

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

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Bi-Weekly Report: April 01 – April 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.

On Lookout Point Reservoir, traps were deployed on 04/01/2025 and pulled for the week on 04/04/2025. During the sampling week, average surface temperatures were 8.5 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, except in the upper zone from 04/02 to 04/03, where five box minnow traps were deployed. Two of these were newly constructed traps with a slightly different design (featuring a deeper throat). These new traps are intended to increase sampling effort in targeted areas near the river mouth in future surveys. Since this was their first week in use, we conducted a preliminary comparison to assess potential differences in CPUE between the old and new trap designs. To avoid biasing the original CPUE measurements, the new traps were placed in the same cell as the regular trap, but on the following day, allowing a rough comparison of catch rates without overlapping sets. Over the course of the sampling week (n=9 Oneida sets, n=31 box minnow sets), two subyearling natural origin Chinook salmon, four natural origin *O. mykiss*, six cutthroat trout, one northern pikeminnow, one sculpin, and seven white crappie were captured (Tables 1, 3-5). The Chinook salmon were 67.5 mm fork length on average; one was captured in the Lower reservoir zone and the other was captured in the Middle reservoir zone. The *O. mykiss* were 104.5 mm on average; two were captured in the Middle reservoir zone and two were captured in the Upper reservoir zone. All the captured salmonids were of natural origin and were implanted with PIT tags. Lookout Point Reservoir was also sampled the week of 4/14/2025-4/17/2025 (week 16). Week 16 results will be included in the next biweekly reporting period.

Green Peter Reservoir was sampled from 04/7/2025 – 04/10/2025. Over the sampling week, average surface temperatures were 10.4 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. Over the course of the sampling week (n=9 Oneida sets, n=24 box minnow sets), 82 Chinook salmon were captured, 80 of which were from a single Oneida set in the Quartzville zone; the other two Chinook salmon were captured in the upper zone (Tables 1, 3-5). Of all the Chinook salmon captured, 43 were hatchery origin subyearlings (mean FL = 56.5) (42 were confirmed recaptures from the bulk marking project and the last was adipose clipped but had likely shed its PIT tag), 20 were natural origin fry (mean FL = 39.9), and 19 were natural origin sub-yearlings (mean FL = 55.8). There were a few mortalities across these groups, most of which appeared to be due to fungal infections: nine in the hatchery origin group, six among the natural origin fry, and three of the natural origin sub-yearlings. Sixteen of the natural origin Chinook salmon subyearlings were implanted in the field with PIT tags. We are in the process of securing a permit modification from NOAA and ODFW to increase our permitted incidental mortality take on Green Peter Reservoir, which was exceeded for Chinook salmon this reporting period. Diseased specimens will be retained in future for transfer to the ODFW pathologist.

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

| Week | Start     | End       | Reservoir     | Net Type   | Effort<br>(# sets) | Effort<br>(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             |

| Week | Start     | End       | Reservoir     | Net Type   | Effort<br>(# sets) | Effort<br>(hrs) |
|------|-----------|-----------|---------------|------------|--------------------|-----------------|
| 8    | 2/17/2025 | 2/20/2025 | Lookout Point | oneida     | 9                  | 208             |
| 9    | 2/24/2025 | 2/27/2025 | Green Peter   | box minnow | 26                 | 615             |
| 9    | 2/24/2025 | 2/27/2025 | Green Peter   | oneida     | 11                 | 261             |
| 10   | 3/3/2025  | 3/6/2025  | Lookout Point | box minnow | 27                 | 646             |
| 10   | 3/3/2025  | 3/6/2025  | Lookout Point | oneida     | 9                  | 214             |
| 11   | 3/10/2025 | 3/14/2025 | Green Peter   | box minnow | 30                 | 841             |
| 11   | 3/10/2025 | 3/14/2025 | Green Peter   | oneida     | 12                 | 301             |
| 12   | 3/17/2025 | 3/20/2025 | Lookout Point | box minnow | 18                 | 655             |
| 12   | 3/17/2025 | 3/20/2025 | Lookout Point | oneida     | 6                  | 218             |
| 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             |

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                              |

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 - Large-scale 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    |

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

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

| Week | Reservoir     | Species     | Lifestage    | LOWER | MIDDLE | UPPER | QUARTZVILLE |
|------|---------------|-------------|--------------|-------|--------|-------|-------------|
| 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          |

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           |

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



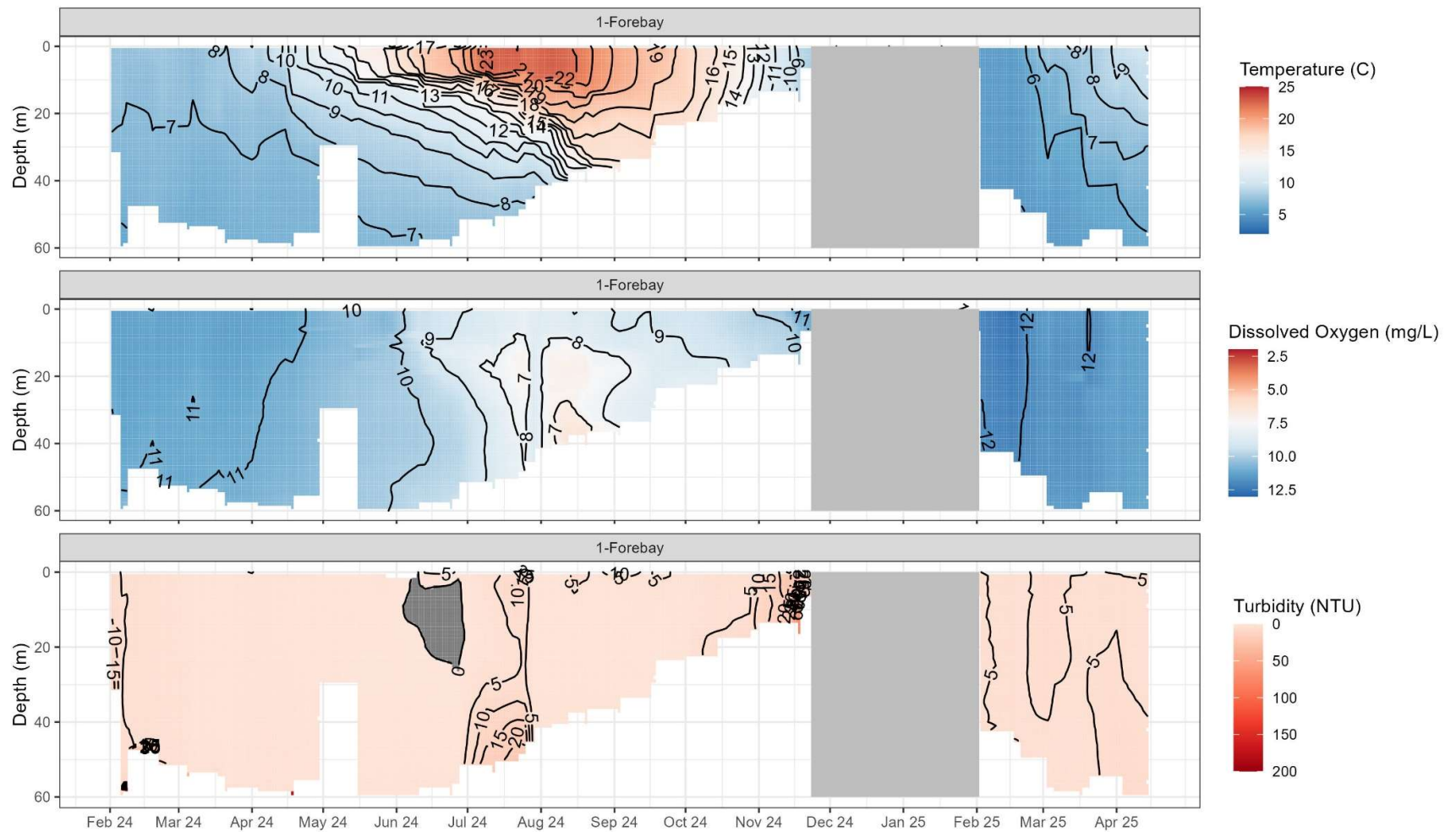


Figure 1. Lookout Point limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.

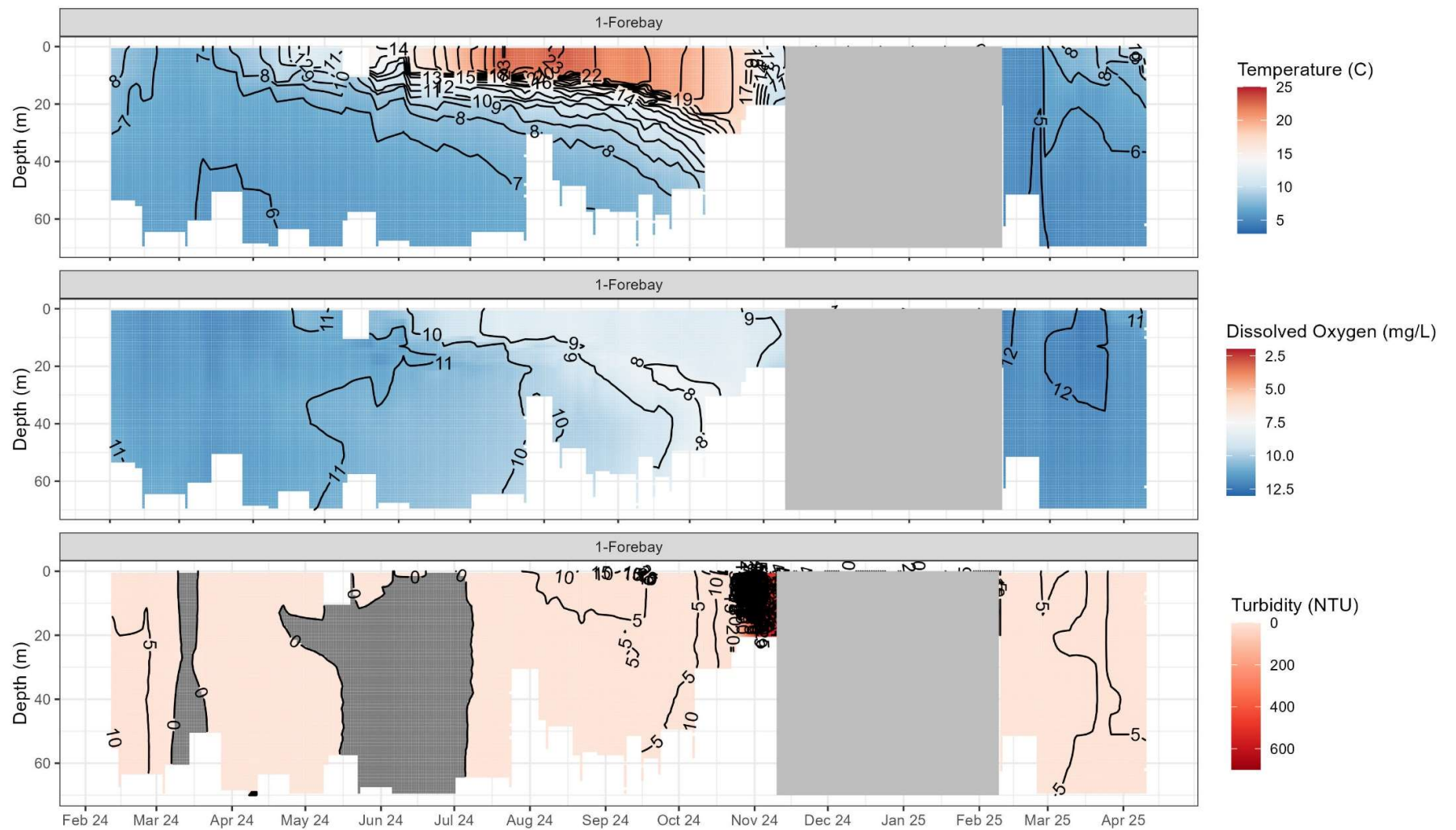


Figure 2. Green Peter limnology data. Light gray indicates no sampling. Turbidity data in dark gray have been removed due to a sensor malfunction/calibration issue.



## RIVERINE SAMPLING SUMMARY

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

Quartzville Creek was sampled during this reporting period on 4/1, 4/2, and 4/3/2025 (Week 14), from 4/7/2025 - 4/11/2025 (Week 15), and on 4/14/2025 (Week 16) (Table 6). Week 14 effort consisted of 23 seine hauls over 3 days (Table 6). The water temperature averaged 6.30 C for Week 14 (Table 7). Over three days of sampling (n = 12 pole seine hauls, n = 11 river seine hauls), 31 dace and one sculpin were captured (Table 8). Week 15 consisted of three days of seining effort 4/7/2025 – 4/9/2025 and two nights 4/10/2025 - 4/11/2025. Week 15 daytime effort consisted of 23 seine hauls (Table 6). The water temperature averaged 7.13 C for Week 15 (Table 7). Over three days of sampling (n= 13 pole seine hauls, n = 10 river seine hauls), one natural-origin juvenile Chinook salmon and three dace were captured (Table 8). Week 15 nighttime effort consisted of 15 seine hauls (Table 6). Over the two nights of sampling (n = 8 pole seine hauls, n = 7 river seine hauls), one hatchery-origin juvenile Chinook salmon, 44 dace and five sculpin were captured (Table 8). The hatchery-origin Chinook salmon was a recapture and the natural-origin Chinook salmon was too small to PIT tag. Week 16 data are preliminary for this reporting period as the 15<sup>th</sup> of the month fell on a Tuesday. Preliminary data for week 16 include a single day of effort (4/14/2025) consisting of eight seine hauls (n = 4 pole seine hauls, n = 4 river seine hauls) capturing nine dace. Mean water temperature was 7.60 degrees during week 16.

The Middle Santiam River was sampled this reporting period from 4/3/2025 – 4/5/2025 (Week 14; daytime), from 4/7/2025 - 4/8/2025 (Week 15; nighttime) and from 4/10/2025 - 4/12/2025 (Week 15; daytime) (Table 6). Water temperature during week 14 averaged 6.10 C (Table 7). Sampling effort during week 14 consisted of 20 hauls over three days. Over the sampling week (n = 14 pole seine hauls, n = 6 river seine hauls), four hatchery-origin juvenile Chinook salmon, nine natural-origin juvenile Chinook salmon, and nine dace were captured. One of the natural-origin Chinook salmon was greater than 45 mm fork length and was implanted with a PIT tag. Of the four hatchery-origin captures, only one had a PIT tag. Week 15 on the Middle Santiam consisted of two nights and three days of seining effort. The water temperature for the week averaged 6.96 C (Table 7). Week 15 nighttime effort consisted of four river seine hauls and eight pole seine hauls that captured four hatchery-origin juvenile Chinook salmon, five natural-origin juvenile Chinook salmon, one natural-origin *O. mykiss*, four dace and three sculpin (Tables 8-10). All four of the hatchery-origin Chinook were recaptures. One natural-origin Chinook salmon was greater than 45 mm and was PIT-tagged, as was the one natural-origin *O. mykiss*. Week 15 daytime effort consisted of 14 pole seine and six river seine hauls over three days. Catch during daytime sampling consisted of two hatchery-origin juvenile Chinook salmon, 17 natural-origin juvenile Chinook salmon, and two sculpin. The hatchery-origin Chinook salmon were both recaptures as were two of the natural-origin Chinook salmon. Aside from the recaptures, a total of five of the natural-origin Chinook salmon were large enough to be implanted with a PIT tag.

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   | 2025/04/01 | 2025/04/03 | Quartzville Creek | Day        | Pole       | 12               |
| 14   | 2025/04/01 | 2025/04/03 | Quartzville Creek | Day        | River      | 11               |
| 14   | 2025/04/03 | 2025/04/05 | Middle Santiam    | Day        | Pole       | 14               |
| 14   | 2025/04/03 | 2025/04/05 | Middle Santiam    | Day        | River      | 6                |
| 15   | 2025/04/07 | 2025/04/08 | Middle Santiam    | Night      | Pole       | 8                |
| 15   | 2025/04/07 | 2025/04/08 | Middle Santiam    | Night      | River      | 4                |
| 15   | 2025/04/07 | 2025/04/09 | Quartzville Creek | Day        | Pole       | 13               |
| 15   | 2025/04/07 | 2025/04/09 | Quartzville Creek | Day        | River      | 10               |
| 15   | 2025/04/10 | 2025/04/11 | Quartzville Creek | Night      | Pole       | 8                |
| 15   | 2025/04/10 | 2025/04/11 | Quartzville Creek | Night      | River      | 7                |
| 15   | 2025/04/10 | 2025/04/12 | Middle Santiam    | Day        | Pole       | 14               |
| 15   | 2025/04/10 | 2025/04/12 | Middle Santiam    | Day        | River      | 6                |
| 16   | 2025/04/14 | 2025/04/14 | Quartzville Creek | Day        | Pole       | 4                |
| 16   | 2025/04/14 | 2025/04/14 | Quartzville Creek | Day        | River      | 4                |

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   | Quartzville Creek | 7.60                      |

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

| Week | River             | Day/<br>Night | CHS | RBT | DACE | SCU | Sucker | Lamprey |
|------|-------------------|---------------|-----|-----|------|-----|--------|---------|
| 4    | Middle Santiam    | Day           | 4   | 0   | 1    | 0   | 0      | 0       |
| 5    | Middle Santiam    | Day           | 1   | 0   | 1    | 0   | 0      | 0       |
| 6    | Quartzville Creek | Day           | 0   | 0   | 3    | 1   | 0      | 0       |
| 6    | Middle Santiam    | Day           | 6   | 0   | 1    | 0   | 0      | 0       |
| 7    | Middle Santiam    | Day           | 2   | 0   | 0    | 0   | 0      | 0       |
| 8    | Quartzville Creek | Day           | 3   | 0   | 11   | 1   | 0      | 0       |
| 8    | Middle Santiam    | Day           | 6   | 0   | 0    | 0   | 0      | 0       |
| 9    | Quartzville Creek | Day           | 1   | 0   | 26   | 4   | 0      | 0       |
| 9    | Middle Santiam    | Day           | 0   | 0   | 1    | 0   | 0      | 0       |
| 10   | Quartzville Creek | Day           | 0   | 0   | 27   | 0   | 0      | 0       |
| 10   | Middle Santiam    | Day           | 0   | 0   | 2    | 0   | 0      | 0       |
| 11   | Quartzville Creek | Day           | 0   | 0   | 55   | 0   | 0      | 0       |
| 11   | Quartzville Creek | Night         | 10  | 5   | 29   | 41  | 1      | 1       |
| 11   | Middle Santiam    | Night         | 2   | 4   | 4    | 1   | 1      | 2       |
| 11   | Middle Santiam    | Day           | 3   | 0   | 1    | 0   | 0      | 0       |
| 12   | Quartzville Creek | Day           | 3   | 0   | 21   | 0   | 0      | 0       |
| 12   | Middle Santiam    | Day           | 0   | 0   | 0    | 0   | 0      | 0       |
| 13   | Quartzville Creek | Day           | 0   | 0   | 3    | 0   | 0      | 0       |
| 13   | Quartzville Creek | Night         | 0   | 4   | 7    | 2   | 0      | 0       |
| 13   | Middle Santiam    | Night         | 1   | 4   | 1    | 5   | 0      | 0       |
| 13   | Middle Santiam    | Day           | 0   | 0   | 1    | 0   | 0      | 0       |
| 14   | Middle Santiam    | Day           | 13  | 0   | 9    | 0   | 0      | 0       |
| 14   | Quartzville Creek | Day           | 0   | 0   | 31   | 1   | 0      | 0       |
| 15   | Middle Santiam    | Day           | 19  | 0   | 0    | 2   | 0      | 0       |
| 15   | Middle Santiam    | Night         | 9   | 1   | 4    | 3   | 0      | 0       |
| 15   | Quartzville Creek | Day           | 1   | 0   | 6    | 0   | 0      | 0       |
| 15   | Quartzville Creek | Night         | 1   | 0   | 44   | 5   | 0      | 0       |
| 16   | Quartzville Creek | Day           | 0   | 0   | 9    | 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     |

| Week | River             | Species        | Lifestage | Riffle | Run | Pool | Pooltail | Total |
|------|-------------------|----------------|-----------|--------|-----|------|----------|-------|
| 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- hatchery  | 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-hatchery   | fry       | 0      | 0   | 1    | 0        | 1     |
| 11   | Middle Santiam    | CHS- hatchery  | 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-hatchery   | 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 - Hatchery | Fry       | 0      | 2   | 0    | 0        | 2     |
| 14   | Middle Santiam    | CHS - Hatchery | Parr      | 0      | 2   | 0    | 0        | 2     |
| 14   | Middle Santiam    | CHS - Natural  | Fry       | 0      | 5   | 1    | 0        | 6     |
| 14   | Middle Santiam    | CHS - Natural  | Parr      | 0      | 3   | 0    | 0        | 3     |
| 15   | Middle Santiam    | CHS - Hatchery | Parr      | 0      | 3   | 0    | 0        | 3     |
| 15   | Middle Santiam    | CHS - Hatchery | 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 - Hatchery | Parr      | 0      | 0   | 1    | 0        | 1     |
| 15   | Quartzville Creek | CHS - Natural  | Juvenile  | 0      | 0   | 1    | 0        | 1     |

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 | # PIT tagged | # recap |
|------|-------|-------------|-----------|-------|--------|---------|--------|--------------|---------|
| 4    | MS    | CHS-natural | fry       | 4     | 32     | 35.2    | 40     | 0            | 0       |
| 5    | MS    | CHS-natural | fry       | 1     | 39     | 39      | 39     | 0            | 1       |
| 6    | QTZ   | No Catch    | -         | 0     | -      | -       | -      | 0            | 0       |
| 6    | MS    | CHS-natural | fry       | 6     | 37     | 39.4    | 45     | 2            | 0       |
| 7    | MS    | CHS-natural | fry       | 2     | 35     | 35.5    | 36     | 0            | 0       |
| 8    | QTZ   | CHS-natural | fry       | 3     | 31     | 34      | 37     | 0            | 0       |
| 8    | MS    | CHS-natural | fry       | 7     | 34     | 35.9    | 42     | 0            | 0       |
| 9    | QTZ   | CHS-natural | fry       | 1     | 29     | 29      | 29     | 0            | 0       |
| 9    | MS    | No Catch    | -         | 0     | -      | -       | -      | 0            | 0       |
| 10   | QTZ   | No Catch    | -         | 0     | -      | -       | -      | 0            | 0       |
| 10   | MS    | No Catch    | -         | 0     | -      | -       | -      | 0            | 0       |



| Week | River | Species       | Lifestage | Catch | Min FL | Mean FL | Max FL | # PIT tagged | # recap |
|------|-------|---------------|-----------|-------|--------|---------|--------|--------------|---------|
| 11   | QTZ   | CHS-natural   | fry       | 5     | 33     | 40.2    | 46     | 1            | 0       |
| 11   | QTZ   | CHS-natural   | smolt     | 2     | 109    | 116.5   | 124    | 2            | 0       |
| 11   | QTZ   | CHS- hatchery | fry       | 3     | 44     | 46      | 47     | 0            | 3       |
| 11   | QTZ   | RBT- natural  | juvenile  | 4     | 92     | 94.75   | 99     | 0            | 0       |
| 11   | QTZ   | RBT-natural   | adult     | 1     | 205    | 205     | 205    | 0            | 0       |
| 11   | MS    | CHS-natural   | fry       | 3     | 33     | 36.67   | 39     | 0            | 0       |
| 11   | MS    | CHS- hatchery | fry       | 1     | 47     | 47      | 47     | 0            | 1       |
| 11   | MS    | CHS- hatchery | smolt     | 1     | 135    | 135     | 135    | 1            | 1       |
| 11   | MS    | RBT- natural  | juvenile  | 4     | 121    | 157.75  | 187    | 0            | 0       |
| 12   | QTZ   | CHS-hatchery  | fry       | 1     | 35     | 35      | 35     | 0            | 0       |
| 12   | QTZ   | CHS-natural   | fry       | 2     | 38     | 41      | 44     | 0            | 0       |
| 12   | MS    | No Catch      | -         | 0     | -      | -       | -      | 0            | 0       |
| 13   | QTZ   | RBT-natural   | juvenile  | 4     | 125    | 140.5   | 160    | 4            | 0       |
| 13   | MS    | CHS-natural   | fry       | 1     | 43     | 43      | 43     | 0            | 0       |
| 13   | MS    | RBT-natural   | juvenile  | 4     | 115    | 129.5   | 150    | 3            | 1       |
| 14   | MS    | CHS-Hatchery  | Fry       | 43    | 45     | 47      | 0      | 0            | 14      |
| 14   | MS    | CHS-Hatchery  | Parr      | 53    | 54     | 55      | 1      | 0            | 14      |
| 14   | MS    | CHS-Natural   | Fry       | 37    | 40     | 42      | 1      | 0            | 14      |
| 14   | MS    | CHS-Natural   | Parr      | 41    | 46     | 54      | 1      | 1            | 14      |
| 15   | MS    | CHS-Hatchery  | Parr      | 52    | 55.    | 58      | 3      | 0            | 15      |
| 15   | MS    | CHS-Hatchery  | Smolt     | 173   | 184    | 197     | 3      | 0            | 15      |
| 15   | MS    | CHS-Natural   | Fry       | 36    | 40     | 45      | 0      | 1            | 15      |
| 15   | MS    | CHS-Natural   | Parr      | 44    | 47     | 55      | 2      | 5            | 15      |
| 15   | MS    | RBT-Natural   | Smolt     | 183   | 183    | 183     | 0      | 1            | 15      |
| 15   | QTZ   | CHS-Hatchery  | Parr      | 49    | 49     | 49      | 1      | 0            | 15      |
| 15   | QTZ   | CHS-Natural   | Juvenile  | 30    | 30     | 30      | 0      | 0            | 15      |

## APPENDIX A. RESERVOIR SAMPLING ZONES

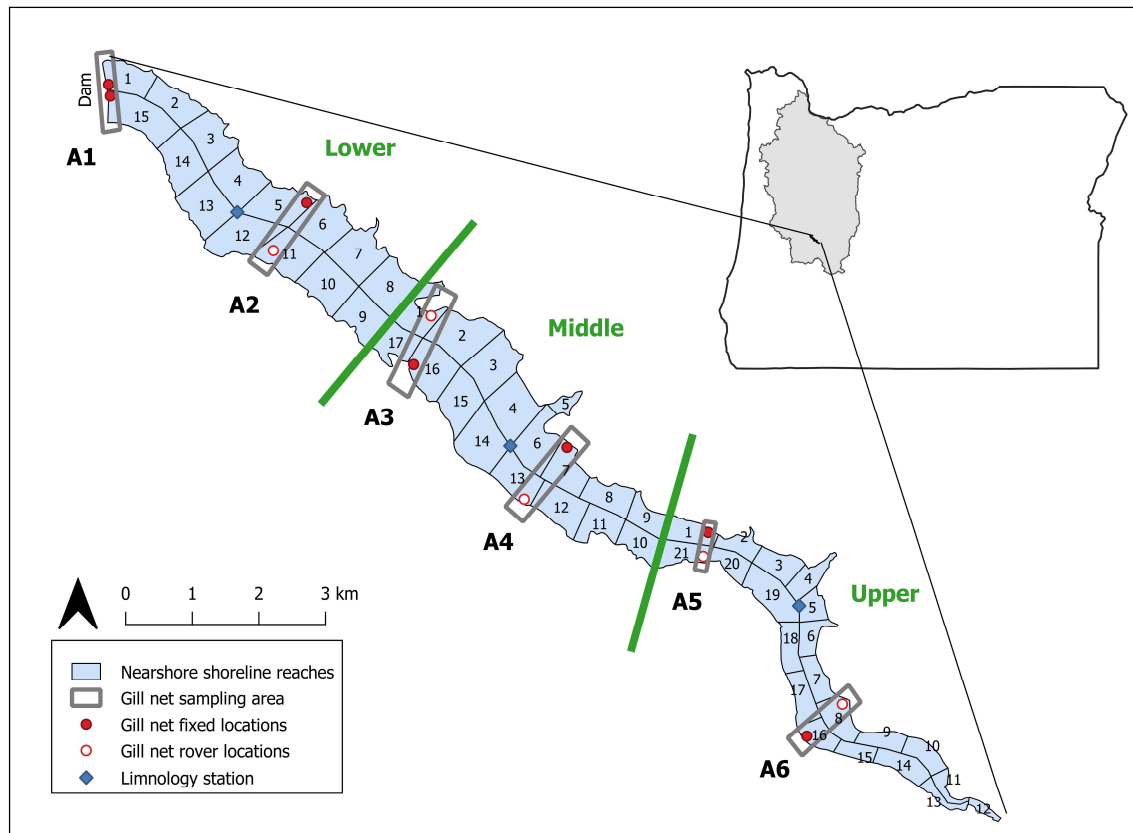


Figure A1. Map of LOP Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.

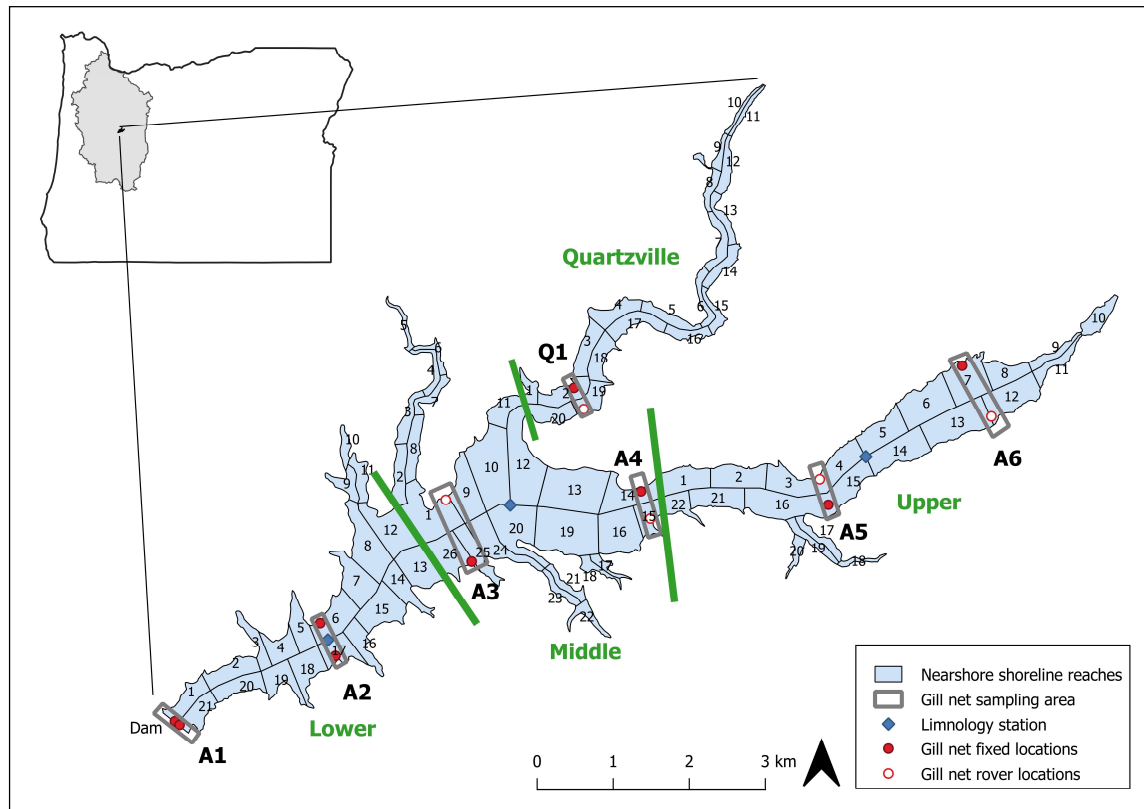


Figure A2. Map of Green Peter Reservoir nearshore shoreline reaches, reservoir zones (lower, middle and upper), gill netting sampling areas and limnological stations.