

Priest Rapids Coordinating Committee (PRCC) Meeting

**In Person at Wanapum Hydro Office Building
and Microsoft Teams
Tuesday, October 28, 2025
1:00 p.m. to 4:00 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, CRITFC
Scott Carlon, Emi Melton (Alt), NMFS	Pete McHugh (Alt), CRITFC for CTUIR
Bill Gale, USFWS	Clayton Buck, Wanapum
Chad Jackson, Andrew Murdoch (Alt), WDFW	Larissa Rohrbach, Anchor QEA, Facilitator
Kirk Truscott, Casey Baldwin (Alt), CTCR	Kristi Geris, Anchor QEA, Technical Support

Meeting Attendees

Larissa Rohrbach, Anchor QEA, Facilitator	Chad Jackson, WDFW*
Kristi Geris, Anchor QEA, Technical Support	Bill Gale, USFWS
Kirk Truscott, CTCR	Keely Murdoch, YN
Pete McHugh, CRITFC for CTUIR	Allen Evans, RTR
Tom Dresser, GPUD	Katie Adase, RTR
Rod O'Connor, GPUD	Quinn Payton, RTR
Tim Taylor, GPUD	

*Attended through part of Item IV.

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. (*This item is ongoing*).
- PRCC representatives will provide feedback on Real Time Research's (RTR's) initial proposed approach to using passive detections at Rocky Reach Dam and the Wenatchee Passive Integrated Transponder (PIT) Barge to inform population and origin-specific predation rates (Objective 4.1), as presented during today's meeting.

- PRCC representatives will submit additional edits on the draft PRCC Statement of Agreement (SOA) *Survival Evaluations - Path Forward* in the version distributed on October 28, for discussion during the PRCC conference call on November 25.
- PRCC representatives will submit additional edits on the revised draft SOA *Decoupling Summer Subyearling Survival Estimates From Juvenile Steelhead Survival Estimates* in the version distributed on October 21, for discussion during the PRCC conference call on November 25.
- PRCC representatives will review the draft *White River Spring Chinook Program Public Outreach and Stakeholder Engagement Guide* and suggest edits to the stakeholder list, populate Table 1 and provide feedback on the talking points for discussion during the PRCC conference call on November 25.

Review Items

- The second revised draft SOA *Decoupling Summer Subyearling Survival Estimates From Juvenile Steelhead Survival Estimates* was distributed to the PRCC by K. Geris on October 21, 2025.
- A draft *White River Spring Chinook Program Public Outreach and Stakeholder Engagement Guide* was distributed to the PRCC by K. Geris on September 22.
- The draft PRCC SOA *Survival Evaluations - Path Forward* was distributed to the PRCC by K. Geris on October 21. A “live edits” version was distributed after the PRCC meeting on October 28, 2025.

Decisions and Approvals

- None.

I. Subyearling Workshop Recap (Joint Session 10 with Habitat Conservation Plan Coordinating Committee)

The PRCC and Habitat Conservation Plan Coordinating Committee (HCP-CC) convened Joint Session 10 to discuss the 2024 Subyearling Chinook Salmon Workshop (see separate joint session minutes).

II. 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 September 23 PRCC meeting minutes were distributed by K. Geris on October 14. No edits or comments were received from PRCC representatives. K. Geris added distribution of two draft SOAs. The revised minutes were distributed on October 21. The minutes were approved by members who attended that meeting. The

Washington Department of Fish and Wildlife (WDFW) abstained. The National Marine Fisheries Service (NMFS) was considered an abstention because the representative was unable to attend today's meeting.

III. Actions Items Review

Action items from the PRCC September 23 meeting and follow-up discussions were as follows (*Note: Italicized text corresponds to agenda items from the September 23 meeting.*):

- *L. Rohrbach will work with T. Dresser to identify proposed dates for a PRCC Policy Committee meeting, including a timeline for materials preparation.*
This item is ongoing.
- *Grant PUD will develop a draft Conceptual Approach SOA with revisions to the Guiding Principles to move forward (i.e., Nos. 1 to 3) and an updated background section to clearly identify and explain unresolved discussion topics (i.e., Guiding Principles Nos. 4 to 7),¹ for discussion during the PRCC meeting on October 28.*
A draft PRCC SOA was distributed to the PRCC by K. Geris on October 21, 2025. This will be discussed during today's meeting.
- *Grant PUD will respond to edits by the Joint Fisheries Parties to the draft SOA Decoupling Summer Subyearling Survival Estimates From Juvenile Steelhead Survival Estimates for discussion during the PRCC meeting on October 28.*
A revised SOA was distributed to the PRCC by K. Geris on October 21, 2025. This will be discussed during today's meeting.
- *PRCC representatives will review the draft White River Spring Chinook Program Public Outreach and Stakeholder Engagement Guide and suggest edits to the stakeholder list, populate Table 1, and provide feedback on the talking points for discussion during the PRCC meeting on October 28, 2025.*
This will be discussed during today's meeting.

IV. PRESENTATION: 2025 RTR Avian Predation Study

L. Rohrbach recalled RTR's additional task (Objective 4.1), as distributed to the PRCC by K. Geris on April 22, notably the following:

"...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..." and "...investigate the precision and accuracy of estimates based on different sample sizes of released and recaptured fish, different spatial- and temporal-

¹ Based on the draft *Conceptual Approach to Evaluating Survival Study Outcomes* (Path Forward – Conceptual Discussion Document), last distributed on September 2.

scales, and the ability to generate stock- and rear-type specific estimates of predation and survival...”

A. Evans (RTR Fisheries Scientist) introduced Q. Payton (RTR Statistician) and K. Adase (RTR Data Analyst). K. Adase will review the predation and survival modeling framework for Upper Columbia River steelhead and yearling Chinook Salmon, e.g., release groups and sample sizes (to address Objective 4.1). Then, A. Evans will provide a brief overview of field work to date for the 2025 Avian Predation Project in general, e.g., status of colony monitoring, PIT recovery, etc. A. Evans shared on Microsoft Teams the presentation *Mid-Columbia Avian Predation & Survival Modeling* (Attachment A), which was distributed to the PRCC by K. Geris on October 29. Discussions were as follows.

Yearling Chinook Sample Sizes (Slide 11)

B. Gale said the reason for large numbers at Leavenworth National Fish Hatchery (LNFH; 2021 to 2025) is for a study. In future years, these numbers will go down. K. Adase said for this study, these large numbers are useful.

R. O'Connor noted that Chiwawa and Nason are separate groups. K. Murdoch likes the idea of consolidating Wenatchee Basin (Chiwawa and Nason) hatchery fish. Also, for wild fish “sites with >500 N,” for the Wenatchee PIT Barge, combining Wenatchee Basin (Chiwawa and Nason) wild fish could produce a larger sample size. K. Murdoch said her interpretation of this analytical task is not necessarily to look at every spawning aggregate; rather, it is to look at population-level survival.

Wild Chinook Releases (Slide 13)

K. Adase said this slide shows the “sites with >500 N.” She asked whether Nason should be on this list. K. Murdoch said in 2024, Nason had greater than 500 wild fish. She has not reviewed every year, but even in years with less than 500 wild fish she is suggesting to consolidate Chiwawa and Nason into a larger Wenatchee Basin sample size. Q. Payton said this is a good point. What can be grouped together to get better precision? The thought is to group recaptures across species while estimating survival and by release group when looking at bird predation. “Sites with >500 N” was chosen because it is hard to estimate survival with a sample size of fewer than 500 fish.

General Comments

Q. Payton recalled R. O'Connor's comment that Chiwawa and Nason are separate groups, and he questioned whether these groups have separate survival probabilities. K. Murdoch said Chiwawa and Nason are both tributaries to the Wenatchee. These are the same population. She hopes to get a population-level estimate and not a spawning tributary-level estimate so Wenatchee Basin fish can be compared to Methow Basin fish and other populations. These fish are managed at the population level. Survival

probability depends on the analysis. Survival from tagging to release will have a lot of variability, and this also depends on whether subyearlings or yearlings are tagged.

Q. Payton said the nuance is getting a group to show up at the Wenatchee PIT Barge at the same time. He suggested looking at each individual group. Is there anything different? If not, group them together.

R. O'Connor recalled a presentation by Tom Desgroseillier (WDFW) to the PRCC Hatchery Subcommittee (HSC) and HCP Hatchery Committees (HCP-HCs) that looked at available PIT data from release to the barge.² There were some big differences between Chiwawa and Nason. L. Rohrbach recalled another presentation by T. Desgroseillier to the PRCC that looked at outmigration timing and survival at the barge.³ *(Note: These two presentations and associated meeting minutes were distributed to RTR and the PRCC by K. Geris on October 29.)*

R. O'Connor understands that the Wenatchee PIT Barge has not been deployed consistently. K. Murdoch said it would be helpful to understand how many fish need to be detected at the barge to complete this part of the analysis. If there are not enough fish, how does this translate to number of PIT tags upstream? She guessed there would be fewer problems with fish detections at Rocky Reach because the detection probability is higher. Q. Payton said these are the same questions he would like answered.

K. Adase said RTR's database shows that in 2021, there were greater than 4,000 wild Chinook Salmon tagged and released in Nason Creek. However, limitations and restrictions on fish length and date tagged resulted in a group of fewer than 500 individuals. A lot of fish were tagged in late September to October, which disqualified them from inclusion in the model. Even though fish were tagged and released at this site, to be considered available in this dataset, these fish needed to be released during the migration season. K. Murdoch asked, of the fish detected at the barge, can these fish from Nason Creek be used? Even if these fish are detected in the spring? K. Adase said this could introduce bias to fish that have survived the winter already, and she is unsure this is worth adding bias to the model. K. Murdoch asked how this introduces bias. To understand survival, this needs to start with smolts leaving the Wenatchee. This does not include overwinter mortality in the Wenatchee. Q. Payton clarified that if a fish is detected at the barge, it should be included in the analysis. This is not to say the smaller release groups will not be included; rather, these groups will not be included until the barge.

² Titled *Post Release Hatchery Survival in the Wenatchee River*, presented to the PRCC HSC and HCP-HCs on March 19, 2025.

³ Titled *Juvenile Outmigration Timing and Survival Estimation utilizing the Wenatchee PIT Barge*, presented to the PRCC on November 18, 2024.

R. O'Connor said the 4,000 fish tagged in the fall in the Nason Creek watershed were captured via electrofishing and are not the same as fish caught in the screw trap that tend to be actively migrating. He believes the screw trap would have operated March to June, and the fall-tagged fish were a supplemental effort when the trap was not operated. K. Murdoch said even so, if these PIT tags make it to the barge, these should be included to boost sample size.

B. Gale said that at LNFH, the large tag years starting about 1 to 2 years ago, and half of those fish were reared in standard vessels and half were reared in the new partial recirculating tanks. These fish were reared in different conditions. Whether this results in differences in avian survival is yet to be determined, but it should be considered that some of these larger hatchery groups may represent multiple groups with different characteristics. A. Evans suggested flagging these subgroups to the extent possible and running a sub-analysis. However, big picture, the goal is to develop models that can aggregate groups within and across basins. He agrees there is a need to parse out groups of fish, but the modeling work can move forward regardless, then just plug and play as people feel appropriate. There are millions of ways to split these groups, but the goal is to start with a good base.

L. Rohrbach asked about the best approach for lumping groups together—start at the small end then lump together or start at the big end then look at the slivers? B. Gale said it depends on how the data are expanded. If the goal is to model the predation rate of fish coming out of the Wenatchee Basin as a whole, one approach may not get the correct estimates. However, it is not clear this is the goal. L. Rohrbach asked, what does the PRCC want to get out of this? K. Murdoch thought the goal was to get population- and origin-specific survival rates at the population level. This would be wild fish with a Wenatchee PIT Barge start or Methow and Entiat releases with a Rocky Reach Dam Juvenile Fish Collector start. This would be most analogous to known fish actively migrating. What was presented today is more detailed than what she was expecting. She was expecting to compare aggregated data for fish detected at the Wenatchee PIT Barge or Rocky Reach Dam, then sorted by population and origin, which seems a little simpler than what was presented. Not to say this is not helpful, but she does not want to lose the population-level data for the details.

L. Rohrbach asked whether the PRCC would be able to request to learn more at the sub-population level after review of results at the population-level. A. Evans welcomed all feedback, notably whether to make the starting point a recapture site rather than the release site. This would be simpler to model.

B. Gale said while querying groups in PTAGIS, there is a tag coordinator name associated with these data, and he suggested reaching out to these individuals to fully understand the data.

L. Rohrbach is not sure whether the Wenatchee PIT Barge dataset is ready to serve as the starting point for this analysis because WDFW is still optimizing detection at that site. K. Murdoch said this is what she wants to learn. There are not many barge operation years yet, but what sample size is needed? K. Adase recalled hearing that operation of the barge might differ year to year, and she asked, what are the current recapture rates? K. Murdoch said the folks with these answers are not in the room, but she understands this might be true. The barge has been a learning curve, and there have been issues with location. L. Rohrbach found an email from A. Murdoch indicating discomfort in using data before calendar year 2024 due to complications with the early operations.

PRCC representatives will provide feedback on RTR's initial proposed approach to using passive detections at Rocky Reach Dam and the Wenatchee PIT Barge to inform population and origin-specific predation rates (Objective 4.1), as presented during today's meeting.

V. Conceptual Approach to Evaluating Survival Study Outcomes

The *Conceptual Approach to Evaluating Survival Study Outcomes* (Path Forward – Conceptual Discussion Document) was distributed to the PRCC by K. Geris on May 27. PRCC live edits and comments from the July 22 and August 26 meetings were distributed on September 2. Grant PUD then worked this document into the draft PRCC SOA, *Survival Evaluations - Path Forward*, which was distributed to the PRCC by K. Geris on October 21. The PRCC reviewed this draft SOA and provided live edits (Attachment B), which were distributed to the PRCC by K. Geris after the meeting on October 28. Discussions were as follows.

Bullet No. 5

B. Gale asked why only Grant PUD would consult with NMFS—why not the PRCC? T. Dresser said this bullet is talking about formal consultation with NMFS. The way it worked in 2004 and 2008, not all PRCC parties were in the room.

K. Murdoch said if performance standards are not achieved after three tests, she would think reconsultation of the Biological Opinion (BiOp) would be the last result, not the first. She thinks Grant PUD would first work with the PRCC to review the data to find reasonable and feasible ways to achieve the standard. T. Dresser said Grant PUD has no issues with working with the PRCC before considering reconsultation; he was basing this off past meeting minutes and what he perceived the discussions were. K. Murdoch said it is the PRCC's job to implement the Salmon and Steelhead Settlement Agreement (SSSA), which involves trying to obtain standards. T. Dresser said that if standards are not being met and Grant PUD needs to pursue a major action such as spill more, which will affect power production, this process will require Federal Energy

Regulatory Commission (FERC) approval and other things the PRCC will likely have no part of. K. Murdoch said there is a whole host of things to consider before reconsultation, such as fish mode or the predation program. T. Dresser said he is not disagreeing, but some of these will require FERC approval. B. Gale provided a suggested edit to this bullet (see tracked changes in Attachment B).

“Check-Ins”

K. Murdoch suggested adding a statement that this is a procedural SOA and that it is not changing or amending the SSSA. T. Dresser questioned whether this is needed because it has never been needed before. The PRCC has implemented some pretty major changes that may not have been in the SSSA. K. Murdoch wants to be clear this is not reinterpreting the SSSA and this is consistent with the SSSA. This is important because this SOA is intended to span the life of the SSSA. For example, there are multiple places that reference 10-year check-ins. The SSSA says to start with 5 years, then after 2012, this can be adjusted. By referencing 10-year check-ins, she does not want to lock-in 10-year check-ins. She recalled in a past meeting, K. Truscott suggested perhaps retesting every 5 years.⁴ This option should not be taken away from future PRCC representatives. T. Dresser said he used 10 years to be consistent with what was agreed to for the regional projects, then suddenly there is a suggestion to change to 5 years. This goes both ways. These are reminders of what this committee agreed to. He agreed that if at some point there is a need to revisit different intervals, Grant PUD is open to considering this. K. Truscott said he has no issues with referencing 10-year check-ins, and he provided a suggested edit to Bullet No. 1 (see tracked changes in Attachment B).

K. Murdoch further suggested avoiding the term “check-in” because this seems informal or discretionary. The SSSA calls it “updated survival estimates,” and she suggested remaining consistent with the language the SSSA uses. T. Dresser said Grant PUD is supportive of changing the language, but the biologists have been using the term “check-in” for many years and would prefer not to nitpick words. “10-year” and “check-ins” were highlighted in yellow in Attachment B as a reminder to revise this language, or footnote to show consistency with the terms and timeframes used in the SSSA and subsequent SOAs.

Bullet No. 4

B. Gale asked whether this bullet should be consistent with “will” and “may” retest. T. Dresser explained that he chose “will” for the Year-1 retest, which will probably involve collecting more data on operations, avian predation, or other. Then he chose “may” because subsequent actions will depend on what data are available. B. Gale provided a suggested edit to this bullet (see tracked changes in Attachment B). “Will”

⁴ See PRCC July 22, 2025, meeting minutes.

and “may” were also highlighted in green in Attachment B in case this language needs further updating.

K. Murdoch suggested adding language about how invalid studies will be repeated. Also, regarding the Year-1 retest and averaging retests, the language should clarify whether the Year-1 retest an average with the original test. K. Geris added an edit to Subbullet 1 for further refining (see tracked changes in Attachment B).

Bullet No. 5, Subbullet 3

K. Murdoch said she may have edits to this subbullet. T. Dresser said he attempted to capture that when not achieving standards, there may be tools in between to implement until standards are achieved. He tried capturing conversations to date but is open to wordsmithing. K. Murdoch said she sees this as No Net Impact (NNI), and she is uncomfortable if this means the PRCC is open to additional hatchery or habitat mitigation. She does not agree on “to offset unavoidable mortality.” When talking NNI, unavoidable project mortality is mitigated up to 7% hatchery and 2% habitat for the adult component. Unavoidable project mortality still occurs when meeting the survival standard, up until that standard is avoidable. This subbullet needs additional wordsmithing. T. Dresser said, regarding use of NNI funds, Section 15.3 of the SSSA is absolutely clear. The NNI fund terminates as soon as standards are achieved, and there are PRCC SOAs stating that standards were achieved for yearling Chinook Salmon, Sockeye Salmon, and steelhead. K. Murdoch said the PRCC agreed Grant PUD met the standard, but if the standard is not maintained, NNI is a short-term bridge to offset the impact. T. Dresser said there is no language saying the NNI fund will be restarted. He has been clear on this position. If additional mitigation is needed and the PRCC wants NNI to come back into play, this will need to be a policy-level decision.

L. Rohrbach said this subbullet may be intentionally vague because the PRCC may be in a scenario where this does go to the policy level. Retaining the subbullet as vague is an option. K. Murdoch argued that vagueness and ambiguity in an SOA is not helpful. L. Rohrbach said another option is to separate this content about mitigation from the bullets defining the points of agreement and insert it into the background information that describes where parties were unable to find consensus. K. Geris added an edit and comment to this subbullet for further refining (see tracked changes in Attachment B).

Next Steps

L. Rohrbach asked about time constraints on this SOA. T. Dresser said there is nothing urgent, but Grant PUD hopes to finalize something after the first of the year (2026).

PRCC representatives will submit additional edits on the draft PRCC SOA *Survival Evaluations - Path Forward* in the version distributed on October 28, for discussion during the PRCC conference call on November 25.

VI. Decoupling Summer Subyearling Survival Estimates From Juvenile Steelhead Survival Estimates

The second revised draft SOA *Decoupling Summer Subyearling Survival Estimates From Juvenile Steelhead Survival Estimates* was distributed to the PRCC by K. Geris on October 21.

L. Rohrbach suggested postponing this discussion to next month due to limited time. T. Dresser said it would be helpful to receive edits and comments ahead of next month's discussion. B. Gale asked about a timeline for this SOA. T. Dresser said the same as the other SOA, and definitely before the survival study results.

PRCC representatives will submit additional edits on the revised draft SOA *Decoupling Summer Subyearling Survival Estimates From Juvenile Steelhead Survival Estimates* in the version distributed on October 21, for discussion during the PRCC conference call on November 25.

VII. White River Hatchery Program

A draft *White River Spring Chinook Program Public Outreach and Stakeholder Engagement Guide* was distributed to the PRCC by K. Geris on September 22.

PRCC representatives have not had time to review this document. L. Rohrbach suggested postponing this discussion to next month but wants to be sure there is a healthy discussion because the Expert Panel is in action now, and Tracy Hillman hopes to complete this process by November or December. T. Taylor explained that the process involves T. Hillman assembling a synthesis report after the Expert Panel recommendation, then this report will go to the PRCC HSC for discussion.

PRCC representatives will review the draft *White River Spring Chinook Program Public Outreach and Stakeholder Engagement Guide* and suggest edits to the stakeholder list, populate Table 1, and provide feedback on the talking points for discussion during the PRCC conference call on November 25.

VIII. PRESENTATION: Past Survival Studies Review

R. O'Connor shared on Microsoft Teams the presentation *Summary of juvenile Steelhead Survival Studies, GPUD Studies Conducted in the Priest Rapids Project 2008-2017* (Attachment C), which was distributed to the PRCC by K. Geris on October 29. Discussions were as follows.

Overview

R. O'Connor said this presentation kicks off a multi-meeting discussion. This starts at a high level, and he asked PRCC representatives to think about questions that he can

provide more specific details on. He is starting with steelhead because this species is the most complex. Next year, he will present on yearling Chinook Salmon.

Conclusions for steelhead, part 1 (Slide 20)

K. Truscott asked what a covariate analysis is. R. O'Connor said he would need to review the paper, but the smolt migration index is based on numbers at Rock Island, and he believes this speaks to how many fish are available for predators. T. Taylor further explained that if there are more fish in the water, the index is based on the assumption there are higher survival rates compared to when there are fewer fish in the water. R. O'Connor said he will get into this more when he discusses collection timing.

L. Rohrbach said it would be interesting to hear more about what covariates were tested but were not significant predictors.

B. Gale said condition factor, as monitored in fish passage, is not necessarily descriptive of performance. K. Murdoch agreed and said condition factor shows injuries like descaling. K. Truscott said predation may not be significantly affected by condition because less-fit fish were likely not included in the survival study for tagging. B. Gale said there is a lot of work that suggests smolt development and fish condition is directly related to avian predation. A lot of this work is focused at the mouth of the Columbia River. This work suggests that fish that are not as smolted tend to be predated upon more at the mouth. He thinks this may be a likely scenario in the Priest Rapids Pool, where fish condition could be contributing to avian predation, but this has not yet been measured. T. Taylor said this may depend on species. Cormorants target more fish in poor condition. B. Gale said perhaps, but he believes fish that are less well-smolted also occur higher in the water column (more exposed to avian predators). K. Truscott said these fish also have a slower migration rate, so fish are within predation areas longer.

Next month, part 2 (Slide 21)

L. Rohrbach asked R. O'Connor to explain what will be helpful as these presentations roll out and the PRCC eventually gets into interpreting the upcoming study results. What should representatives pay attention to? R. O'Connor said the purpose of these presentations is to provide an awareness of past studies—what was done, what were the results—so hopefully representatives are on the same page when the 2026 results come in.

IX. 2025 Fish Passage Operations Report

A. Fish Ladder Inspections

No updates shared.

B. Fish Spill Updates

T. Dresser said both projects are in adult steelhead fallback fish spill mode until November 15. The adult ladders will be taken out of service for annual winter

maintenance from Thanksgiving to February 2026. Per the Bull Trout BiOp, one fishway will remain up and running year-round.

C. Adult Fish Counts for 2025 (April 15 to November 15)

L. Rohrbach reviewed the adult fish counts through October 18, as shown below.

Project	Spring Chinook Salmon ^a		Summer Chinook Salmon ^b		Fall Chinook Salmon ^c		Sockeye Salmon	Coho Salmon	Steelhead
	Adults	Jacks	Adults	Jacks	Adults	Jacks			
PRD	15,932	842	38,260	920	19,100	1,205	141,495	8,618	8,937
WAN	15,784	1,470	41,158	993	9,331	672	139,599	8,268	8,675
RIS	14,532	1,017	39,868	1,194	6,236	242	139,671	8,119	7,331

Notes:

a: Chinook Salmon counted from April 15 to June 13 are considered spring Chinook Salmon.

b: Chinook Salmon counted from June 14 to August 13 are considered summer Chinook Salmon.

c: Chinook Salmon counted after August 14 are considered fall Chinook Salmon.

PRD = Priest Rapids; WAN = Wanapum; RIS = Rock Island

UPDATES

VIII. Review of Outstanding NNI-Funded Projects

- **Lower Wenatchee Instream Flow Enhancement Project Phase II**
No updates were shared.
- **Northern Pike Removal**
No updates were shared.
- **WDFW PIT-Tag Detection Barge**
No updates were shared.
- **2025 Quincy Northern Pikeminnow Derby**
No updates were shared.
- **2025 RTR Avian Predation Study**
Covered above.

IX. Subcommittee Updates

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

- Priest Rapids Fish Forum – met October 1, next meeting November 5.
- Habitat Subcommittee – toured Habitat Projects in Canada October 8-9, next meeting November 6.
- Fall Chinook Work Group – met October 7, next meeting May 5.
- Hatchery Subcommittee – met October 15 to 16, next meeting November 19 to 20.

X. SOAs Discussed in 2025

SOA number	Key Words	Last Discussed	Status
2025-XX	Decoupling Summer Subyearling Survival	October 28, 2025	In Review
2025-XX	Survival Evaluations - Path Forward	October 28, 2025	In Review

XI. Next Meetings

The next PRCC meeting will be on Tuesday, November 25, 2025, from 1:00 p.m. to 4:00 p.m., to be held virtually by Microsoft Teams. A joint session with the HCP-CC for a Subyearling Chinook Salmon Workshop Recap (Joint Session 11) will be held from 12:30 p.m. to 1:00 p.m. (schedule TBD).

The PRCC agreed to reschedule the December meeting 1 week ahead to Monday, December 15, 2025, to accommodate the holiday.

The PRCC agreed to repeat this year’s meeting schedule and logistics in 2026.

XII. Attachments

Attachment A – RTR presentation, *Mid-Columbia Avian Predation & Survival Modeling*

Attachment B – Draft PRCC SOA, *Survival Evaluations - Path Forward* (live edits)

Attachment C – Grant PUD presentation, *Summary of Juvenile Steelhead Survival Studies, GPUD Studies Conducted in the Priest Rapids Project 2008-2017*

Mid-Columbia Avian Predation & Survival Modeling

Presented to the PRCC Oct. 28, 2025



Study Overview

- **Goal:** Develop statistical models that incorporate passive detections at Rocky Reach Dam, the Wenatchee barge, and other sites to inform population and origin specific predation and survival rates.

Current Progress:

- ✓ Identify Steelhead and yearling Chinook release groups to be used in analysis
- ✓ Curate MRR dataset to use in modelling scenarios
- Develop models to address varying spatial scales



Photo by Chelan County PUD

Identifying Release Groups

- Steelhead (9)
 - Columbia River Safety Net
 - Methow River Safety Net
 - Wenatchee River Steelhead Conservation
 - Okanagan Safety Net
 - Okanagan Conservation
 - Methow Basin 1-Year
 - Methow Basin 2-Year
 - Early Winters
 - Wild



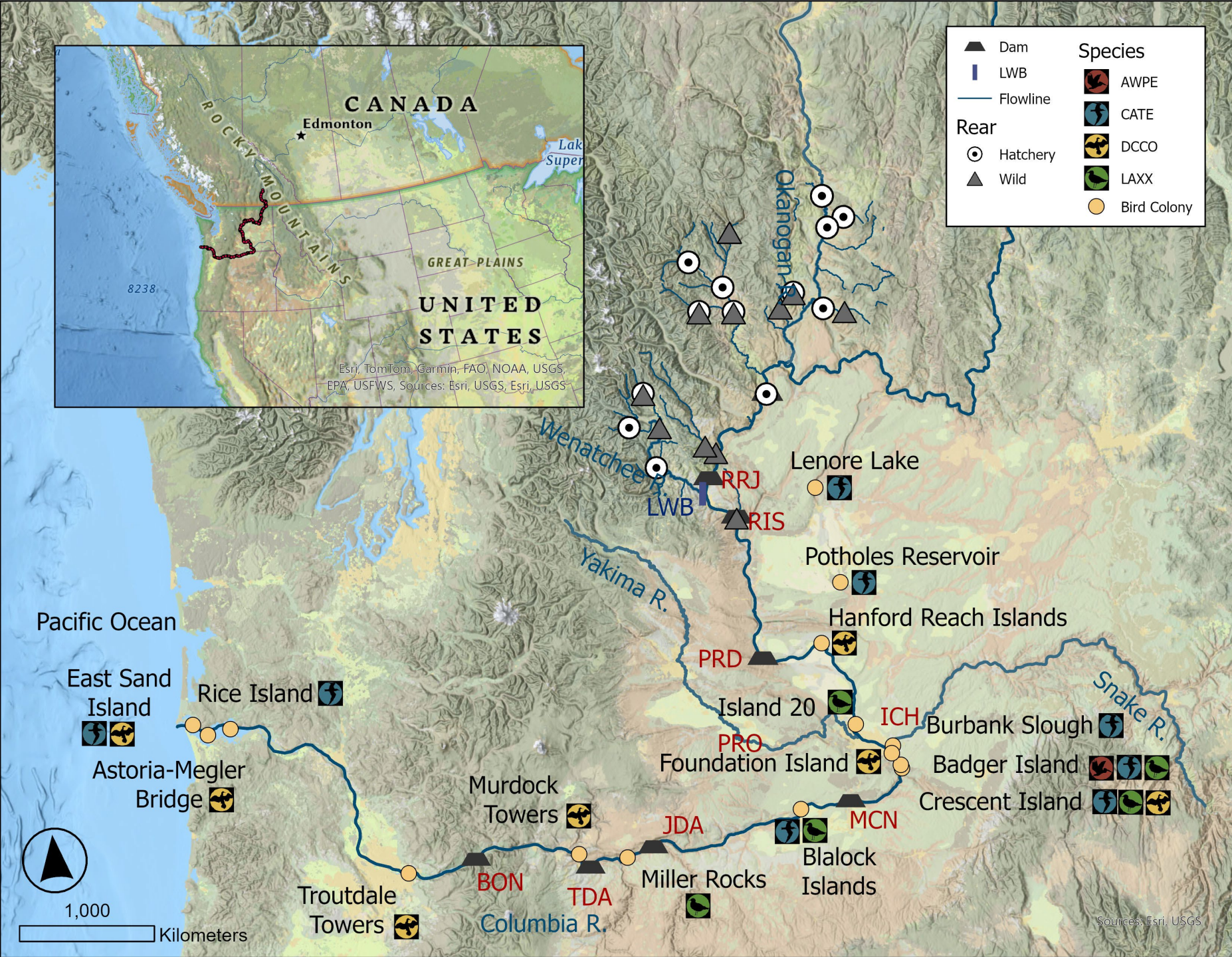


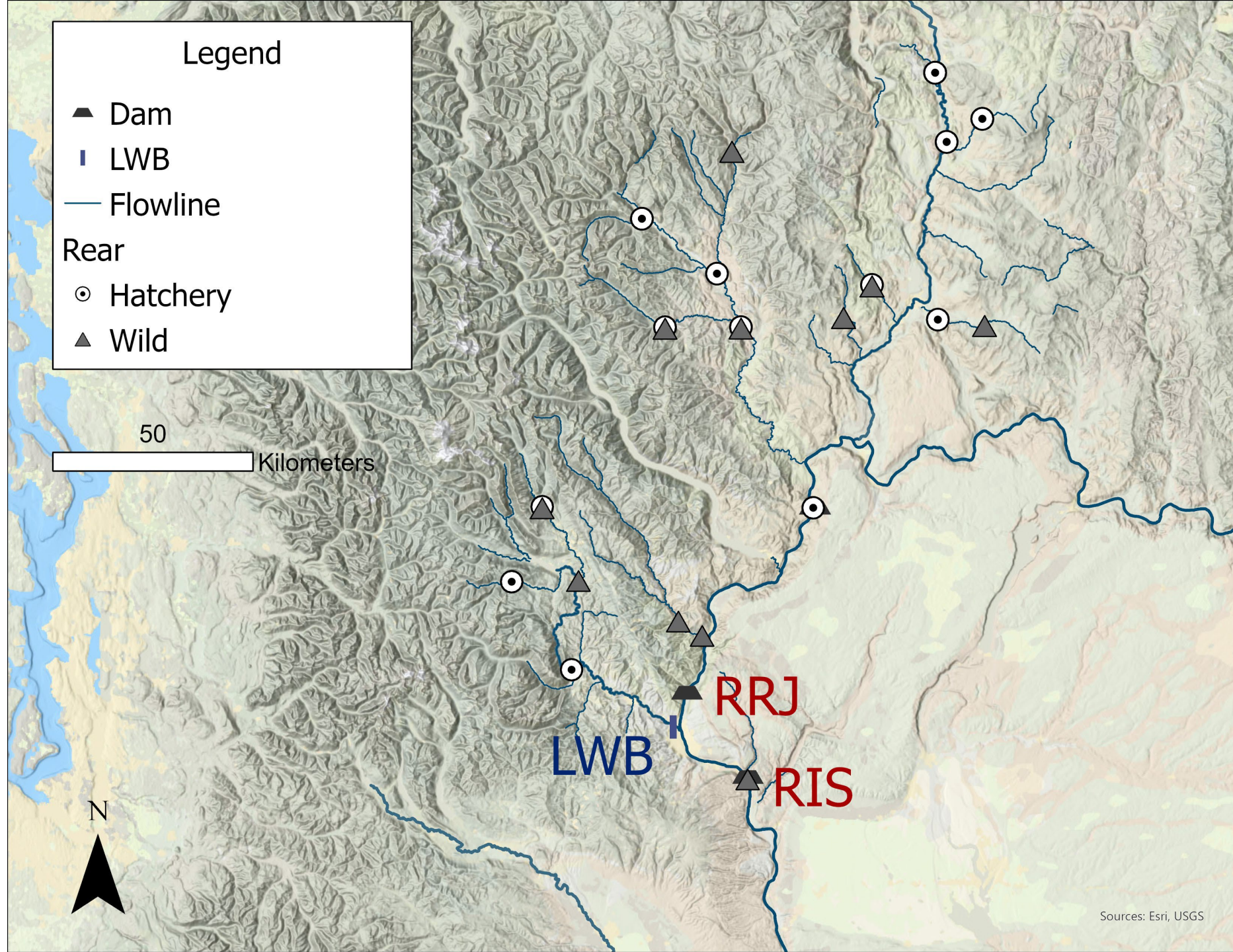
Photo by RTR

Identifying Release Groups

- Yearling Spring Chinook (7)
 - Chewup Accl. Facility
 - Chief Joseph Hatchery
 - Chiwawa Hatchery
 - Chiwawa Rearing Pond/East Bank Hatchery
 - Leavenworth NFH
 - Winthrop NFH
 - Wild

Steelhead MRR





Steelhead Sample Sizes

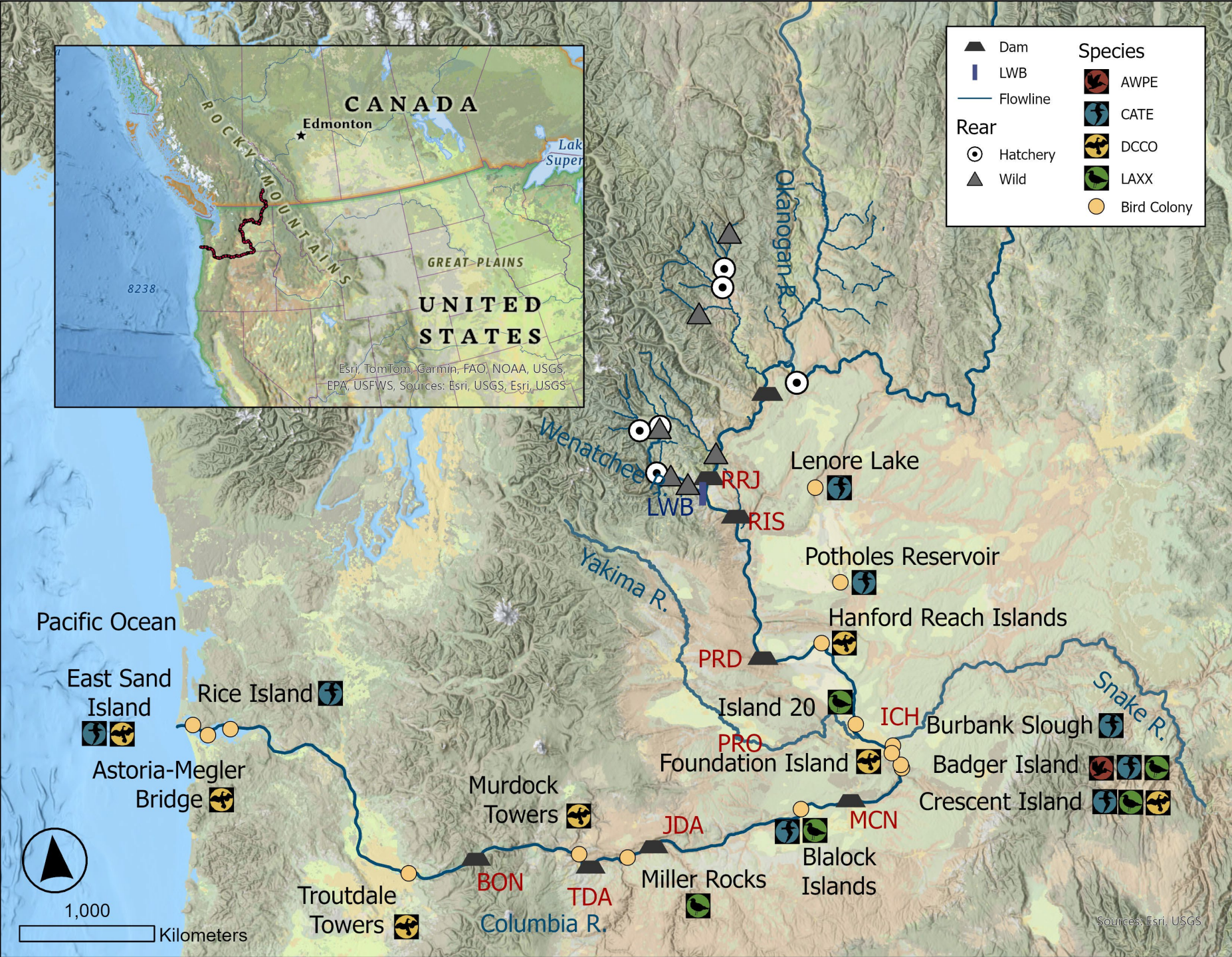
Group	Release Site	Group Average Sample Size (2021-2025)
Columbia Safety Net	WELH	4,997
Methow Safety Net	METHR	4,777
Wenatchee Steelhead Conservation*	CHIWAR, NASONC, WENATR	32,248
Okanagan Safety Net	SALMOC, OKANR, ANTOIC, SIMILP	14,988
Okanagan Conservation	STMARP	4,994
Methow Basin 1-Year	TWISPR, WINT	9,424
Methow Basin 2-Year	TWISPR, WINT	22,541
Early Winters	EARLWP	9,429
Wild	Sites with >500 N	7,985

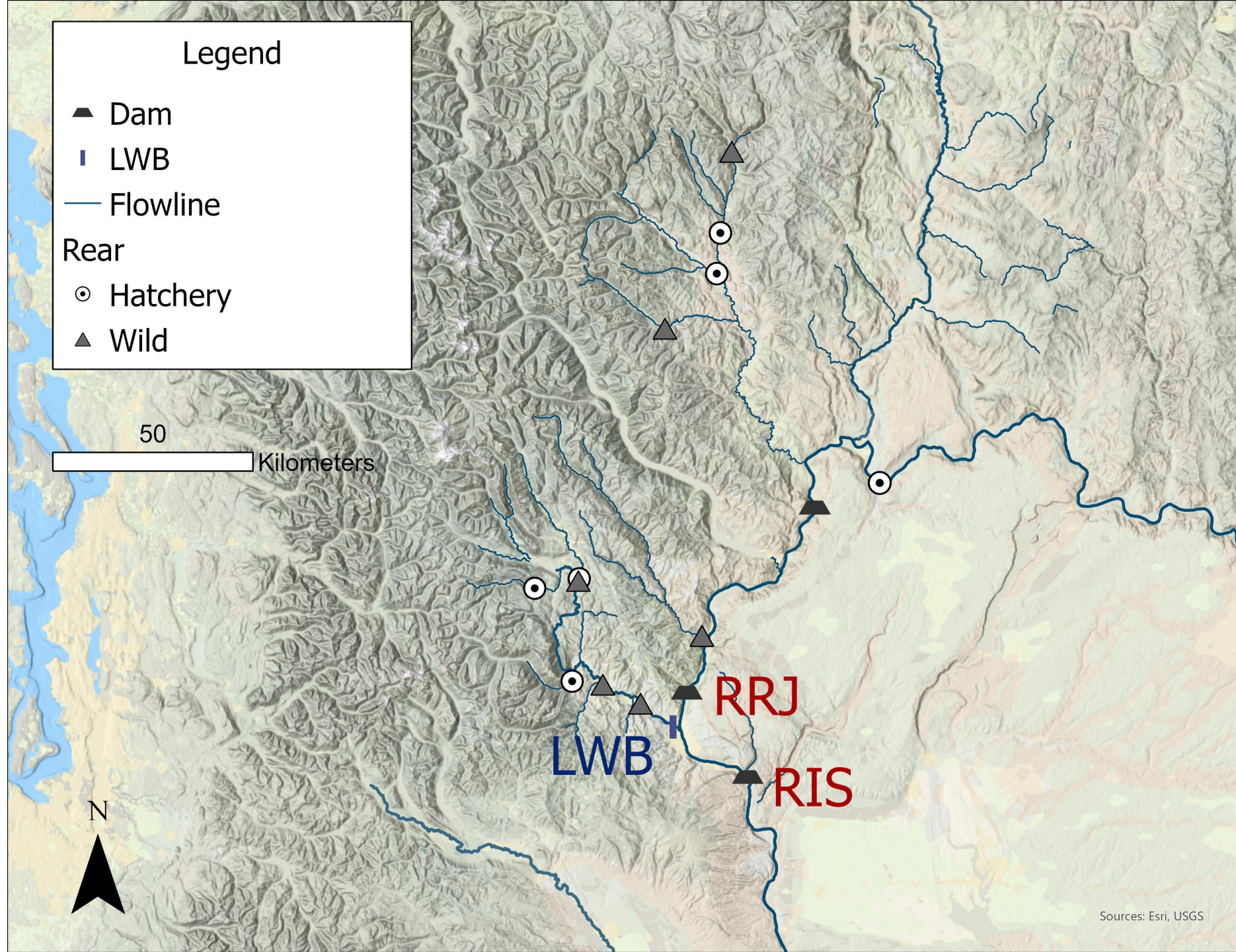
Wild Steelhead Releases

Release Site	2021	2022	2023	2024	2025
CHEWUR	529			796	
CHIWAR*	532			716	518
CHIWAT*	1,480	805	682	864	705
ENTRTP	831	803	1,085	2,433	1,094
LOUPLC		575	885		
METHR	718	637		2,771	
OMAKC	932	958	529	614	
SALMOC	1,086	1,114	737	1,176	
TWISPR	3,202	2,201	2,560	2,730	
RI2BYP	1,724	1,638	2,205	762	1,470
ENTUST					546

Average per site: 1,141; 11 Unique Sites; *Wenatchee Sites

Chinook MRR





Yearling Chinook Sample Sizes

Group	Release Site	Average Sample Size (2021-2025)
Chewuch Acclimation Facility	CHEWUP	4,995
Chief Joseph Hatchery	CHJO	4,606
Winthrop NFH	WINT	19,601
Chiwawa Rearing/East Bank Hatchery*	CHIP	10,114
Leavenworth NFH*	LEAV	33,565
Chiwawa Hatchery/Nason Accl.*	NAF	9,795
Wild	Sites with >500 N	1,667

Wild Spring Chinook Age

Chinook Yearling (CH-1)

April 1st - mid to late May	>80mm
Mid May to June 1st	>90mm
June 1st - mid June	>140mm
After mid June	>150mm

Chinook Subyearling (CH-0)

April 1st - mid to late May	61-80mm
Mid May to June 1st	61-90mm
June 1st - mid June	61-140mm
After mid June	61-150mm



Wild Chinook Releases

Release Site	2021	2022	2023	2024	2025
CHEWUR	723				
CHIWAT*	2,286	2,608	5,744	2,885	2,415
DRYTAL*	860		954	623	
ENTRTP			1,340	1,145	799
TWISPR			902	1,216	
WENA4T*	943	1,305	1,670	2,016	1,244

Average 1,667 per site; 6 Unique Sites; *Wenatchee Sites



Questions ?

2025 Avian Predation Project Update

- Completed colony monitoring (April – August)
 - Four fixed-winged aerial surveys
 - Bi-weekly boat and ground surveys with periodic drone surveys
 - In-season coordination with USBR and other agencies
- Completed steelhead PIT tagging at RIS (April – June)
 - 7,671 tagged fish (6,984 newly tagged, 687 recaptures; 6,201 H, 1,470 W)
- Completed PIT tag recovery at colonies (July – September)
- Colony counts (on-going)
- Predation rate modelling (on-going)



2025 PIT Recovery – *Preliminary Data*

- Scanned 34 individual sites
 - 24 colonies (14 upstream of McNary, 10 downstream)
 - 8 DCCO, 6 CATE, 4 GBHE/GREG, 3 LAXX, 2 AWPE, 1 BRAC
 - 5 loafing sites
 - 90,913 unique tag codes (all species and MY combined)

2025 Migration Year smolts and other fishes

	Chinook	Coho	Sockeye	Steelhead	Other
Upstream McNary	8,621	1,025	1,087	10,134	158
Downstream McNary	4,593	556	335	4,538	28
ALL	13,214	1,581	1,422	14,672	186



Questions ?



Priest Rapids Coordinating Committee
DRAFT Statement of Agreement

Survival Evaluations - Path Forward

Submitted to the Priest Rapids Coordinating Committee: _____

Approved by the Priest Rapids Coordinating Committee: _____

Statement: The Priest Rapids Coordinating Committee (PRCC) approves the following Statement of Agreement (SOA).

- This SOA only pertains to the step(s) which would be taken if the juvenile performance standards are not achieved during the intervals approved by the PRCC (currently 10-year) check-in for the remaining term of the SSSA and 2008 NOAA Biological Opinion (BiOp) (e.g. 2026, 2035 and 2045). This SOA is not intended to address/resolve any other outstanding issues (e.g. juvenile steelhead correction factor, adult salmonid passage methodology, 91% adult and juvenile combined standard, etc.).
- The project-wide performance standard for Covered Species¹ is 86.49% ($\pm 2.5\%$ SE) per the Priest Rapids Salmon and Steelhead Settlement Agreement and 2008 NOAA Bi Op for the Priest Rapids Project. For any specific study, a less precise estimate of not more than $\pm 3.5\%$ SE may be acceptable if the PRCC agrees (SOA 2017-02).
- Valid ten-year check-ins will be a single standalone estimate; and if the standard is achieved, then next check-in test will occur at a 10-year interval (e.g. 2035, 2045, etc.).
- If the performance standard is not achieved during the initial ten-year check-in, the Year-1 retest will be expanded to gather more detailed project-level information (e.g. route specific, behavior, approach, project-level, etc.), as necessary to better understand the test results.
 - If performance standards are achieved during the Year-1 retest,² then the next Check-in will occur at the original 10-year intervals (e.g. 2035, 2045, etc.).
 - If the performance standard is not achieved during the Year-1 retest, a Year-2 retest will be conducted. Based on results from Year-2 retest, the

¹ "Covered Species" - means spring, summer and fall Chinook salmon (*Oncorhynchus tshawytscha*), sockeye salmon (*O. nerka*), steelhead (*O. mykiss*) and coho (*O. kisutch*).

² Average of first year study (assuming valid study).

PRCC **may** determine that more detailed, project-level information is necessary.

- At the conclusion of the 1 or 2 consecutive year retests, valid estimates will be averaged together. If performance standards are achieved, then the next test will occur at the original **10-year** intervals (e.g. 2035, 2045, etc.).
- If performance standards are not achieved after 3 consecutive tests, the PRCC will work to develop a suite of actions with the intent of meeting performance standards which may include the following actions ~~will be taken~~:
 - For an ESA-listed Covered Species under the 2008 NOAA Biological Opinion, Grant PUD will consult with NOAA-Fisheries on potential future actions.
 - For all Covered Species under the SSSA, the PRCC will decide on what additional tools may be implemented to achieve the survival standards using the following criteria: 1) likelihood of biological success; 2) time required to implement; and 3) cost-effectiveness of solutions, but only where the Parties agree that two or more alternatives are comparable in their biological effectiveness.
 - The PRCC may consider mitigation measures **(options)** to offset unavoidable mortality in the interim period before additional tools are fully implemented. Once agreed upon, mitigation measures will be implemented as soon as reasonable and will remain in place until it is demonstrated that juvenile salmonid survival standard(s) have been achieved.

Commented [KG1]: Or, in coordination with the policy committee.

Summary of juvenile steelhead survival studies

GPUD studies conducted in the Priest Rapids Project 2008-2017

Two study periods: 2008-2010; 2015-2017

- High level review – more details next month
- Combined survival of juvenile steelhead for each study period
- Gear, operations, study design
- Similarities and differences
- Conclusions

Studies not included

- 2006 & 2007 first studies with acoustic tags and three species (steelhead, yearling Chinook Salmon, Sockeye Salmon)
- Both years invalidated by PRCC due to study design issues likely significantly underestimating survival (no tag life test, tagger effects)
- 2014 study invalidated due to fracture of the Wanapum Dam spillway

Steelhead evaluation results

2008-2010

- 3-year mean Project survival = **0.810 (SE 0.015)**
- HTI acoustic tag system
- Wanapum juvenile bypass operational
- Flows below average in 2009-2010
- Avian predation rates ~8-15%

2015-2017

- 3-year mean Project survival = **0.870 (SE 0.020)**
- JSATS acoustic tag system
- Wanapum **and** Priest Rapids juvenile bypasses operational
- Flows below average in 2015-2016
- Avian predation rates ~4%

a) HTI System



b)



JSATS System

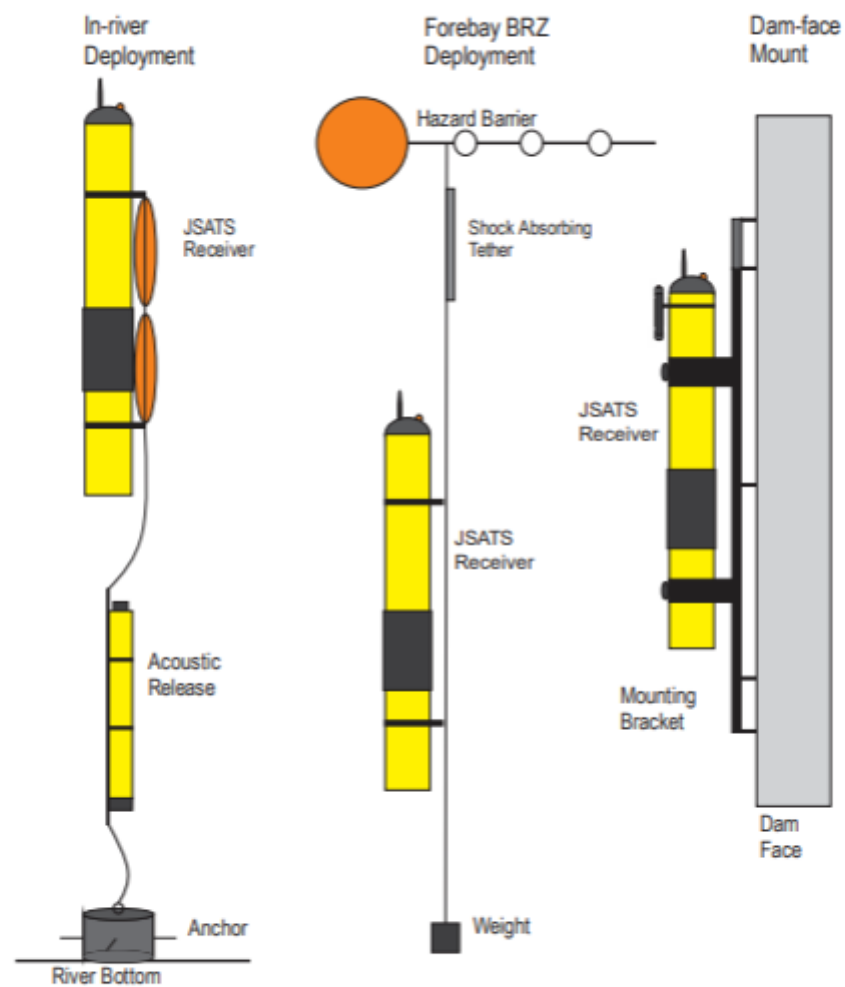


Figure A.1. Deployment schematic of JSATS receivers fixed to the river bottom with an acoustic release (left), attached to the hazard barrier of the BRZ at Wanapum and Priest Rapids dams (center), and attached to the face of Wanapum and Priest Rapids dams (right) (similar to Hatch et al. 2015).

- Technology: HTI phase 2006-2010, JSATS 2011-2017
- HTI studies: behavior and survival
 - Integral to development of bypasses at Wanapum and Priest Rapids dams

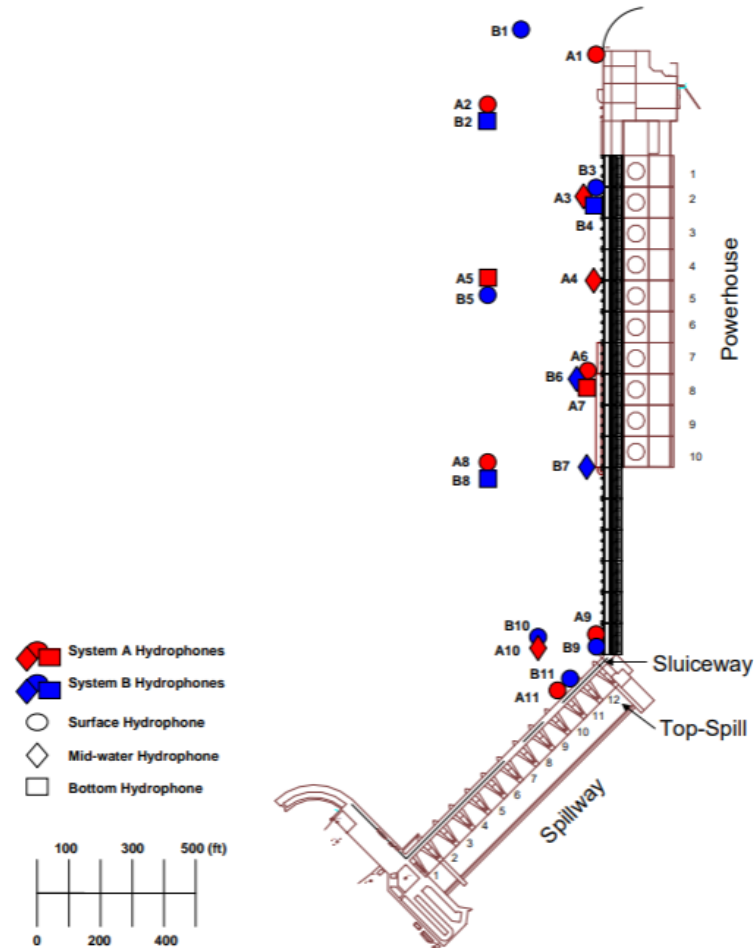


Figure 10. Schematic drawing of hydrophone deployment at Wanapum Dam, 2006.

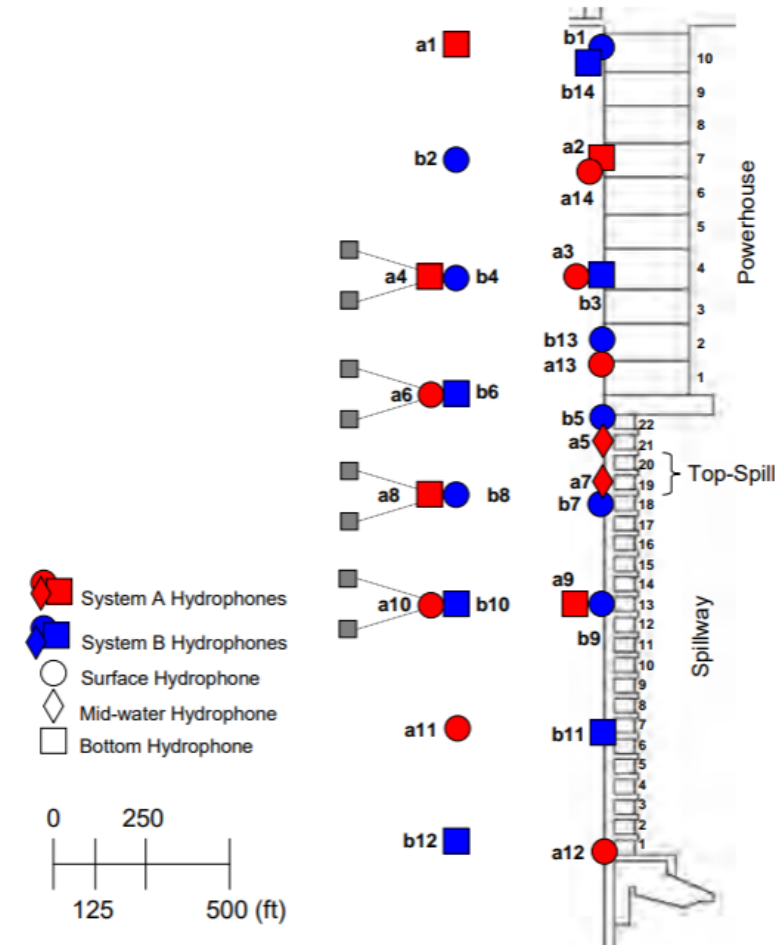


Figure 11. Schematic representation of hydrophone deployment at Priest Rapids Dam, 2006.

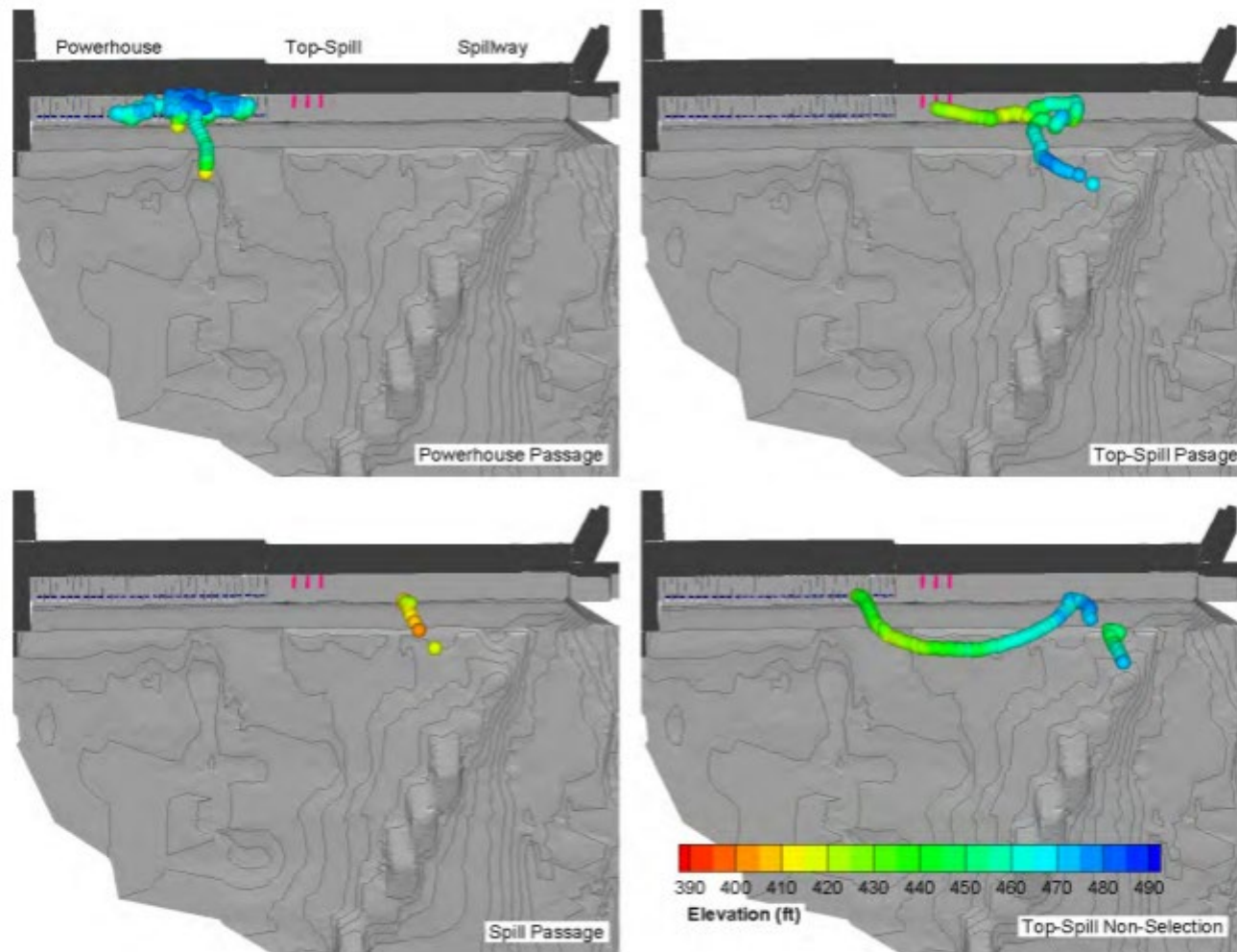


Figure 43. Examples of four types of steelhead passage behavior at Priest Rapids Dam are displayed that included passage of fish at the powerhouse, top-spill, and spillway and non-selection passage of fish at the top-spill.

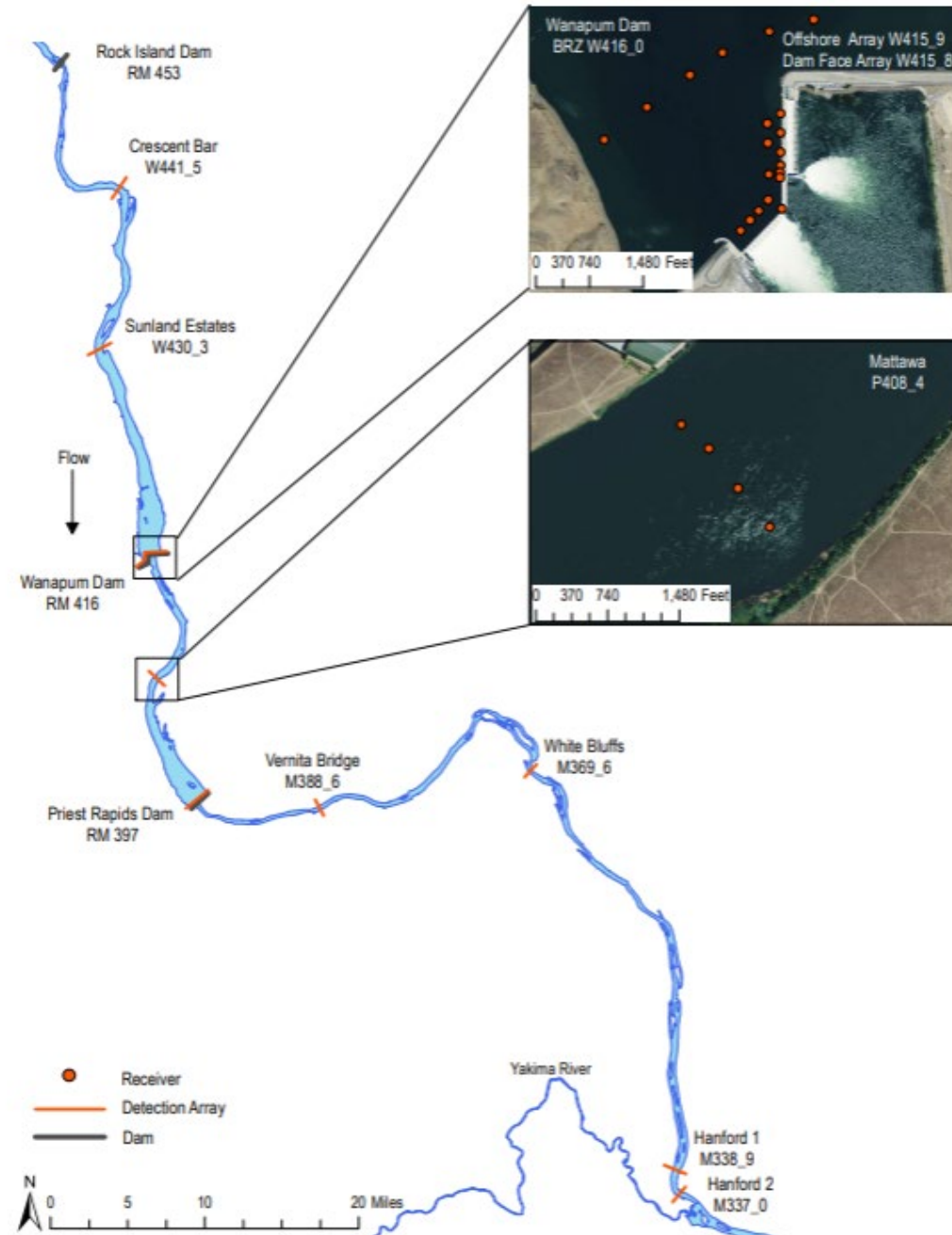
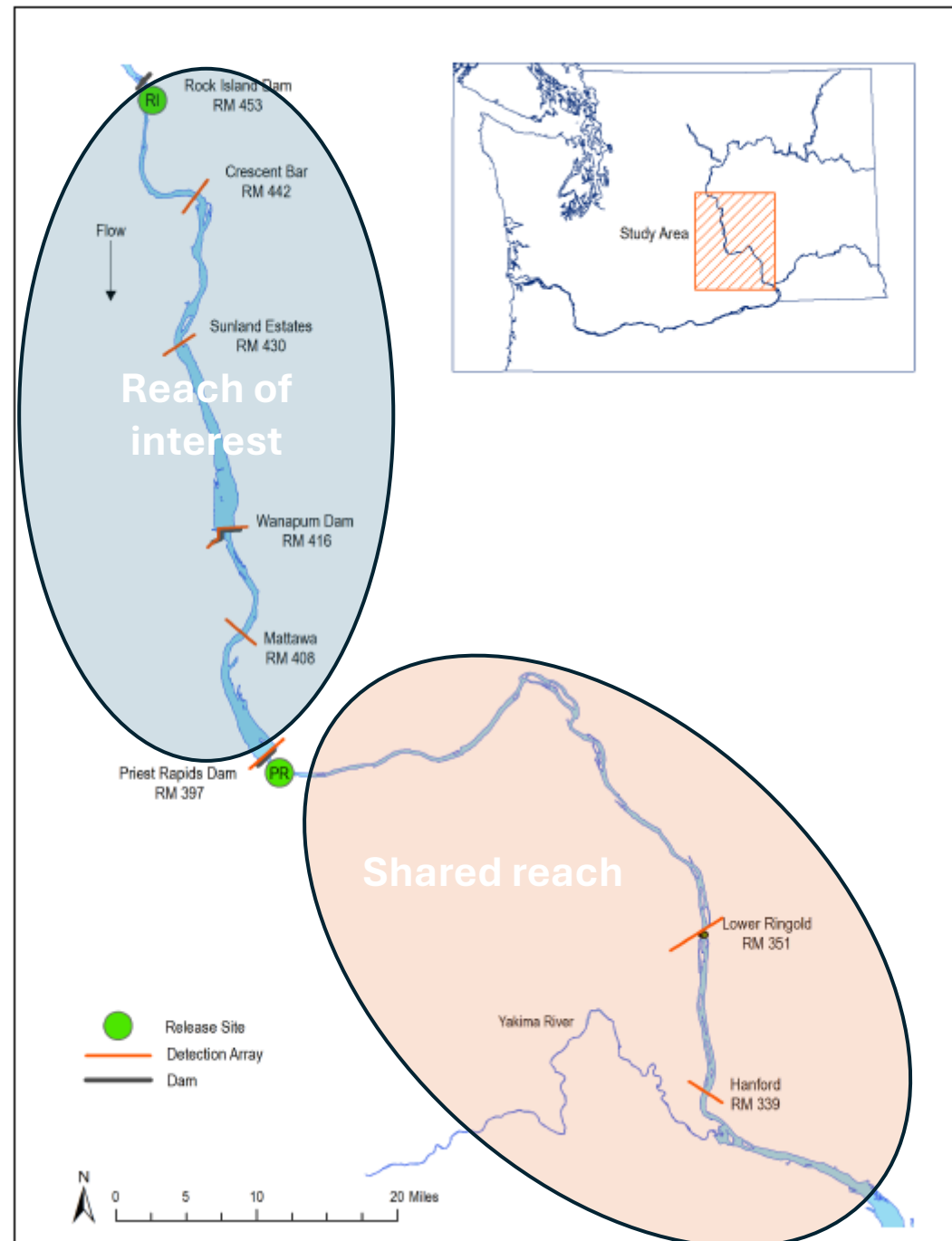


Figure A.3. Position of arrays deployed for the survival study with a detailed view of the detection array at Wanapum Dam and cross-river detection array at Mattawa. Digital imagery is the 2013 National Agriculture Imagery Program Mosaic for Grant County (<http://datagateway.nrcs.usda.gov/gdorder.aspx>).

Study design

- Paired-release recapture - Skalski et al. (1998)
 - Treatment group released at Rock Island tailrace
 - Control group released at Priest Rapids tailrace
 - Timing of control group releases to mix with treatment fish
- Survival estimate = difference between control and treatment groups in the proportions detected at the farthest downstream detection arrays
 - Survival differences between groups that traveled through the **shared reach** (from Priest Rapids tailrace to last arrays) is attributed to travel through the **reach of interest**, i.e. the Priest Rapids Project



Study fish

- Run-of-river juvenile salmonids collected from gatewells, vertical slots adjacent to the turbine intakes
- Fish were collected with a crane-operated dip net
- Transported to Wanapum fish town facility for sorting and tagging
- Study fish surgically implanted with acoustic transmitters and held for 24 hours prior to release
- Excluded fish were returned to river









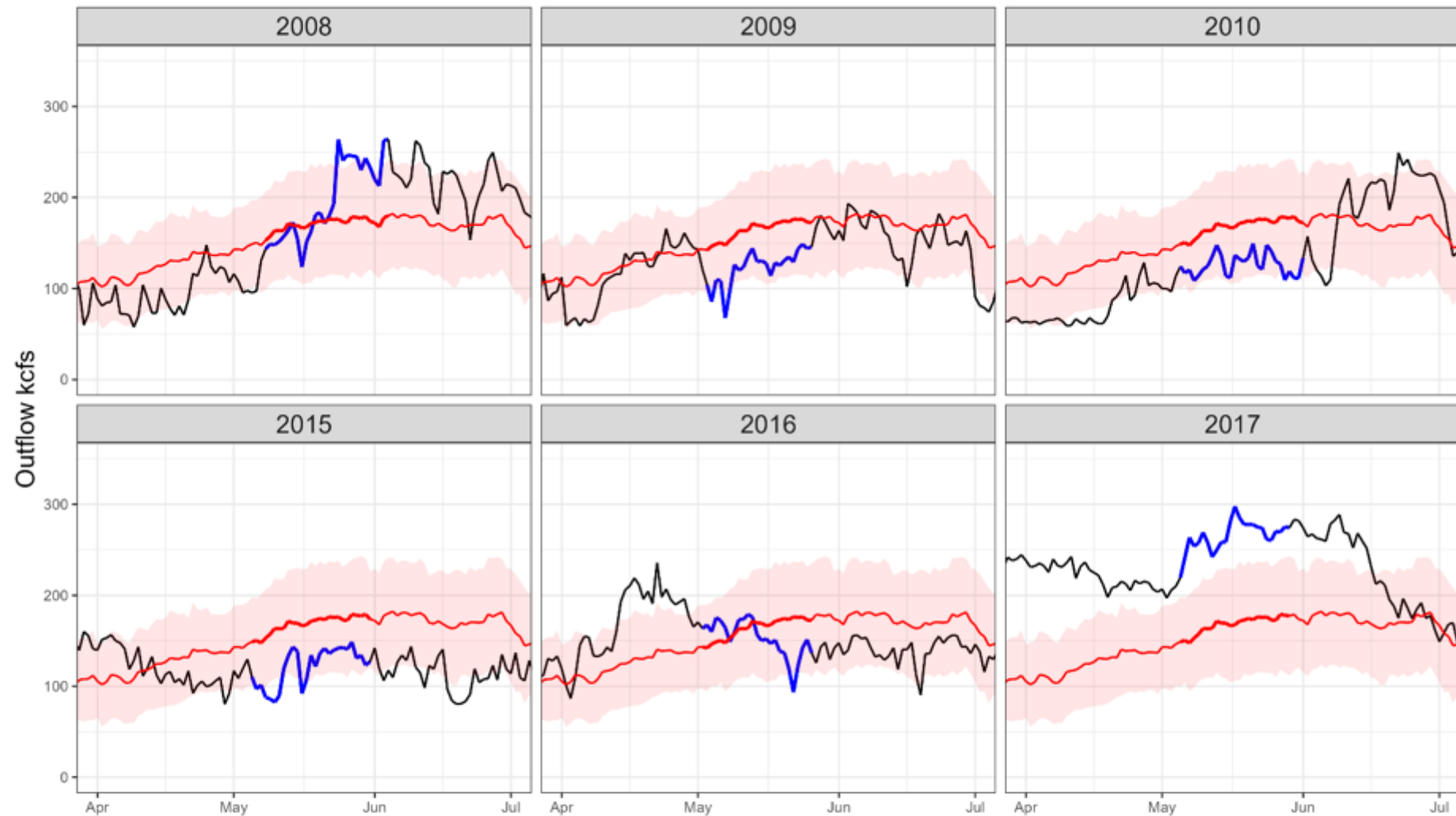


Figure 11. Daily river outflows during each study year (2008–2010 and 2015–2017) in the Priest Rapids Project area, averaged between Wanapum and Priest Rapids Dams. The line is colored blue during the temporal extent of the study period for each year. The red line shows the 25-year historical average outflow (2000–2025), with the red shaded ribbon indicating ± 1 standard deviation from the historical mean

Table 1. Summary of total mortality (1 – survival) and predation by colonial waterbirds on double-tagged steelhead, yearling Chinook Salmon, and Sockeye Salmon smolts during 2008–2016. Estimates represent the proportion of fish mortality from all sources combined or by avian predation alone during smolt passing from the tailrace of Rock Island Dam to Priest Rapids Dam. The estimated percentage of total mortality explained by avian predation is also provided. Estimates of uncertainty are reported as standard errors for total mortality and 95% credible intervals for avian predation. Estimates of total mortality are those of Skalski et al. (2017). Predation estimates are those of Evans et al. (2013, 2016) and Roby et al. (2017).

Species	Year	Total Mortality	Avian Predation	% Avian Predation
Steelhead	2008	0.17 (0.03)	0.08 (0.05–0.12)	49% (31–70%)
	2009	0.17 (0.03)	0.15 (0.10–0.21)	85% (56–100%)
	2010	0.23 (0.02)	0.08 (0.05–0.13)	37% (22–56%)
	2014	0.08 (0.03)	0.03 (0.01–0.07)	32% (12–76%)
	2015	0.16 (0.03)	0.04 (0.02–0.06)	23% (12–58%)
	2016	0.13 (0.03)	0.04 (0.02–0.06)	17% (10–49%)
Yearling Chinook	2014	0.09 (0.02)	0.02 (0.01–0.05)	23% (7–65%)
Sockeye	2009	0.08 (0.01)	NA	NA
	2010	0.09 (0.02)	NA	NA
	2015	0.08 (0.01)	0.02 (0.01–0.04)	22% (10–42%)

Steelhead evaluation results

2008-2010

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- HTI acoustic tag system
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2015-2017

- 3-year mean Project survival = **0.870 (SE 0.020)**
- JSATS acoustic tag system
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Conclusions for steelhead, part 1

- The six studies occurred across a broad range of flow conditions (low in 2009, 2010, 2015; high in 2017)
- The average of flows and temps across all six years aligned with 25-year averages – broadly representative
- Covariate analysis (Payton et al. 2016) identified flow, smolt migration index, and avian predation as significant predictors of juvenile steelhead survival through PRP
- There's more details to share . . .

Next month, part 2

- Juvenile steelhead collection timing
- Passage route analyses
- Route-specific survival
- Reach-specific survival
- Reach-specific avian predation
- More on annual variability

