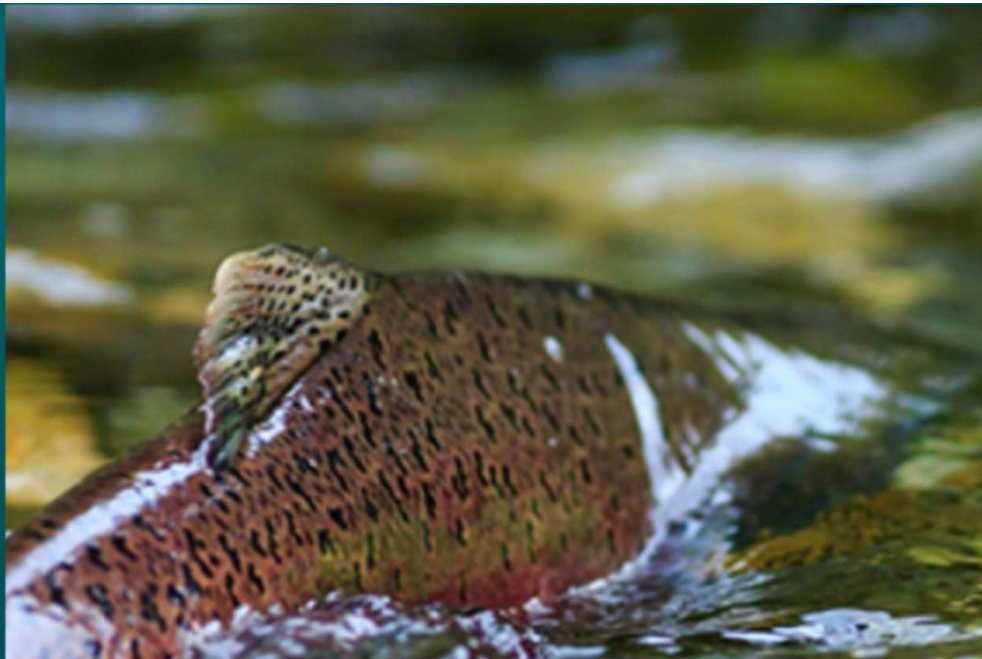




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The Pacific Hatchery Adaptation Strategy

Salmon Enhancement & Habitat Advisory Board

Hatchery Modernization

June 9, 2025



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Purpose of Today's Engagement

1. Provide an Updated Overview of the Pacific Hatchery Adaptation Strategy (PHAS)
 - Strategy Refresher
 - Engagement Process
 - What We Heard
2. Action Progress Summary
3. Next Steps & Timelines
4. Provide an Opportunity for Feedback & Input on the Strategy

Pacific Hatchery Adaptation Strategy



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The Purpose

Why are we developing this?

We need a new strategy to help us use hatcheries responsibly and effectively to help support conservation, rebuilding, stewardship, assessment and harvest in an environment of increasing change.

The **goal** of the strategy is to innovate and adapt the Department's operational planning for salmon enhancement by developing tools and processes that enable a more adaptive approach.



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Pacific Hatchery Adaptation Strategy

Objectives - Original

1. Aligning Salmon Enhancement with Stock Management Objectives
2. Developing Guidelines for Conservation Enhancement Outcomes
3. Improving Transparency in Hatchery Production Planning & Tools
4. Aligning Harvest Production with Fishery Transformation
5. Improving Hatchery Genetic Management
6. Strengthening Hatchery Science, Research & Experimentation



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Pacific Hatchery Adaptation Strategy

Objectives - Revamped

1. All salmon enhancement programs have clear goals that align with broader conservation and fishery objectives and recognize First Nations interests.
2. Risks of conservation enhancement are well managed and are outweighed by the benefits to salmon populations
3. Monitoring and evaluation ensures that salmon enhancement programs are scientifically defensible and are managed adaptively.



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Pacific Hatchery Adaptation External Engagement Process

- The PHAS Discussion Paper was released externally in Fall 2024.
- The intent was to present the Strategy and to seek input.
- Our team engaged via e-mail, a survey, presentations, meetings, & discussions.



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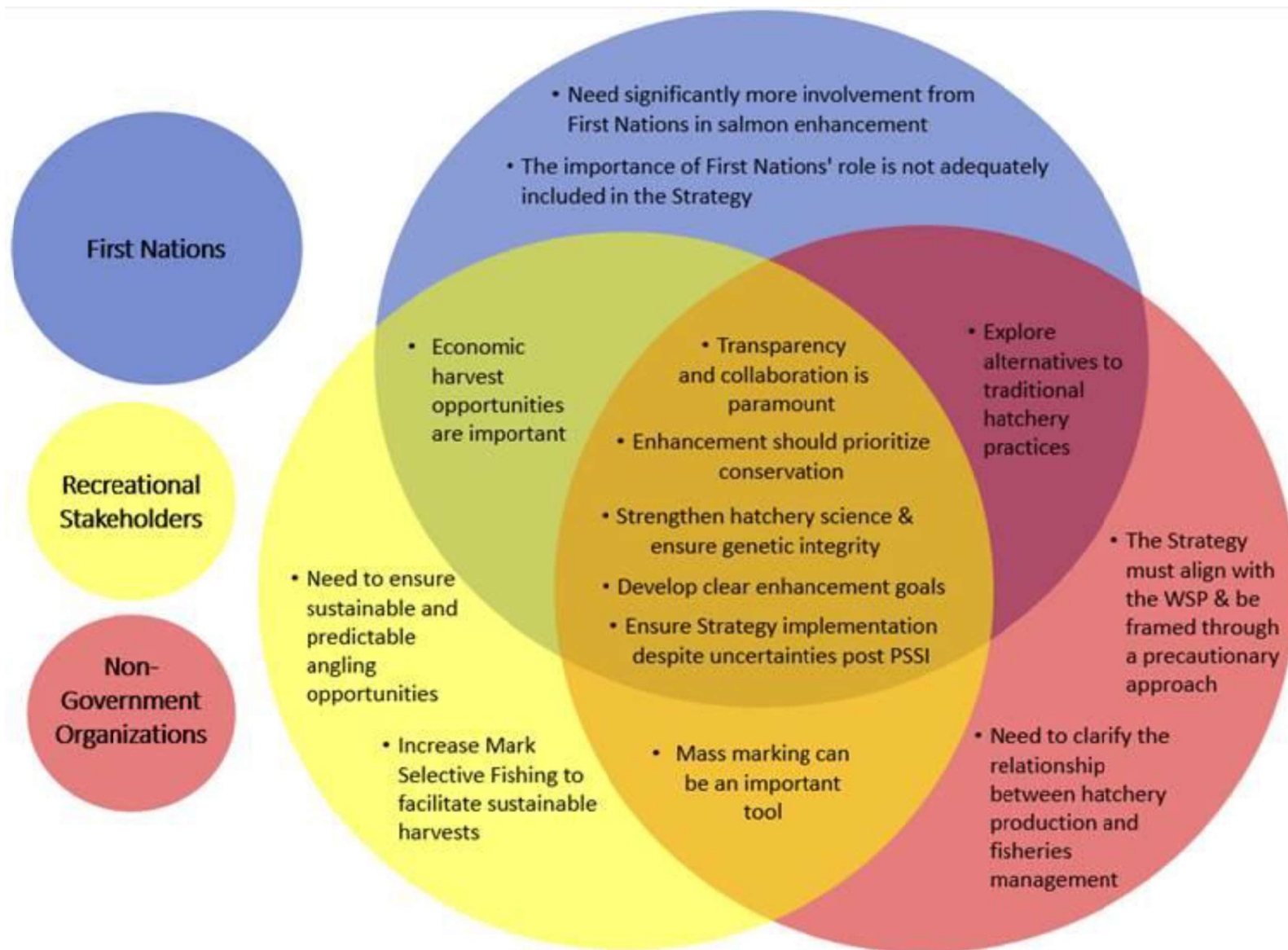
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External Engagement *What We Heard*





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Pacific Hatchery Adaptation Strategy

Progress Examples



WCVI

- FN Engagement
- Population goals
- Enhancement Plans
- Mass Marking Terminal MSF



Central Coast

- FN Engagement
- Joint Program Review & goal setting
- Mass Marking



Hatchery
Science

- Collaborative Research Projects
- Building Relationships with Academia



Conservation
Guidelines

- Health Guidance & Principles
- Genetic trade-offs





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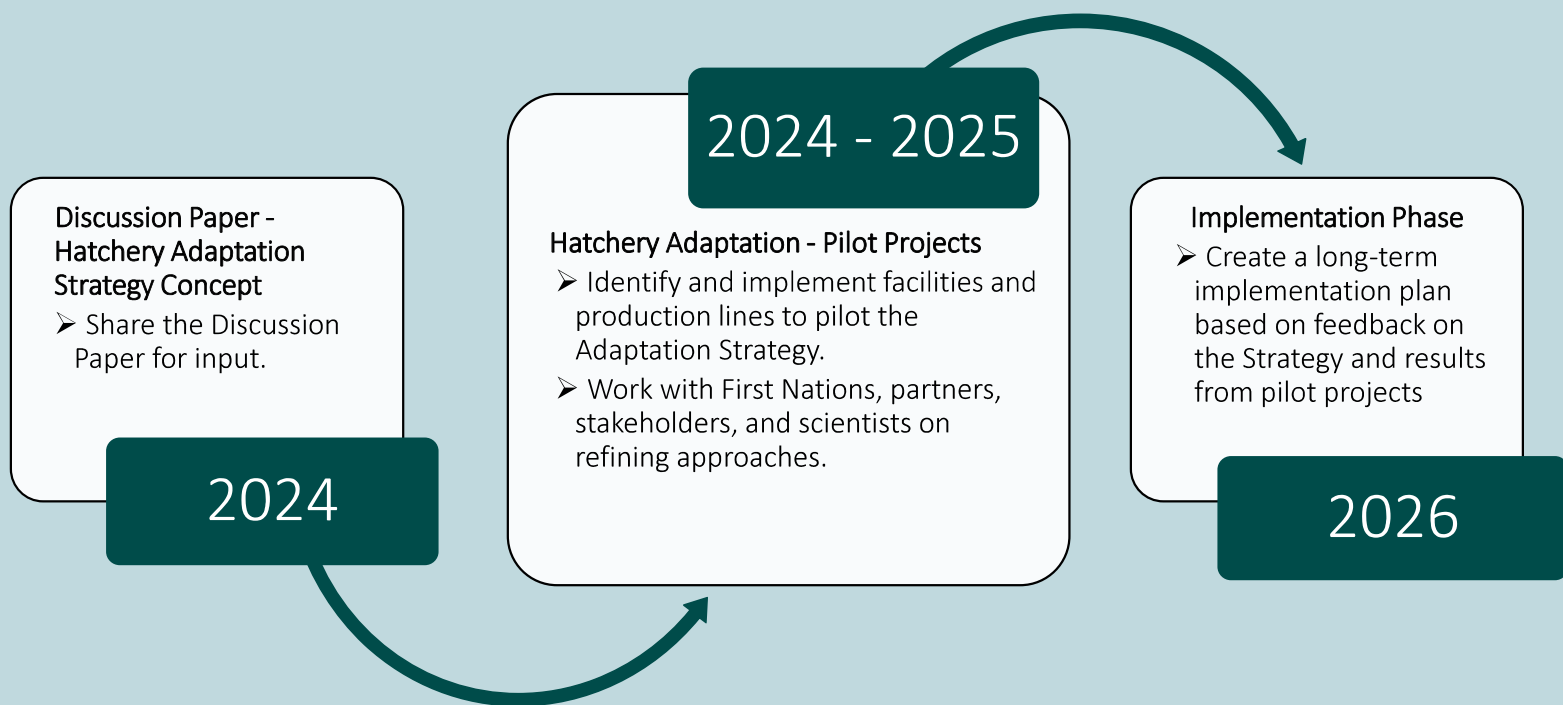
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Pacific Hatchery Adaptation Strategy

Next Steps & Timeline

Next Steps

- Move Actions Forward - Focusing on Existing Processes (*e.g., IFMP, WCVI Chinook Rebuilding, Central Coast FRRA*)
- Produce Final Version on PHAS by Early 2026





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Pacific Hatchery Adaptation Strategy Questions & Feedback



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Pacific Hatchery Adaptation Strategy

Original Action Progress DRAFT Summary

Objective 1 – Aligning Salmon Enhancement with Stock Management Objectives

- **Action 1A:** Drafted a compilation of considerations to align new enhancement with broader stock management objectives.
- **Action 1B:** Developed *Draft Framework for Hatchery Reviews* as a proposed approach for hatchery reviews. Started the review process on CC, FIA and SCA pilot populations.
- **Action 1C:** Developed *Proposed Decision-Making Process for Biological Designations* for working with Nations. The process has been developed and has been piloted on WCVI Chinook.

Objective 2 – Developing Guidelines for Conservation Enhancement Outcomes

- **Action 2A:** Fish health guidance and principles have been developed to form the *Conservation Enhancement Guidelines*. This includes topics such as disease management, genetic management, captive broodstock, maturation inducers, and cryopreservation.

Objective 3 – Improving Transparency in Hatchery Planning & Tools

- **Action 3A:** Created *Enhancement Plan* templates and have completed *Enhancement Plans* for 24 + high-priority populations.
- **Action 3B:** Engaged with Nations on area-specific *Enhancement Plans* for select West Coast Vancouver Island (WCVI) and Central Coast (CC) populations.



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Pacific Hatchery Adaptation Strategy

Original Action Progress DRAFT Summary

Objective 4 – Aligning Harvest Production with Fishery Transformation

- **Action 4A:** Estimated enhanced contribution to catch for harvest-objective production for Chinook.
- **Action 4B:** Documented harvest programs that misalign with current harvesting. Shared with Fisheries Management (FM).
- **Action 4C:** Drafted *Mass Marking for Hatchery Management: Decision Criteria*. Completed external engagement and started mass marking Chinook pilots in 2024.

Objective 5 – Improving Hatchery Genetic Management

- **Action 5A:** Identified PNI targets based on default designations of each enhancement objective.
- **Action 5B:** Published *Genetically Based Enhanced Contribution Guidance for Pacific Salmon Populations*.
- **Action 5C:** Transfer guidelines drafted.
- **Action 5D:** Investments in the genetics lab. Parentage Based Tagging (PBT) almost all enhanced Chinook populations.

Objective 6 – Strengthening Hatchery Science, Research, and Experimentation

- **Action 6A:** CSAS submission on *Advice on the Assessment and Management of Genetic Interactions Between Hatchery and Wild Salmon in Conservation Units* was accepted.
- **Action 6B:** Communicated SEP hatchery science work via the *Hatchery Science Snapshot 2024 Edition*. Formed a SEP Hatchery Science Cross-Branch Working Group. Wrote a *Proposed Database Approach*. Spearheaded numerous new science projects to inform a long-term experimental plan.
- **Action 6C:** Drafting a Risk Assessment for New Enhancement