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 - Cannery Creek Hatchery Maintenance and Upgrade

State Funding Requested: $7,487,000 **House District:** Southcentral Region (12-35)
One-Time Need

Brief Project Description:

Cannery Creek Hatchery is a State-owned hatchery built in 1978. The project will fund the reconstruction of the main hatchery building.

Funding Plan:

Total Project Cost:	$8,235,700
Funding Already Secured:	($748,700)
FY2012 State Funding Request:	($7,487,000)
Project Deficit:	$0

Funding Details:

PWSAC will provide the administrative costs associated with this project. Dollar value estimated at 10% of total project cost.

Detailed Project Description and Justification:

Cannery Creek Hatchery is a State-owned salmon hatchery located remotely in Prince William Sound. The facility was built in 1978 and has many deferred maintenance needs. 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 extend the life of the facility.

Project Timeline:

The feasibility study has been completed for this project. The 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

Contact Name: Kaci Schroeder
Contact Number: 465-3732

For use by Co-chair Staff Only:

$2,224,000
Approved

10:24 AM 5/27/2011

Grant Recipient Contact Information:

Name:	David Reggiani
Title:	General Manager
Address:	PO Box 1110
	Cordova, Alaska 99574
Phone Number:	(907)424-7511
Email:	dave.pwsac@ak.net

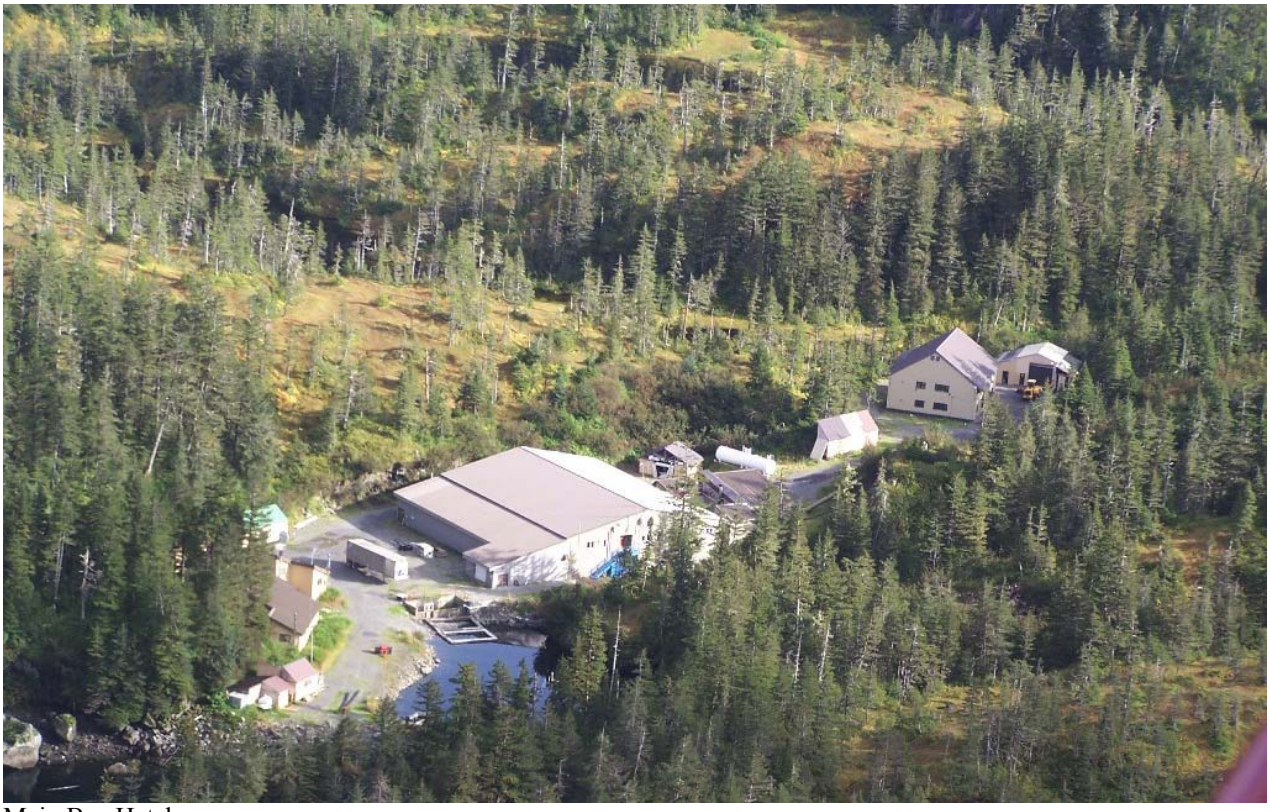
Has this project been through a public review process at the local level and is it a community priority? [ ] Yes [X] No

For use by Co-chair Staff Only:

10:24 AM 5/27/2011

Contact Name: Kaci Schroeder
Contact Number: 465-3732

Deferred Maintenance and Energy Efficiency Upgrades
for the
State-owned Cannery Creek, Main Bay, and Gulkana Hatcheries



Main Bay Hatchery

Managed and Operated by
Prince William Sound Aquaculture Corporation
October 2010

Deferred Maintenance 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.

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 (Cannery Creek, Main Bay, and Gulkana).

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 as a pink and chum salmon hatchery. The chum program was not as successful as the pink program due to the extreme cold lake water during January through March and was discontinued in 1990. In 1988, ADF&G contracted PWSAC to operate and manage the hatchery on behalf of the State through a 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. CCH currently produces 138 million pink salmon fry annually which generate an average return of approximately 6 million adult pink salmon. Six on-site year-round staff and 14 seasonal staff operate the facility.

Main Bay Hatchery (MBH) was built in 1981 by the ADF&G FRED Division as a chum salmon hatchery. ADF&G discontinued the chum program in 1986 and switched to a sockeye salmon enhancement program with the goal of producing 20 million sockeye smolt annually. In 1991, ADF&G contracted PWSAC to operate and manage the hatchery in a similar agreement as with CCH. Main Bay was the first sockeye smolt producing hatchery in the world. The site is located on land managed by the U.S. Forest Service, approximately 40 miles southeast of Whittier, in Main Bay, PWS. MBH currently produces 10 million sockeye salmon smolt annually which generate an average return of approximately 850,000 adult sockeye salmon. Six on-site year-round staff and 8 seasonal staff operate the facility.

Gulkana Hatchery (GH) was established in 1973 by the ADF&G FRED Division as a sockeye salmon stream-side incubation facility. By 1984, GH became the largest sockeye salmon production facility in the world with a 26 million egg-take. The hatchery is located on the upper boundary of the Copper River Basin, 260 miles from the Gulf of Alaska at the base of the Alaska Range, near the headwaters of the Gulkana River. In 1993, ADF&G contracted PWSAC to operate and manage the hatchery in similar fashion as CCH and MBH. GH currently produces and stocks 22 million sockeye salmon fry into nursery lakes annually which generate an average return of approximately 250,000 adult sockeye salmon. Four year-round staff and up to 16 seasonal staff operate the facility.

In total, parties that benefit from PWSAC 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.

In a recent study conducted by the McDowell Group, they concluded that PWSAC's modest $6.4 million budget produces exponential economic returns to the regional and Alaska economies. In 2010, commercial harvesters (employing nearly 1,500 skippers and crew) earned $90 million by catching 188 million pounds of PWSAC salmon. Formulating estimates for the 2010 first wholesale value was not yet possible based on available information. However, they surmised that the record ex-vessel value of the 2010 harvest suggests that processors will see first wholesale values well in excess of those seen in 2008, when processors sold PWSAC salmon for $193 million.

Purpose:

PWSAC is faced with the challenge of maintaining three 30+ year old State-owned facilities with limited financial resources. PWSAC manages and operates these State-owned salmon hatcheries at no cost to the State. PWSAC desires to continue its partnership in providing enhanced salmon for the many users in the PWS and Copper River region. This CIP request will provide funds necessary to address deferred maintenance and energy efficient upgrades to aging State-owned hatcheries and ensure their operational status for another 30 to 40 years.

Major Components:

Priority 1:	Water Supply System and Fishway Improvements	$ 1,920,000
Priority 2:	Power and Fuel System Renovations	$ 575,000
Priority 3:	Weatherization and Energy Efficiency Upgrades	$ 1,320,000
Priority 4:	Hatchery Building Renovation	$ 7,487,000
	Total	**$ 11,302,000**

Cannery Creek Hatchery	$ 7,487,000
Main Bay Hatchery	$ 2,977,000
Gulkana Hatchery	$ 838,000
Total	**$ 11,302,000**

The budgets developed for these projects are based on the PWSAC's operational experience and site visits by independent engineers. Some detailed design work has 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:

Water Supply System and Fishway Improvements

MBH Pipeline Replacement: The main hatchery water supply is a 30-inch uninsulated sectional steel pipeline installed both above and below ground as it descends from Main Lake to the hatchery. In January 1996, the pipeline separated at one of the sectional connections due to an anchor failure caused by contraction of the pipe in an extreme cold temperature weather event. This resulted in the loss of 95% of the sockeye salmon production and approximately $8 million in ex-vessel value to the commercial common property fishery. The sectional connections were reinforced shortly after the event (second and third pictures below) however the pipeline needs to be replaced to ensure against another failure. The replacement pipeline will be fabricated from high-density polyethylene (HDPE) pipe which is more durable in cold temperatures, contain minimal mechanical connections, and is less susceptible to damage.

MBH Pipeline, Priority 1 – Water Supply System and Fishway Improvements

MBH Pipeline, Priority 1 – Water Supply System and Fishway Improvements

MBH Pipeline, Priority 1 – Water Supply System and Fishway Improvements

Power and Fuel System Renovations

MBH Hydroelectric System Components: The existing hydroelectric system which was installed during the original 1981 construction is functional and currently in operation. It utilizes the water collection and conveyance that supplies the fish culture operations and has generated 100% of the facility's energy needs for the last 30 years, approximately 200kW. However, upon inspection, engineers found heavy rust and extreme pitting on the exterior of the turbine scroll case and outlet piping due to leakage at the wicket gate seals and main turbine shaft seal. They suspect this condition may extend to the interior of both the turbine scroll case and outlet piping. As there have been significant advancements in hydroelectric system technology since the late 1970's, the engineers recommend updating the powerhouse with a completely new hydroelectric equipment package which will include: turbine, generator, switchgear/controls, hydraulics and flywheel.

MBH Hydroelectric System, Priority 2 – Power and Fuel System Renovations

Weatherization and Energy Efficiency Upgrades

This work includes a variety of weatherization and energy efficiency upgrades for three buildings (housing units) located at Main Bay Hatchery (MBH) and replacement of two mobile home trailers at Gulkana Hatchery (GH).

Main Bay has a unique microclimate within the PWS region. Main Bay's 1982-current average annual total precipitation is 203 inches and with an average total snowfall of 263 inches it is one of the highest snowfall locations in the Sound. Conversely, Gulkana Hatchery, located adjacent to Paxson, has relatively dry but extreme cold conditions where winter temperatures can plunge to -50°F.

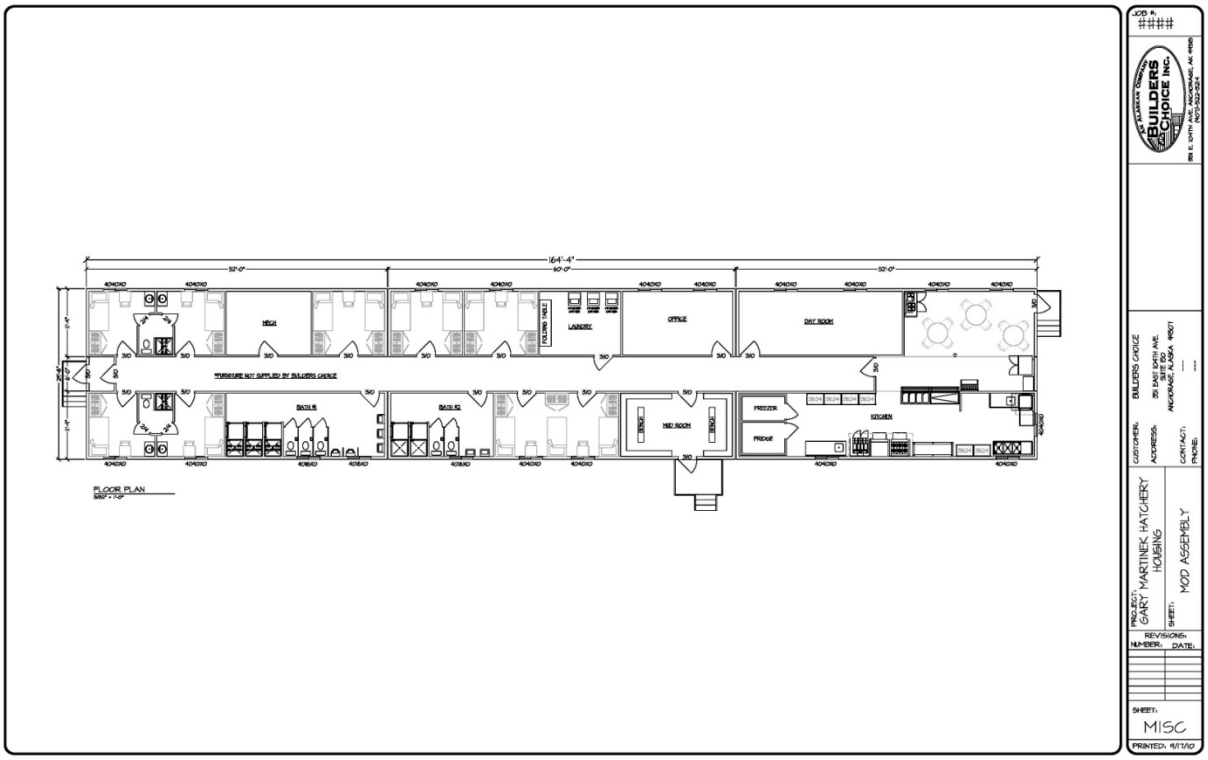
MBH Residences 1, 2, and 3, Priority 3 - Weatherization and Energy Efficiency Upgrades

The existing T1-11 siding, windows, exterior doors, and roofing of houses 1-3 are from original construction in 1981. Some of the improvement elements included are:

- Siding replacement at Residences 1, 2, and 3
- Window and exterior door replacement at Residences 1, 2, and 3
- Enhanced insulation (attic and exterior walls) at Residences 1, 2, and 3
- Roof replacement at Residences 1, 2, and 3
- Extension of roof eves over exterior entrance doors
- Miscellaneous dry-rot repairs

GH Bunkhouse, Commissary, and Office, Priority 3 - Weatherization and Energy Efficiency Upgrades

<u>Remove and Dispose of Existing Mobile Home Trailers:</u> These 1976 mobile home trailers are utilized as a bunkhouse, commissary, and office space for the Gulkana hatchery staff. They are well beyond their design life and need to be replaced. The existing structures will be removed and replaced with a modular prefabricated unit with adequate space to accommodate the operational needs of the hatchery (see below).



Hatchery Building Renovation

CCH - Demolish Existing Building: The main hatchery building is a wood stick-built structure resting on a pressure-treated wood foundation. It does not meet current seismic building codes 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. The new building will be of similar architectural style but with steel framework construction to ensure a 50-year design life.

CCH 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

UNITED FISHERMEN OF ALASKA

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Resolution 2010-1

A RESOLUTION OF THE UNITED FISHERMEN OF ALASKA SUPPORT FUNDING THE DEFERRED MAINTENANCE PROJECTS AT THE STATE-OWNED SALMON HATCHERIES

WHEREAS, the Alaska Department of Fish and Game Division of Fisheries Rehabilitation, Enhancement, and Development was formed in the 1970's to develop policies, regulations, and hatchery practices to responsibly rebuild and utilize Alaska's renewable and sustainable salmon natural resources; and

WHEREAS, the State of Alaska currently owns 11 salmon enhancement hatcheries operated by regional and non-regional private non-profit aquaculture associations via professional services agreements at no cost to the state; and

WHEREAS, these state-owned salmon hatcheries are 30 to 40 years old and are need of significant deferred maintenance to address basic infrastructure problems beyond the normal annual maintenance provided by the private non-profit aquaculture associations at no cost to the state; and

WHEREAS, these diverse salmon enhancement programs contribute significantly to the Alaska common property fisheries (commercial, sport, subsistence, and personal use) in many areas of the state and are helping to sustain the Alaska salmon fisheries and domestic and international Alaska salmon markets; and

WHEREAS, salmon produced by the Alaska salmon enhancement program have fetched hundreds of millions of dollars in ex-vessel value and billions of dollars in total economic output; and

WHEREAS, the economic impact from the Alaska salmon enhancement program is significant and vital to the Alaska salmon industry in creating jobs and wealth within the rural and urban communities that would not otherwise be present;

THEREFORE BE IT RESOLVED, that the United Fishermen of Alaska support funding for the deferred maintenance projects at the state-owned salmon hatcheries throughout Alaska.

By UFA Board of Directors, September 29, 2010:

Arni Thomson, UFA President Attest: Mark D. Vinsel, UFA Executive Director