	0
5	Quartzville Creek	0	0	3	1
5	Middle Santiam	6	0	1	0
6	Middle Santiam	2	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
3	Middle Santiam	CHS-natural	fry	0	0	4	0	4
4	Middle Santiam	CHS-natural	fry	0	0	1	0	1
5	Quartzville Creek	No Catch	-	-	-	-	-	-
5	Middle Santiam	CHS-natural	fry	0	0	6	0	6
6	Middle Santiam	CHS-natural	fry	0	0	2	0	0

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

Week	River	Species	Lifestage	Catch	Min FL	Mean FL	Max FL	# VIE tagged	# PIT tagged	# recap
3	MS	CHS-natural	fry	4	32	35.2	40	1	0	0
4	MS	CHS-natural	fry	1	39	39	39	0	0	1
5	QTZ	No Catch	-	-	-	-	-	-	-	-
5	MS	CHS-natural	fry	6	37	39.4	45	0	2	0
6	MS	CHS-natural	fry	2	35	35.5	36	0	0	0



## APPENDIX A. RESERVOIR SAMPLING ZONES

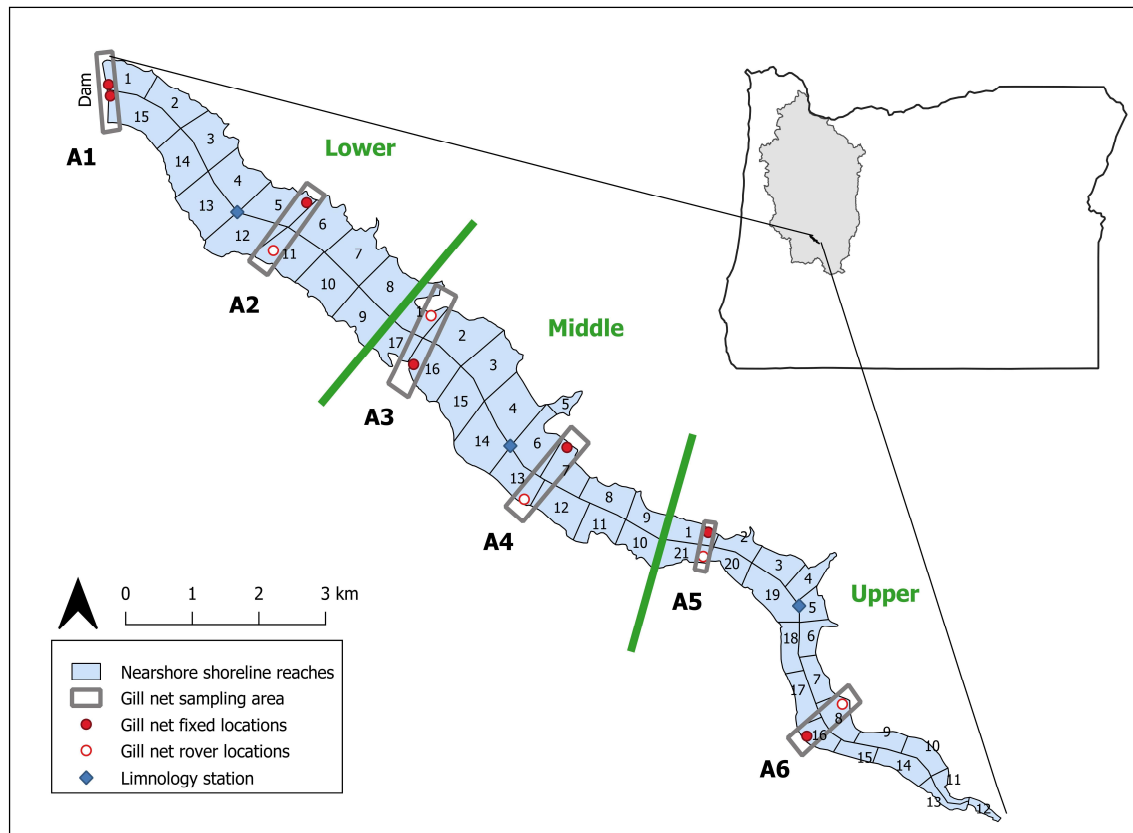


Figure A1. Map of LOP Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.

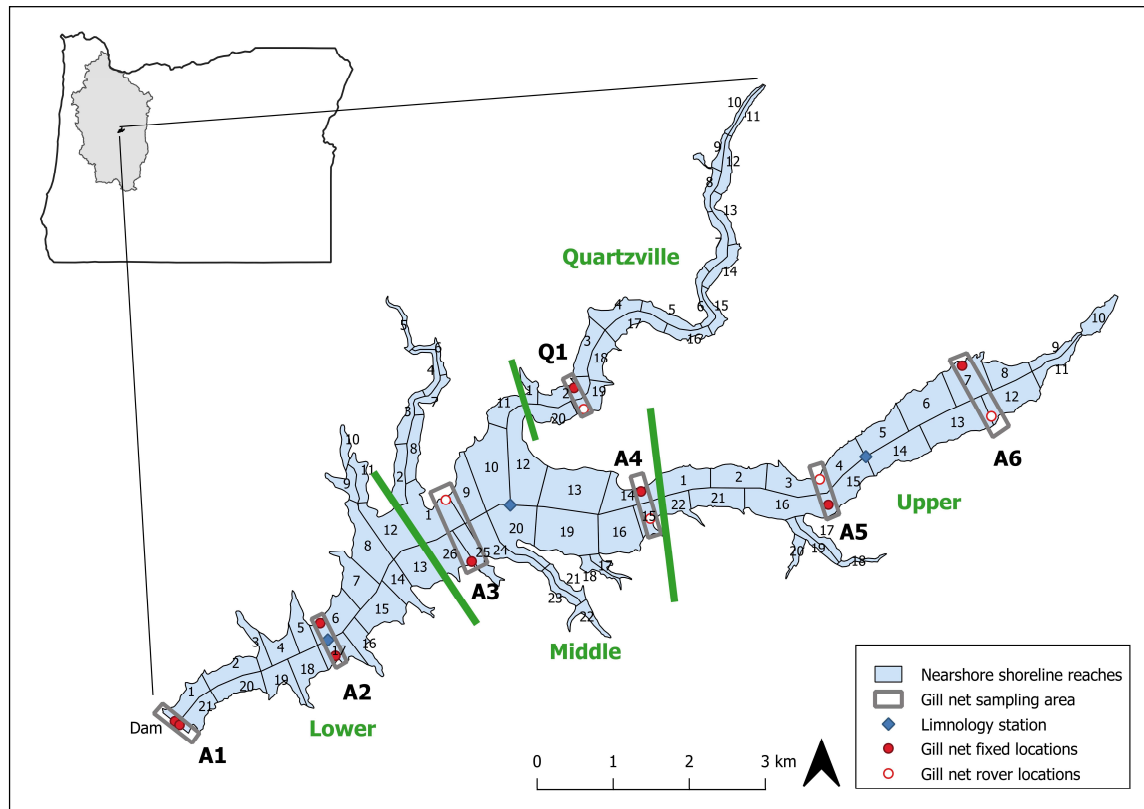


Figure A2. Map of Green Peter Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.