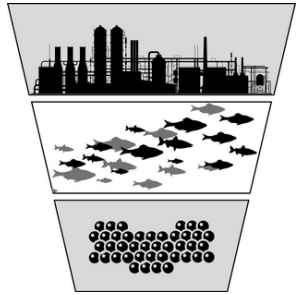
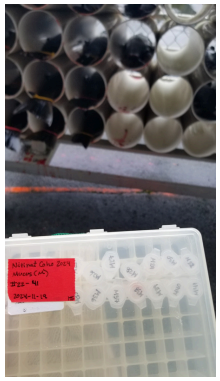
Improvement, Expansion, and Modernization of Salmonid Health Diagnostic Services For Optimizing Salmonid Hatchery Health Management



Salmon Enhancement

PBS Nanaimo

Disease



Historically, DFO's Salmonid Enhancement Program (SEP) has collaborated with the Science Branch's Aquatic Animal Health (AAH) Section to successfully implement disease monitoring and mitigation programs across SEP facilities with the goal of ameliorating endemic diseases in salmonid hatcheries. The diagnostic capacity of the Finfish Diagnostic Laboratory (FDL) at the Pacific Biological Station (PBS) has not kept pace with new technologies, and there is limited technology transfer between Science Branch and SEP.

The anticipated outcomes of this project are to re-establish the linkage between SEP and the Science Branch and to use the expertise of the Science Branch to improve, expand, and modernize the FDL. In doing so, this will provide SEP with the information necessary to provide long-term support for the enhanced capacity of the FDL.

This multi-year project will result in a proactive approach to optimizing salmonid hatchery health management and will be accomplished through the completion of the following objectives.

Take-aways

- Salmon disease testing methods have greatly expanded in the last decade resulting in increased accuracy and decreased turnaround time; implementation of these tests will increase the Finfish Diagnostic Laboratory's diagnostic capacity.
- This hatchery lab project collects tissue samples from broodstock and young salmon to confirm new methods are sensitive and specific to pathogens of interest. Once validated, these tests will be used by the Finfish Diagnostic Laboratory.

Timeline

✓ Oct 2023 – Oct 2024: Molecular assay validation for pathogen detection in broodstock and juveniles including BKD and bacterial coldwater disease. Screening Chinook salmon broodstock for bacterial coldwater disease.

🔄 Oct 2023 – Mar 2025: Technology transfer to Finfish Diagnostic Laboratory. Screening SEP-submitted samples for pathogens of interest using molecular assays.

🔄 Oct 2024 – Mar 2025: Evaluation of non-lethal sampling methods for detection of BKD in broodstock.

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Locations

Pacific Biological Station

Collaborations

BC Centre for Aquatic Health Sciences

Project ID

2408

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