

Alaska Fish & Game - Ruth Burnett & William J. Hernandez Sport Fish Hatchery

Cold Water Recirculating Facilities

Project Scale:

Upon completion, the new Anchorage & Fairbanks Sport Fish Hatcheries will have a total rearing volume of greater than 5300 m³ and will produce approximately 6.6 million fish for release.



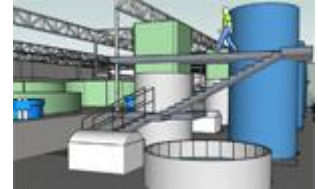
Where:

Fairbanks & Anchorage, Alaska, USA

When:

Multi-phase design began in early 2006.

Fish production to begin in Fall 2010 for Ruth Burnett and Fall 2011 for Anchorage.



Project Description:

The Alaska Department of Fish and Game is developing two new sport fish hatcheries, the Ruth Burnett Sport Fish Hatchery in Fairbanks and the William J. Hernandez Sport Fish Hatchery. The new hatcheries are an integral part of a development strategy by the Sport Fish Division to ensure the continued and increased production of sport fish for South Central (Region II) and Interior Alaska (Region III). Each facility will be producing six species of cold water fish: Rainbow Trout, Lake Trout, Arctic Char, Arctic Grayling, Silver Salmon, and King Salmon.

The State of Alaska selected PR Aqua as the most qualified contractor capable of providing a complex recirculating cold water fish production system and the integration required to successfully deliver this system as a turn-key system capable of producing a bio-mass of fish meeting the size, species, rearing schedule and pathology guidelines set by Alaska Department of Fish and Game. Through the development of these two hatcheries, a standardized recirculation system protocol is to be developed for use in state operated Sport Fish hatcheries. PR Aqua is working with two separate design teams (CH2M Hill in Fairbanks and HDR FishPro in Anchorage) to develop the designs for the two new hatcheries.

Services Being Provided:

PR Aqua is taking an integral role in the delivery of all phases of the project and is providing the following services: bio-programming, system planning and design, equipment selection, tender support, construction review, commissioning, and operational assistance.

Project Features:

For each of the two hatcheries, PR Aqua is incorporating advanced water recirculation and partial reuse technologies in the culture systems designs to achieve a balance between the objectives of reducing water use for sustainability, improving control over culture conditions, minimizing mechanical and operational complexity, optimizing water quality, and minimizing risks.

Challenges and Solutions:

PR Aqua is challenged with the concurrent development of two similar hatcheries for the same end-user while working with two distinct multidisciplinary consulting teams. Communication and coordination are of critical importance in providing cohesive, functional designs while adhering to each project's schedule and budget.

PR Aqua has guided the client and each of the design teams through a comprehensive bio-programming exercise to determine the scope and scale of each facility. The bio-programming process is critical to the success of the project as it allows for a thorough review and definition of key production related criteria and operational preferences early in the design process, setting the stage for successful design and ultimately, the operational success of the facility.

Each facility is to produce six species of cold water fish while maintaining culture separation of various stocks and lifestages of each species. PR Aqua is charged with the complex task of planning the production and developing rearing system designs to achieve all production goals while assisting in optimizing facility scale and cost impacts.

Results

Both projects are currently under construction.