

The Salmon Prize

Rules and Regulations v1.3

April 14, 2025

The Salmon Prize is governed by the rules and regulations outlined in this document and supersedes all previous versions. All participating Teams must adhere to these rules and regulations.

The Salmon Prize may revise these rules at any time and at its sole discretion.

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SCHEDULE A

- Schedule A1 — 2025 Sockeye International

1. Introduction

- 1.1. Welcome to the Salmon Prize competition, an ambitious initiative to find new discoveries about the mechanisms that drive salmon survival by measuring how well teams can predict salmon returns. We invite you to join us on this journey of exploration, as teams from diverse disciplines come together to try and unlock the enigmas of salmon survival through their predictions.

2. Eligibility and Participation

- 2.1. Registration: To participate in the one or more of our competitions, each Team is required to complete the team registration process and agree to the rules and regulations (current v1.3, effective from March 29, 2025).
- 2.2. Geographical Extent: This competition is open to individuals worldwide, except where there are legal restrictions in place.
- 2.3. Entry Fees: Entry fees may be applied, depending on the competition and will be specified in the appropriate Schedule.
- 2.4. Prediction Timeline: The timeline for the Salmon Prize is unique to each competition and is specified the appropriate Appendices.
- 2.5. Responsible Participation: Participation in the Salmon Prize necessitates adherence to ethical and scientific standards. Teams from anywhere in the world must uphold the principles of integrity, transparency, and fair play throughout the competition. By registering for the competition and submitting predictions, teams acknowledge their commitment to comply with the Salmon Prize Rules and Regulations (v1.3, effective from March 29, 2025).

3. Teams

- 3.1. A " Team" refers to a single person or a group of individuals engaged in understanding and predicting the annual return of various salmon species within the framework of the Salmon Prize competition.
- 3.2. Teams are encouraged to include a broad range of disciplines, including but not limited to fisheries scientists, students, technology experts, machine learning specialists, remote sensing professionals, amateur scientists, and even amateur enthusiasts.
- 3.3. Every Team has one Captain, who is the primary point of contact for the Salmon Prize.

- 3.3.1. The Team Captain shall provide accurate and up-to-date contact information for all team members through www.SalmonPrize.com website.
- 3.3.2. The Team Captain assumes responsibility for ensuring that their Team complies with the most current version of the "Salmon Prize Rules and Regulations". They must familiarize all team members with the guidelines and ensure their understanding and commitment to abide by the competition's ethical and scientific standards.
- 3.3.3. The Team Captain shall oversee the timely submission of predictions, and all required supporting documentation by the due date specified in the competition timeline.
- 3.4. In addition to the Team Captain, a team can also have Team Members. There is a maximum of ten Team Members per team, unless an exception has been granted by the Organizers.
 - 3.4.1. Each Team Member commits to actively contribute to the Team's efforts, drawing on their individual expertise and knowledge to enhance the overall predictions and research outcomes.
 - 3.4.2. Team Members must uphold the highest standards of ethics and integrity in their contributions to the competition. They shall refrain from engaging in any form of academic dishonesty or unethical practices.
- 3.5. Teams are solely responsible for all costs associated with their participation in the Salmon Prize competition. This includes registration fees, travel expenses, research materials, and any other costs related to their involvement.

4. Competition Cycle

- 4.1. For each competition, there is a specified period in which predictions can be submitted. In some cases, early registration will be permitted however Teams will not be able to submit predictions until the competition officially begins.
- 4.2. Salmon Prize workshops and other supporting information sources may be available to participants to gain valuable insights about salmon survival, ocean conditions, data availability, predictive models, and other relevant information that can help participants develop new predictive models and understand the competition's requirements.
- 4.3. Failure to meet the submission deadline will result in disqualification from the competition.

- 4.4. For each competition, a preliminary dataset may be provided as a starting point for making predictions. The extent of the dataset will be determined on a case-by-case basis and will be specified appropriate Schedule.
- 4.5. Predictions will be measured against a publicly available data that is produced from a recognized source. The details of the source will be specific in the appropriate Schedule and will be used to determine the winning predictions.
- 4.6. A final award ceremony may be held for each competition. All teams are invited to attend any award ceremony where the winning Teams will be announced and celebrated for their predictions and contributions. If an awards ceremony is not held, winners will be posted on the Salmon Prize website and all contestants will be notified via email.

5. Prediction Submission and Other Requirements

- 5.1. To participate in the "Salmon Prize" competition, Teams are required to submit predictions and supporting documentation. Below are the minimum requirements that Teams need to fulfill when making their submissions:
 - 5.1.1. Prizing Opportunities: There may be several prize opportunities available for Teams. The value of the prizes will be determined based on the level of sponsorship provided by supporters and will be specified in the appropriate Schedule.
 - 5.1.2. Prediction Data: Each prediction prize will have a specific set of salmon runs that require a prediction. See Section 6 and the Schedules for specific prize requirements.
 - 5.1.3. Public Abstract: Each Team must submit a title and an abstract for each competition they enter. The abstract should cover methodology and approach to formulating their prediction(s).
 - 5.1.4. Data Sources: Each winning Team must provide a list of data sources used in developing their predictions.
 - 5.1.5. Variables Used: Each winning Team may be required to reveal the variables used in their model development.
 - 5.1.6. Predictive Models: In some cases, Teams may need to share their model(s) in order to conduct further analysis on predictive performance. The ownership of these models remains the property of the Team and will be treated as confidential.
 - 5.1.7. Documentation of Methods: While not mandatory, Teams are encouraged to share their models, methodologies, and data with the broader scientific

community. Open access promotes collaboration, facilitates scientific advancements, and strengthens the overall impact of the competition.

- 5.1.8. In some cases, winning Teams may be required to provide public presentations on the methods used.

6. Prizing

- 6.1. Details of competition prizes are specified in the appropriate Schedule. This includes details on the salmon runs to be predicted, the value of the prizes, the source of data used to measure the returns, along with any other related requirements to qualify for the competition.
- 6.2. The value of the prize pools may increase throughout the competition cycle as there may be ongoing efforts to solicit additional prizes from sponsors. Participants are encouraged to visit the Salmon Prize website and explore the "Prizes" section within each competition regularly for updates on the evolving value of the prize pools as well as any newly added awards.
- 6.3. Supporters of the Salmon Prize have the opportunity to become an online sponsor by visiting the website and making a donation.
- 6.4. If a sponsor of the competition refuses or fails to timely pay Salmon Prize the funds that will be used for all or any award, Salmon Prize will not be liable to deliver such award or any unpaid portion(s) thereof or to otherwise compensate Team or any Team Member.

7. Evaluations and Judging

- 7.1. **Scoring Predictions:** Scoring will be based on the absolute percent error in prediction. For prizes based on a single salmon run, Teams with the least absolute percent error between their prediction and the actual number of fish measured will win. For prizes that are based on multiple runs, it will be the Team with the lowest average value of absolute percent error that wins.
- 7.2. **Run Data Collection:** The evaluation process begins with the collection of actual salmon return data from the designated salmon runs. This data will serve as the ground truth against which the predictions of Teams will be compared. Specific details regarding which data are used for the comparison are outlined in the appropriate Schedule.
- 7.3. **Official Data Sources:** Only data from official and reputable sources responsible for monitoring salmon returns, such as government agencies, fisheries

departments, or established research institutions will be used in determining run returns. Details on specific sources will be shown in the appropriate Schedule.

- 7.4. Leaderboards will be used to rank Team predictions based on the Scoring method described in 7.1. This transparency fosters healthy competition and enables participants view their predictions against their competitors. There will be three leaderboard states, based on the timing of the event:
 - 7.4.1. Initially, while the competition is actively allowing predictions to be made, the Leaderboard will only reveal which teams are participating and if their prediction(s) have been submitted yet.
 - 7.4.2. Once the prediction period of the competition ends, the leaderboards will reveal the number of returning salmon predicted for the prize.
 - 7.4.3. Once the winners have been announced, the leaderboard will show the predictions, ranked by least absolute percent error out of 100%.
- 7.5. Judge's Decision: Prior to selecting the winner, the judges will review both the predictions and the salmon runs to ensure the values are accurate. Once the values are verified, a winner will be selected based on the criteria outlined in section 7.1. The judges' decisions are final.
- 7.6. Prize Distribution: Prizes will be distributed based on the requirements for each prize outlined in the appropriate schedule and will be made to the winning Captain of the winning Team. It is the responsibility of the Captain to distribute the prizes to their Team. Organizers of the Salmon Prize are not responsible for any redistribution of prizes to the Team.

8. Intellectual Property

- 8.1. Balancing the intellectual property needs of the Teams with the broader goal of sharing discoveries with the world is an important part of the Salmon Prize. This section outlines how we strive to achieve that balance.
- 8.2. Teams retain ownership of their predictions and any intellectual property generated during the competition. By participating in the Salmon Prize, teams grant the organizers a non-exclusive, worldwide, royalty-free license to use their predictions and non-confidential submissions for research, analysis, and promotion purposes with appropriate attribution.
- 8.3. The Salmon Prize organizers are committed to protecting the intellectual property rights of participants and will handle any confidential information accordingly.
- 8.4. The Salmon Prize seeks to foster an environment of collaboration and knowledge sharing. Towards that end, Teams are encouraged to explore opportunities to

disseminate their findings and insights for the advancement of fisheries science and conservation efforts.

9. Governance

- 9.1. The "Salmon Prize Rules and Regulations v1.3" document serves as the comprehensive guide outlining the rules, procedures, and requirements of the competition. It specifies the criteria for participation, evaluation, prize distribution, and other essential aspects to maintain fairness and transparency.
- 9.2. Updates to the Rules: The "Salmon Prize" organizers reserve the right to make updates and amendments to the "Salmon Prize Rules and Regulations" document before the closing date of the competition. These updates, if any, will be communicated to all registered Teams promptly to ensure compliance with the most current guidelines.
- 9.3. Goldstream Publishing Inc. is the organization that owns the Salmon Prize and is a registered corporation in the province of British Columbia, Canada.
- 9.4. The Organizer of the Salmon Prize consists of the lead (Sean Simmons, President of Goldstream Publishing Inc.) and any delegates the lead appoints.
- 9.5. Judges are appointed by the Organizer and will be selected from a pool of highly qualified Salmon scientists and will be independent of the competition.

SCHEDULE A — COMPETITIONS

Details of the competitions available through SalmonPrize.com in 2024 are specified in this schedule, which may be amended from time to time as more competitions, prizing and/or new categories are added to the competition. In 2024 the list of competition categories are:

- **Schedule A1: 2025 Sockeye International**

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SCHEDULE A1 — 2025 Sockeye International

1. The 2025 Sockeye International competition covers 14 unique Sockeye runs within three major systems (shown below) and is designed to see which Team can best predict the:
 - a. One Columbia River Run: As measured through Columbia River Intertribal Fisheries Commission or the Washington Department of Fish and Wildlife
 - b. Five Fraser River Runs: As measured by the Pacific Salmon Commission using the “preliminary post-season run size estimates”
 - c. Eight Bristol Bay Runs: As measured by the Alaska Department of Fish and Game or University of Alaska Fairbanks, College of Fisheries and Ocean Sciences
2. These run size estimates will equal the spawner numbers + catch + a Management Adjustment (made by the agency responsible for reporting the runs size).
3. Run Predictions: Teams wishing to compete for this prize will be required to provide predictions for the following 14 distinct sockeye runs. Brood tables for all runs will be provided to all teams and available for download from the SalmonPrize.com website. The 14 distinct Sockeye runs include:
 - a. BRISTOL BAY
 - i. Alagnak River
 - ii. Egegik River
 - iii. Igushik River
 - iv. Kvichak River
 - v. Nushagak River
 - vi. Naknek River
 - vii. Ugashik River
 - viii. Wood River

- b. COLUMBIA RIVER
 - i. Entire Run (mostly Okanagan)
 - c. FRASER RIVER
 - i. Chilko River
 - ii. Quesnel River
 - iii. Raft River
 - iv. Stellako River
 - v. Stuart River (Late Run)
4. The initial total prize value for this competition is \$5,000. Over the course of the competition, additional sponsors may be added to increase the value of this prize. Below is breakdown of how the prize money will be awarded.
- a. The best overall prediction from all combined runs category:
 - i. \$1,000 for first place
 - ii. \$500 for second place
 - iii. \$200 for third place
 - b. The best Bristol Bay predictions for (eight runs) category
 - i. \$500 for first place
 - ii. \$200 for second place
 - iii. \$100 for third place
 - c. The best Fraser River System prediction (five runs) category
 - i. \$500 for first place
 - ii. \$200 for second place
 - iii. \$100 for third place
 - d. The best Columbia River prediction (one run) category
 - i. \$300 for first place
 - ii. \$200 for second place
 - iii. \$100 for third place
 - e. The best retrospective models category — i.e. Which models perform the best over the past five years. This category is limited to submissions where the R-Code has been provided as part of the team’s submission and is well documented so that it can be easily run by the organizers.
 - i. \$300 for best overall performance
 - ii. \$100 for best Bristol Bay performance
 - iii. \$100 for best Fraser River performance
 - iv. \$100 for best Columbia River performance
 - f. \$100 will be awarded to the first five teams who complete a prediction submission for this competition (\$500 in total).
5. In addition to predicting the total number of Sockeye salmon returning to these 14 runs, Teams must also satisfy these requirements to qualify for prizing:
- a. Provide a public abstract (see 5.1.3)

- b. Provide a list with descriptions of data sources used (see 5.1.4)
 - c. Provide a list of variables used in the modelling process, (see 5.1.5)
 - d. Provide the models used to generate the predictions (see 5.1.6)
6. The competition opens April 15, 2025 and runs until June 30, 2025. Teams must have all their predictions and associated documentation uploaded to their teams account on www.SalmonPrize.com by the deadline in order to qualify.
7. Winners will be announced at the 2026 Washington-British Columbia American Fisheries Society conference in March, 2026.