

Priest Rapids Coordinating Committee (PRCC) Meeting

**In Person at Douglas PUD Auditorium
and Microsoft Teams
Tuesday, April 22, 2025
9:00 a.m. to 12:00 p.m.**

Meeting Minutes

PRCC Representatives, Alternates, and Facilitation

Tom Dresser, Rod O'Connor (Alt),	Keely Murdoch, Brandon Rogers (Alt), YN
Tim Taylor (Alt), GPUD	Tom Lorz, Pete McHugh (Alt), CTUIR
Scott Carlon, Justin Yeager (Alt), NMFS	Clayton Buck, Wanapum
Bill Gale, USFWS	Larissa Rohrbach, Anchor QEA, Facilitator
Chad Jackson, Andrew Murdoch (Alt), WDFW	Kristi Geris, Anchor QEA, Technical Support
Kirk Truscott, Casey Baldwin (Alt), CTCR	

Meeting Attendees

Larissa Rohrbach, Anchor QEA, Facilitator	Quinn Payton, RTR
Caitlin Burd, Anchor QEA, Technical Support	Katie Adase RTR
Kirk Truscott, CTCR	Nate Banet, RTR
Tom Lorz, CTUIR	Bill Gale, USFWS
Tom Dresser, GPUD	Chad Jackson, WDFW
Rod O'Connor, GPUD	Andrew Murdoch, WDFW
Tim Taylor, GPUD	Keely Murdoch, YN
Allen Evans, RTR	

Action Items

- L. Rohrbach will work with T. Dresser to identify proposed dates for a PRCC Policy Committee meeting, including a timeline for materials preparation, tentatively in the July to August 2025 time frame. *(This item is ongoing.)*
- Grant PUD will discuss internally whether outcomes from past survival studies may be summarized to inform avian predation studies.

Review Items

- None.

Decisions and Approvals

- The PRCC representatives in attendance approved the request from Real Time Research (RTR) for No Net Impact (NNI) Funds (H601) of \$25,796 for a proposed additional task to the study entitled “Avian Predation on ESA-listed Juvenile Salmonids on the Middle Columbia River, 2025.” *(Note: Scott Carlon provided National Marine Fisheries Service’s (NMFS’s) approval via email on April 23.)*

I. Welcome, Announcements, Agenda Review, and Meeting Minutes Approval

L. Rohrbach welcomed the PRCC and reviewed the agenda. No additions or changes were requested by PRCC members, and the agenda was approved by all parties in attendance.

The draft March 25 PRCC meeting minutes were distributed by K. Geris on April 8. No edits were received, but updates were made to the review items. The revised minutes for approval were distributed on April 15. There was one last update to an action item (shown in tracked changes). P. McHugh approved the revised minutes via email on April 16. The minutes were approved by members who attended that meeting. *(Note: Scott Carlon provided NMFS’s approval via email on April 23.)*

II. Actions Items Review

Action items from the PRCC March 25 meeting and follow-up discussions were as follows *(Note: Italicized text corresponds to agenda items from the March 25 meeting.)*:

- *Anchor QEA will add Emi Melton (NMFS) to the PRCC secondary email list and will confirm PRCC Sharepoint access.*
E. Melton was added to the email list on March 26 and SharePoint access was confirmed on April 2.
- *L. Rohrbach will work with T. Dresser to identify proposed dates for a PRCC Policy Committee meeting, including a timeline for materials preparation, tentatively in the July to August 2025 time frame.*
This item is ongoing.

III. DECISION: RTR 2025 Avian Predation Work

RTR’s draft 2024 Avian Predation Annual Report and Appendix C were distributed to the PRCC by K. Geris on March 7 for a 30-day review. Comments were received from the Yakama Nation (YN) and Columbia River Inter-Tribal Fish Commission (CRITFC), as distributed on April 7, and RTR responses to PRCC comments and the final 2024 Avian Predation Annual Report were distributed on April 10.

L. Rohrbach shared the YN's *PRCC NNI Funds Project Specification Sheet Avian Predation on ESA-Listed Juvenile Salmonids – 2025*.¹ L. Rohrbach recalled that K. Murdoch added proposed language for an additional task under Objective 4 as follows:

- *Task 4.1: Work with the PRCC to develop a statistical plan which makes use of passive detections at Rocky Reach Dam and the Wenatchee PIT tag barge to inform population and origin specific predation rates.*

The PRCC determined that the deliverable would be a statistical plan to inform future analyses and tagging efforts. RTR developed a study plan based on their interpretation of this additional task. L. Rohrbach shared RTR's *Proposed Additional Task for the study entitled "Avian Predation on ESA-listed Juvenile Salmonids on the Middle Columbia River, 2025"* (Attachment A). A. Evans provided an overview of the proposed study plan to the committee. RTR reworded the task to read as follows:

- *Investigate statistical model(s) that utilize passive detections of PIT-tagged smolts from multiple release sites in the Middle Columbia River to inform stock-specific and population-wide estimates of avian predation and survival*

A. Evans said the proposed study plan was based on the initial study scoping document. Additions included more detail on specific fish species and stocks to be investigated as well as potential analytical frameworks. The proposed study plan was also informed by previous PRCC discussions on analysis of predation and survival on stocks captured and tagged at other locations than Rock Island Dam. Analytical frameworks will be explored to characterize predation and survival on a broader group of fish (e.g., including fish tagged at their release sites and at various recapture sites) to create a sample that is representative of the population at large. A challenge to implementing this framework would be that stocks are released from significantly different systems at different times of the year. A large-scale population analysis of a known pool of fish through space and time is needed to effectively model and estimate predation and survival. The modeling scheme is anticipated to have a travel time component to accommodate for this spatial and temporal variance across release sites in areas such as the Wenatchee and Entiat basins.

K. Murdoch said it would be beneficial for this study to inform whether passive integrated transponder (PIT)-tagging rates in the upper Columbia River are sufficient for this analysis, specifically for natural-origin fish. It will be important to identify which areas would require an increase in tagging efforts to obtain useful estimates. A. Evans replied that the analysis will generate precision estimates. Precision of estimates based

¹ Distributed to the PRCC by K. Geris on February 18.

on current releases will inform power analyses that have the ability to determine the number of additional PIT-tagged fish needed to achieve desired precision.

K. Murdoch noted that the description within the proposed study plan calls out the tributaries of the Wenatchee, Entiat, Okanogan (Okanogan), and Twisp rivers. The reference to the Twisp River should be replaced with the Methow River. There are smolt traps that PIT tag fish on both the mainstem Methow River and Twisp River. Those two natural-origin sample groups are likely able to be combined due to the smolt traps being in the Methow Basin. It would be limiting to focus on one tributary within the Methow Basin. A. Evans agreed and replied that the goal of the proposal is to capture a wide array of release and capture sites within feasible analysis parameters.

K. Murdoch asked for further clarification on the stock-specific and population-wide estimates mentioned in the task section of the proposed study plan. A. Evans confirmed that the terminology “stocks” references the Wenatchee, Entiat, Okanogan, and Twisp stocks. The population as a whole refers to individual stocks coming together in space and time. This definition of population is what will be modeled to generate predation and survival estimates.

K. Murdoch said this type of analysis would be valuable even if it only generates stock-specific predation rates and is not feasible to estimate for the full upper Columbia River population. A. Evans said that estimates of recapture probability increase when stocks are mixed by the time they arrive at McNary Dam. Increased recapture probabilities directly tie to increased precision of survival estimates. The vision for the proposed study plan is to demonstrate different options of analysis and identify areas where precision is lacking. Individual release groups (particularly those of small sample sizes) may be difficult to distinguish. A point estimate may be obtained; however, it would be challenging to statistically conclude whether one group is performing better than others. A. Murdoch said that fish may have to be pooled across populations because of low sample size. Integrating the avian predation analysis with smolt survival analyses (accounting for travel time and percent spill) or environmental covariates would inform predation rates as well as the ecological conditions where those estimates are observed.

L. Rohrbach said the proposed study plan will be characterized as data exploration in 2025. The task ahead for 2025 will be to determine whether it is statistically possible to evaluate populations using different starting points in tributaries rather than at the Rocky Reach and Rock Island collectors. There is currently no proposal for evaluating environmental covariates. Would this change how the report is developed this year? A. Evans responded that there are currently not enough data to evaluate environmental covariates for year one of the proposed study. Evaluating environmental covariates would be included in phase two of the study. Survival studies planned to occur within

the upper Columbia River Basin will have double tag datasets that may help in answering questions regarding environmental covariates. K. Murdoch clarified that her proposed language for Task 4.1 did not intend to include environmental covariates. The task was intended to cover the basic analysis for the proposed study plan.

T. Dresser said it will be important to acknowledge management activities being implemented on various islands. There is a wealth of information on avian predation at Priest Rapids Dam. There has been an observed correlation between implementation of dissuasion activities and reduced predation. A. Evans said that RTR's predation analyses on single- and double-tagged steelhead revealed that avian predation is the major driver for survival within the Priest Rapids project. Other variables are likely important contributors to survival when analyzing the population on a larger spatial scale. T. Dresser acknowledged the implementation of a larger spatial scale but emphasized that this committee's primary focus is the Priest Rapids project.

T. Dresser proposed that the PRCC hold a progress update discussion with RTR before the completion of the draft report to identify data gaps. A. Evans said that the proposed study plan would include the use of retrospective data analysis for 2025 if approved by the PRCC. RTR will plan to reach out to the PRCC in August to provide a progress update and will contact the PRCC with any challenges that require earlier discussions.

A. Evans provided an update for what is planned for the 2025 field season. PIT-tag estimates to measure detection probability were collected at avian colonies in March. 905 steelhead were tagged as of April 21, 2025. Avian colony monitoring efforts have commenced with an aerial survey on April 27, 2025. Three more aerial surveys are scheduled for mid-May, early June, and early July during the season when chicks begin to fledge. The U.S. Army Corps of Engineers, CRITFC, the Confederated Tribes of the Umatilla Indian Reservation, and the YN have conducted passive dissuasion activities on Crescent Island and Badger Island. These activities included placing large woody debris in previous nesting locations. Passive dissuasion material has additionally been installed at the Goose Island Caspian tern colony.

T. Lorz inquired into the factors that may be affecting steelhead collection at Rock Island Dam (because last year record low numbers of steelhead were collected).

A. Evans replied that it is too early in the run to identify collection probability. The goal is to tag 7,000 steelhead. Chelan County has hired a contractor to analyze whether collection probability is driven by environmental conditions or operational conditions at the Rock Island and Rocky Reach facilities. K. Truscott inquired about the origin of the tagged steelhead. A. Evans replied that information on the origin of recaptures can be distributed to the PRCC. Currently, more natural-origin fish have been recaptured in comparison to hatchery-origin fish.

The PRCC representatives in attendance approved the request from RTR for NNI Funds (H601) of \$25,796 for a proposed additional task to RTR's proposed study plan (*Note: Scott Carlon provided NMFS's approval via email on April 23.*)

IV. PRCC Hatchery Subcommittee Update – White River Hatchery Program

L. Rohrbach provided the PRCC with updates to current discussion within the PRCC Hatchery Subcommittee (HSC). A review package that includes the following final documents has been distributed to the PRCC HSC for approval:

- Expert Panel Reading List
- Broodstock Collection Assessment Document
- Nason Unintentional Supplementation Document plus responses to comments (*Note: Transactions of the American Fisheries Society recently accepted this paper for publication.*)
- The following 10-Year Comprehensive Report chapters with discussions redacted
 - (Pearsons 2023a) Chapter 1 – Abundance BACI
 - (Buchanan et al. 2023) Chapter 2 – Juvenile/pHOS
 - (Small et al. 2023) Chapter 8 – Evaluating Genetic Metrics of Adult Natural- and Hatchery-Origin Spring Chinook Salmon in the Upper Columbia Basin

The Expert Panel Reading List is divided between readings that the PRCC HSC has identified as essential and optional for Expert Panel consideration. These documents would be delivered to the Expert Panel upon approval by the PRCC HSC and PRCC. The package was distributed for PRCC HSC committee review on May 5, 2025. The committee has a 5-day period to provide a vote before the package is elevated to the PRCC.

(Note: As of Monday, May 12, all PRCC HSC parties except NMFS voted to approve, or abstained from voting. Therefore, the Expert Panel review package will be distributed to the PRCC for their review and approval.)

V. 2025 to 2027 Smolt Survival Study Updates

T. Dresser said that Grant PUD has had conversations with potential helicopter contractors. A mandatory site visit is planned to occur in May 2025. Contract negotiations and development are planned to be completed in September. R. O'Connor said that Grant PUD plans to present a study plan to the PRCC at the May 27, 2025, meeting.

K. Murdoch proposed that it would be valuable to understand the effect of dam operations on smolt predation vulnerability. An analysis may reveal if higher rates of

predation occur for fish that pass through turbines, spillways, or the powerhouse. Management actions could subsequently be implemented to reduce predation vulnerability through project operations. This type of analysis could be conducted anywhere within the Columbia Basin where there is opportunity to investigate these metrics in the 2026 survival study. Data could be collected from double-tagged steelhead carcasses at avian colonies.

T. Dresser said that Grant PUD has spent 10 years evaluating juvenile steelhead survival through the Priest Rapids project area. Predation estimates that were previously attributed to bypasses and turbine systems were eventually identified to be due to Caspian terns. Survival and collection efficiency as a result of changing operations have been previously analyzed. Additionally, it is challenging to internally justify additional operational analyses when juvenile steelhead survival standards have been achieved.

K. Truscott suggested retrospectively analyzing existing data to determine previous correlations between predation rates and project facility operations. T. Lorz said a cost estimate for installation of forebay monitors in the powerhouse could be requested. It is unlikely that monitors would be expensive depending on the level of robustness of the analysis. K. Murdoch suggested this type of retrospective analysis could fill in data gaps in the interaction between project passage and avian predation.

T. Dresser said that revisiting the survival study plan to add passage route-specific monitoring will not be supported in 2026 and Grant PUD is moving forward with the approved study plan. Future studies could potentially include passage route-specific monitoring under some conditions. Grant PUD will discuss internally whether outcomes from past survival studies could be summarized retrospectively to inform avian predation studies.

VI. 2025 Fish Passage Operations Report

A. Fish Ladder Inspections

K. Murdoch said that the first fish ladder inspection will occur the week of April 28, 2025.

B. Fish Spill Updates

L. Rohrbach recalled that an early juvenile spill was projected. T. Dresser said that juvenile spill started at Wanapum Dam on April 4, and at Priest Rapids Dam on April 7, 2025. Operations are running well and no outages have occurred.

C. Adult Fish Counts for 2024 (April 15 to November 15)

Adult salmon and steelhead passage had just started by the meeting date. T. Dresser said that five spring Chinook Salmon and three steelhead have been collected at Priest Rapids Dam. One spring Chinook Salmon and 10 steelhead were collected at Wanapum Dam.

UPDATES

VII. Review of Outstanding NNI-Funded Projects

- **Lower Wenatchee Instream Flow Enhancement Project Phase II**
No updates were shared.
- **Northern Pike Removal**
T. Dresser said that Grant PUD will be able to move forward with the contract after the final PRCC March 25 meeting minutes are distributed (*Note: The final minutes were distributed on May 6.*)
- **WDFW PIT-Tag Detection Barge**
No updates were shared.
- **2025 Quincy Northern Pikeminnow Derby**
T. Dresser said the Pikeminnow derby will occur from May 17 to May 19. Staff from Grant PUD will be in attendance to provide information on the PRCC and native predators.
- **2025 RTR Avian Predation Study**
Covered above.

VIII. Subcommittee Updates

K. Geris will continue to forward subcommittee notes and materials to PRCC members and alternates.

- Priest Rapids Fish Forum – met April 2, next meeting May 7.
- Habitat Subcommittee – met April 10, next meeting May 8.
- Fall Chinook Work Group – met October 8, next meeting May 6.
- Hatchery Subcommittee – met April 16 to 17, next meeting May 21.

IX. SOAs Discussed in 2025

SOA number	Key Words	Last Discussed	Status
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X. Next Meetings

The next PRCC meeting will be on Tuesday, May 27, 2025, from 9:00 a.m. to 11:00 a.m., to be held in person at the Confluence Technology Center in Wenatchee, Washington. There will be a virtual option. A joint session with the Habitat Conservation Plan Coordinating Committee (HCP-CC) for a Subyearling Chinook Salmon Workshop Recap (Joint Session 6) will be held from 11:00 a.m. to 12:30 p.m. (schedule TBD).

XI. Subyearling Workshop Recap (Joint Session 5 with HCP-CC)

The PRCC and HCP-CC convened Joint Session 5 to discuss the 2024 Subyearling Chinook Salmon Workshop (see separate joint session minutes).

XII. Attachments

Attachment A – Proposed Additional Task for the study entitled “Avian Predation on
ESA-listed Juvenile Salmonids on the Middle Columbia River, 2025”



TO: Priest Rapids Coordinating Committee

RE: Proposed Additional Task for the study entitled “Avian Predation on ESA-listed Juvenile Salmonids on the Middle Columbia River, 2025”

FROM: Real Time Research, Inc.

DATE: April 7, 2025

Task: Investigate statistical model(s) that utilize passive detections of PIT-tagged smolts from multiple release sites in the Middle Columbia River to inform stock-specific and population-wide estimates of avian predation and survival.

Description: As part of this task, statistical models will be developed to estimate survival and avian predation on hatchery and wild yearling Chinook and steelhead based on PIT-tagged smolts released at different hatcheries and into different tributaries (Wenatchee, Entiat, Okanagan, Twisp) that were subsequently recaptured alive at downstream in-river arrays (Rocky Reach bypass, Wenatchee Barge, and other sites {e.g., McNary}) or recovered dead on bird colonies. Empirical data from the last five smolt outmigration years (2021–2025) will be used to estimate predation and survival and to compare estimates based on different modelling frameworks and assumptions. Models will incorporate and investigate the precision and accuracy of estimates based on different sample sizes of released and recaptured fish, different spatial- and temporal-scales, and the ability to generate stock- and rear-type specific estimates of predation and survival. Based on these initial results, and with guidance from the PRCC, recommendations to inform potential future tagging and/or recapture efforts will be provided.

Deliverable: Results would be included as a standalone appendix in the 2025 Annual Report. The appendix would include detailed statistical methods and assumptions, weekly and annual predation and survival estimates from different release/recapture and modelling schemes, and recommendations to develop future tagging studies in the region.

Budget: \$25,796.00