

About the Hatchery

The William Jack Hernandez Sport Fish Hatchery is successfully serving the dual purpose of promoting sustainable fisheries and enhancing the Alaska economy by using innovative engineering design.

The 141,000-square-foot hatchery is the largest facility owned and operated by the Alaska Department of Fish & Game, Division of Sport Fish (DSF). With a mission to protect and improve the state's recreational resources, DSF operates hatcheries throughout Alaska. At full capacity, the facility is capable of producing six million fish, which include Chinook and Coho salmon, rainbow trout, lake trout, Arctic char and Arctic grayling. DSF uses the fish to stock their Fairbanks hatchery, as well as release in accessible waters along south central Alaska's 600-mile road system. The hatchery is an important contributor to sport fishing in Alaska, which nets the state economy \$1.4 billion annually.

In addition to sustaining Alaska's fisheries, the hatchery features design elements that are cost-effective and employ sustainable engineering. Unlike hatcheries that use water only once, this hatchery relies on reuse technology, allowing operators to circulate up to 95 percent of fish culture process water. Water reuse decreases the amount of energy required for heating

water, significantly increases fish production, and discharges less effluent than conventional hatcheries. This hatchery represents the first large-scale application by a state fish and game agency of intensive recirculation technology to produce salmon and trout for sport fishing programs.

The hatchery also promotes education about the fishery resources found in the state. A 10,000-square-foot visitor center accommodates up to 100,000 visitors each year, offering a birds-eye view of all the facility processes and programs. Clerestory windows provide natural light, which in turn promotes healthy development of fish, maintains thermal efficiency, and provides a pleasant visitor experience and work environment for staff.

Located on a reclaimed brownfield site, the site offers trails that lead to venues where visitors can watch stocking operations and egg takes, or view fish moving in the nearby creek. The entire complex allows visitors to see the hatchery in full production, while providing safety and biosecurity measures for hatchery operations.

Funding for the \$89.5 million facility was provided by bond sales, fishing license receipts and Alaska Legislature appropriations.



Hatchery Species Key

Coho "Silver" Salmon



Chinook "King" Salmon



Arctic Char



Arctic Grayling



Rainbow Trout



Lake Trout



William Jack Hernandez Sport Fish Hatchery Project Guide



Alaska Department of Fish and Game
www.adfg.alaska.gov



Alaska Department of Transportation & Public Facilities
www.dot.state.ak.us



HDR
www.hdrinc.com



Institute for Sustainable Infrastructure
www.sustainableinfrastructure.org



The William Jack Hernandez Sport Fish Hatchery received the first-ever Envision™ Project Award.



The Envision™ sustainable infrastructure rating system is the first holistic framework for sustainability of infrastructure. Envision™ is a product of a strategic alliance & collaboration of several organizations, including the Institute for Sustainable Infrastructure (ISI) a non-profit organization co-founded by the American Public Works Association, the American Society of Civil Engineers, and the American Council of Engineering Companies, along with the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design.



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PROJECT KEY

1. Decommissioned cooling pond at start of construction.
2. Pouring concrete into foundation walls.
3. Connecting process water supply pipes at Repump Building.
4. Installing deep water sumps below hatchery floor.
5. Large rearing tanks and pipes before pouring floor slab.
6. Commissioning the 10-foot tank installations.
7. Inspecting process piping before start up.
8. First fish in 28-foot tanks.
9. Visitor corridor.
10. Releasing trout to grow in start tanks.
11. Returned adults provide eggs for the next generation.
12. The William Jack Hernandez Hatchery was designed for winters in Alaska.



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Constructed on a brownfield site that formerly served as a cooling pond for a decommissioned military power plant, the hatchery employs innovative, sustainable and cost-effective features.

- Energy efficient design.
- Process water treatment to exceed water quality requirements.
- Storm water treatment in landscaped depressions for groundwater recharge and no runoff to creek.
- Reuse of existing staff housing, raceways, and wells.
- Hatchery water reuse minimizes impact to regional water supply resources.
- Clerestory windows allow natural lighting creating healthy fish development and pleasant working environment.



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