

Agency: Commerce, Community and Economic Development**Grants to Named Recipients (AS 37.05.316)****Grant Recipient: Prince William Sound Aquaculture Corporation****Federal Tax ID: 92-0047772****Project Title:****Project Type: Maintenance and Repairs****Prince William Sound Aquaculture Corporation (PWSAC)****State Funding Requested: \$9,745,000**
One-Time Need**House District: Southcentral Region (12-35)****Brief Project Description:**

Cannery Creek Hatchery is a State-owned salmon hatchery located in Prince William Sound. The facility was built in 1978 and has many deferred maintenance needs which have been grouped into four main components outlined below.

Funding Plan:**Total Cost of Project: \$9,745,000***There is no other funding needed***Detailed Project Description and Justification:**

There are 4 main components to the Cannery Creek Hatchery Deferred Maintenance Project:

Hatchery Building Renovation

Water Supply System and Fishway Improvements

Power and Fuel System Renovations

Weatherization and Energy Efficiency Upgrades

The main hatchery building is a wood stick-built structure resting on a pressure-treated wood foundation and has reached its design life. This project would provide for the demolition of the existing structure and construction of a new energy efficient building. The remote hatchery relies on diesel-fired boilers for heat and is powered with electricity generated on-site by diesel generators. The replacement of the existing building will reduce the annual operating energy costs and provide a structure to allow this salmon enhancement program to continue into the future.

Many of the concrete structures at the hatchery are in need of repair from 32 years of exposure to the freeze/thaw cycles. This project will provide for repairs needed to the concrete dam and four concrete broodstock fishway weirs. In addition, it will fund the replacement of the existing 24" diameter Schedule-80 PVC water supply pipeline with a new HDPE pipeline.

Power and fuel system work will include replacement of an arctic style generator module abutted to the main hatchery building with a new separately located generator building. In addition, it will fund the upgrade replacements of two 15,000 gallon single-wall bulk diesel tanks with two new double-wall tanks. This project also includes funds for site contamination investigation, repair of the existing containment liner, and the installation of a new roof over the bulk tanks (60'x60'). The funding request includes a \$50,000 site mitigation contingency.

**\$2,300,000
Approved**

Weatherization and energy efficiency upgrades are badly needed for five buildings (staff bunkhouse and four housing units) located on the hatchery grounds. These buildings are heated by diesel-fired boilers and powered with electricity generated on-site by diesel generators. Upgrades include replacement of windows, siding, and roofing, along with the addition of attic and wall insulation. These upgrades will extend the life of these buildings and reduce the annual operating energy costs.

Project Timeline:

Water supply system improvements, power and fuel system renovations, and weatherization and efficiency upgrades are ready to commence in later summer/early fall 2010. Hatchery building renovation feasibility study is complete. Final engineering and construction will be completed over two years.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Prince William Sound Aquaculture Corporation

Grant Recipient Contact Information:

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Has this project been through a public review process at the local level and is it a community priority? Yes No

**Capital Improvement Projects
For
Cannery Creek Hatchery**



**Prince William Sound Aquaculture Corporation
February 2010**

Capital Improvement Projects Summary

Background:

The Prince William Sound Aquaculture Corporation (PWSAC) is a private non-profit regional aquaculture association formed in 1974 by a local area fishermen's group to optimize salmon production in Prince William Sound (PWS) for the long term well-being of all user groups.

PWSAC relies on a two percent tax on the regional commercial salmon harvest and cost recovery revenues (selling a portion of the returning salmon to the hatchery) to fund its salmon enhancement activities.

The State-owned Cannery Creek Hatchery (CCH) was built in 1978 by the Alaska Department of Fish and Game (ADF&G) Fisheries Rehabilitation, Enhancement and Development (FRED) division. In 1988, ADF&G contracted PWSAC to operate and manage the hatchery on behalf of the State through a 20-year professional services agreement. The site is located on land managed by the U.S. Forest Service, approximately 40 miles east of Whittier, on the eastern shore of Unakwik Inlet in the northern area of PWS. Six on-site year-round staff and 14 seasonal staff operate the facility.

Approximately six million pink salmon return annually from this enhancement project. Since 1978, CCH has produced over 130 million adult pink salmon which have been harvested and processed by Alaska's commercial fishing industry. In total, parties that benefit from CCH enhanced salmon include harvesters, the processing sector, which employs people to process the fish, and other portions of the economy that are indirectly affected by the fish harvesting and processing activity. The impact ripples through a range of seafood industry support businesses, retailers, local utilities, and other parts of the general regional economy.

PWSAC operates four remote hatcheries in PWS and one inland on the Gulkana River. Four species of salmon are currently produced: pink, chum, coho and sockeye. The returning salmon benefit the commercial, sport, personal use and subsistence fishers in the PWS area and throughout the State. Three of the hatcheries are State-owned facilities.

Purpose:

PWSAC is faced with the challenge of maintaining this 32 year old State-owned facility with limited financial resources. In addition, the ADF&G professional services agreement is up for renewal. PWSAC desires to continue its partnership with the State in providing enhanced salmon for the many users in the PWS region. This CIP request will provide funds necessary to address deferred maintenance and energy efficient upgrades to an aging State-owned hatchery.

Major Components:

Priority 1: Weatherization and Energy Efficiency Upgrades	\$ 729,000
Priority 2: Power and Fuel System Renovations	\$ 982,000
Priority 3: Water Supply System and Fishway Improvements	\$ 547,000
Priority 4: Hatchery Building Renovation	<u>\$ 7,487,000</u>

Total \$ 9,745,000

The budgets developed for these projects are based on the PWSAC's operational experience and site visits by independent engineers. Detailed design work has not been performed on individual components of the proposed work, and the final designs may result in some components reducing or increasing in scope. It is anticipated that the overall scope of work will result in basic improvement plan described here.

Detailed Itemization:

Weatherization and Energy Efficiency Upgrades

This work includes a variety of weatherization and energy efficiency upgrades for five buildings (staff bunkhouse and four housing units) located on the hatchery grounds.



CCH Bunkhouse, Priority 1 - Weatherization and Energy Efficiency Upgrades

The existing T1-11 siding, windows, and roofing of houses 1-3 and one wing of the bunkhouse are from original construction in 1978. The materials on house 4 (duplex) and the other wing of the bunkhouse are from 1989. Some of the improvement elements included are:

- Siding and trim replacement at bunkhouse
- Window replacement at bunkhouse
- Enhanced insulation (attic and exterior walls) at bunkhouse
- Siding replacement at Residences 1, 2, 3, and 4
- Window replacement at Residences 1, 2, 3, and 4
- Enhanced insulation (attic and exterior walls) at Residences 1, 2, 3, and 4
- Roof re-framing at Residence 4
- Roof replacement at Residences 1, 2, 3, and 4
- Miscellaneous dry-rot repairs



CCH Residences 1, 2, and 3, Priority 1 – Weatherization and Energy Efficiency Upgrades



CCH Residence 4 (duplex), Priority 1 – Weatherization and Energy Efficiency Upgrades

Power and Fuel System Renovations

Replace Generator Module: The existing generator module is attached to the hatchery building and is undersized for efficient power production at the facility. The proximity to the hatchery results in continuous noise and emissions directly adjacent to the employee work space. A new generator building would be located away from the hatchery building and include adequate space for third smaller generator which would operate more efficiently during low load periods during the winter months.



CCH Generator Module, Priority 2 – Power and Fuel System Renovations

Site Contamination Investigation: Evidence of past fuel oil leaks and spills are present in and around the generator module. Some soil contamination is likely, but the extent will not be known until a site assessment is completed.

Replace and Cover Existing Oil Tanks: The two existing 15,000 gallon fuel oil tanks appear to be relatively well maintained and in good condition. However, they are single-wall tanks and rely on a containment dike to prevent spills into the surrounding environment. Because of the high rainfall at CCH, the containment dike is regularly drained, so an unattended spill could occur with drain valves open to surrounding surface and groundwater. In order to provide a more reliable, fail-safe system, replacement of the tanks with double-wall tanks and installation of a roof over the existing tanks.



CCH Bulk Fuel Storage Tanks, Priority 2 – Power and Fuel System Renovations

Water Supply System and Fishway Improvements

Concrete Repairs at Dam: Although the dam is structurally sound, concrete decay and corrosion of miscellaneous metal components do require some repair or replacement to maintain a safe working environment around the structure.



CCH Lake Dam, Priority 3 – Water Supply System and Fishway Improvements



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CCH Lake Dam, Priority 3 – Water Supply System and Fishway Improvements

Pipeline Replacement: The main hatchery water supply pipeline is a 24-inch insulated PVC pipe installed partially above ground. The insulation shield shows signs of some physical damage and the PVC pipe is susceptible to damage in cold temperature. It is intended to replace the pipe HDPE pipe which is more durable in cold temperatures and less susceptible to damage.



CCH Lake Dam, Priority 3 – Water Supply System and Fishway Improvements

Weir No. 4: This is furthest upstream fish containment weir. The concrete foundation has undermined significantly and some of the weir supports have corroded. Additional concrete footings will be placed and the corroded steel components replaced.



CCH Weir 4, Priority 3 – Water Supply System and Fishway Improvements

1st Weir and Barge Landing Improvements: The fill behind the gabion bulkhead has eroded and settled impeding barge access. The gabions will be renovated and additional fill will be placed to provide a smoother surface for landing craft ramps to moor against.



CCH Barge Landing, Priority 3 – Water Supply System and Fishway Improvements



CCH 1st Weir, Priority 3 – Water Supply System and Fishway Improvements

The 1st Weir abuts the barge landing. Concrete has eroded and steel frames have corroded at some locations allowing fish to pass weirs in undesirable locations. Minor concrete patching and steel replacement is needed.

Hatchery Building Renovation

Demolish Existing Building: The main hatchery building is a wood stick-built structure resting on a pressure-treated wood foundation and has reached its design life. The existing structure will be removed, but elements that are re-usable such as water supply piping, head troughs, and head boxes would be salvaged and re-used.



CCH Main Hatchery Building, Priority 4 – Hatchery Building Renovation

Hazardous Materials Testing: Because of the age of the building, it is likely that some of the removed material will require off-site disposal to comply with current standards for hazardous material handling. An assessment will be required to develop a mitigation plan.

Hazardous Materials Disposal: The scope of this work is unknown without further testing. A budget allowance is included at this time, but the actual cost could be less or greater than budgeted.

New Hatchery Building: The actual size of the new building may vary depending on the final design and elements of the existing building that are incorporated into it. It is assumed that the new building will be of similar architectural style and quality as the existing building with additional space to accommodate an incubation room approximately twice the size of the existing room.

Concrete Raceway Repairs: The concrete has deteriorated badly in most of the raceways, especially on the walls above the waterline due to freeze/thaw phenomenon. Both wall replacement and coating will be considered in final design.



CCH Main Hatchery Building, Priority 4 – Hatchery Building Renovation