October 19, 2010

Dear City and Borough Assembly Members,

The Sitka Sound Science Center respectfully requests that you consider the recommendations of the Sitka Long Range Planning Commission to provide a $200,000 no interest loan from the Revolving Loan Economic Development Fund for the purchase of the Sage Building and property.

The Sitka Sound Science Center is dedicated to increasing understanding of terrestrial and aquatic ecosystems in The Gulf of Alaska through education and research. As part of this mission our activities include operations of the Sheldon Jackson hatchery, the Molly O. Ahlgren Aquarium, supporting scientific research and outreach and education. We have strong partnerships with Northern Southeast Aquaculture Association (NSRAA) and The University of Alaska Fisheries Technology Training Program. We currently support research conducted by NOAA, University of Alaska and Scripps Oceanographic Institute. Our Board of Directors represents a wide and rich diversity of science, education and business expertise in the region.

As you may know, the Revolving Loan Economic Development Fund was set up shortly after the Alaska Pulp Corporation closed. The philosophy behind establishing the fund was to invest in businesses that create employment and generate economic development for Sitka. The Sitka Sound Science Center is already providing employment and has tremendous potential for more job creation as we expand our programs. We have a positive impact on local economic development as our contribution to the common stock fishery (commercial, charter, and sport), through our hatchery operations, is worth well over $700,000. Our research and education work is also good for Sitka's economy as we employ local professional scientists through these programs. We attract thousands of visitors each summer to our hatchery and aquarium which provide excellent opportunities for ecosystem, fisheries and marine education. This knowledge helps support local businesses as well through increased awareness of the healthy manner in which our fisheries are managed and harvested. This project will help revitalize the Sheldon Jackson campus. When the College shut its doors in 2007 many high-paying jobs were lost. Our organization is seeking to bring back those professional-level jobs to Sitka through research projects and through semester and

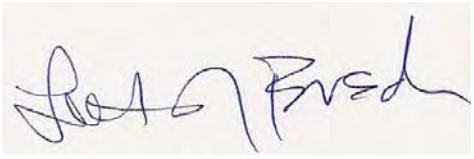
summer sessions "abroad"conducted in Sitka.

This no-interest loan will help SSSC purchase our property. We can not realistically expand our programs until we have ownership of our site. A professional condition survey of the facility was conducted by Northwinds Architects of Juneau. The survey indicated that the building is structurally sound but is in need of mechanical, roof and window repairs. In order to make our programs and facility attractive we need to make these improvements soon. **Ownership is the critical next step.** The 18,000 square foot property has been assessed at $580,000 and Sheldon Jackson is now asking $469,000. When the City helps us acquire the building with a $200,000 no interest loan, SSSC's contribution will be $269,000 and the building will be acquired immediately through the help of a local commercial fishermen who is offering SSSC a bridge loan in order to make the transaction happen quickly. Our contribution will come in part from a $100,000 matching grant from the Karsh Foundation, a private foundation, which will be achieved with the approval of the city loan, a campaign to raise individual donations and a small loan from the State of Alaska.

The attached documents include: our business plan which outlines the current and future activities of our organization; our financial documents that demonstrate our solvency and good management; resumes of key personnel at the Science Center; a list of our board members. Also included are letters of support from various agencies that believe investment in this facility and our organization will have a positive economic impact on the community and the region.

Thank you for your careful review of the packet.

All the best,



Lisa Busch
Director
Sitka Sound Science Center

Name of Project: Sitka Sound Science Center Building Acquisition

Name of Contact: Lisa Busch

Mailing Address: P.O. Box 1373 Sitka, Alaska 99835

Purpose of Project: The purpose of this project is to help a not-for-profit business acquire its facility in order to develop programs that will create jobs and economic development for Sitka.

Loan Dollars Requested from Municipality: $200,000 in a non-interest bearing loan

Project Total: $469,000

Applicants Dollars committed: $269,000

Proposed Loan Payback Period: Loan for the life of the Sitka Sound Science Center

Brief Description of Project: This project will allow SSSC to purchase its building. We must have ownership of the building in order to improve our facility so that we can attract researchers, students and visitors to new programs.

Timetable: We expect to purchase this building November 15, 2010

Number of New Jobs Created: 7-20

Support Letters

Sitka Economic Development Association

University of Alaska Southeast

Northern Southeast Regional Aquaculture Association

Fishery Technology Program, University of Alaska Southeast

Ms. Taylor White

Alaska Longline Fishermen's Association

The Boat Company

Alaska SeaGrant College Program

SEDA
SITKA ECONOMIC DEVELOPMENT ASSOCIATION
329 Harbor Drive, Suite 212 ★ Sitka, Alaska 99835 ★ (907) 747-2660 ★ fax (907) 747-7688 ★ www.sitka.net

October 19, 2010

Dear City Assembly:

This is a letter of support for the Sitka Sound Science Center's (SSSC) effort to acquire Lot 7 of Sheldon Jackson College campus subdivision, which includes the Sage building and hatchery facilities. Ownership control of these facilities will help stabilize SSSC's operations and allow for long-term planning and growth of its programs. We believe this is an excellent use of Revolving Loan Funds, and good for economic development in Sitka.

SSSC already contributes to Sitka's economic prosperity by providing employment, educational and research opportunities, as well as salmon for the common stock fishery.

Recently, the SSSC made a presentation to the SEDA Board of Directors. We were pleased to learn that SSSC is developing its programs in partnership with the Northern Southeast Regional Aquaculture Association (NSRAA) and local fish processing companies while at the same time building upon Sheldon Jackson's science education legacy.

As you may know, the Sitka Comprehensive Plan demonstrates a desire in our community to continue to be an educational hub for the region and the State of Alaska. The new education programs that SSSC proposes will bring young, energetic students to Sitka and provide well-paid teaching and support staff positions that will advance fishery and marine research in the Eastern Gulf of Alaska.

We recommend you support SSSC's request to borrow Revolving Loan Funds to secure ownership of their facilities.

Sincerely,

Garry White, Executive Director

MEMORANDUM

DATE: **October 15, 2010**

TO: **Sitka Assembly**

FROM: **Jeff Johnston, UAS Sitka Campus Director**

CC: **Lisa Busch, Executive Director, SSSC**
Richard Caulfield, Provost, UAS

SUBJECT: **Support for Sitka Sound Science Center**

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1. This is a letter of support for the Sitka Sound Science Center's (SSSC) effort to secure the Sage building. I believe this project will be good for the community, economic development and jobs in Sitka. I have been the Sitka Campus Director for over the five years now and I have come to appreciate the contributions the SSSC will be able to continue to make to Sitka, the Southeast and the entire State of Alaska, if they can secure their claim on the Sage Building.

2. The Sitka Sound Science Center's mission, to promote and support scientific research and science education in the eastern Gulf of Alaska is one that UAS-Sitka embraces. The SSSC has strong support from the community at large, the fish processing industry, the aquaculture community and numerous research entities.

3. Once the building is purchased and funding secured for construction improvements, I would see opportunities to continue training for people who want to work in aquaculture and fisheries biology. The proximity of other fisheries enhancement facilities makes Sitka well suited for training people in the field. The SSSC can provide valuable internships and educational field trips to many of these locations to demonstrate to students not only modem fish aquaculture techniques but also expose them to professionals in the field in a variety of settings.

4. I would ask you to support this request.

NORTHERN  **SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION, INC.**

(907) 747-6850
FAX (907) 747-1470
EMAIL steve_reifenstuhl@nsraa.org

1308 Sawmill Creek Road Sitka, Alaska 99835

Sitka Assembly
City of Sitka

October 18, 2010

Re: Support for Sitka Sound Science Center Loan Request

Dear Sitka Assembly Members,

NSRAA supports the Sitka Sound Science Center's request for a non-interest bearing loan from the Southeast Alaska Revolving Loan Fund. That Fund was initially set up to create jobs and promote economic development in Sitka. SSSC is doing just that. The Sage building is integral to the hatchery, but is also a critical component to further development of SSSC's vision which will create jobs, educational opportunity, and economic benefit.

NSRAA has supported the Science Center since its inception in 2007 and has worked in partnership with this non-profit for the past three years. We have found this organization to be well managed by experienced professionals in fisheries, fish enhancement and science education and research.

SSSC is helping the Sitka economy on several levels. It manages the SJ Hatchery which in partnership with NSRAA is contributing to the common property fisheries in Sitka Sound. Southeast Alaska fishermen and Sitka directly benefit from the salmon produced at SSSC. The cumulative commercial value through 2010 is about $700,000.00. This translates to a first wholesale value of roughly $1.4 million with far greater total economic output. The SSSC program and hatchery also provide employment and educational opportunities.

We believe that ownership of the Sage building is critical for SSSC to expand its educational and research programs which are beneficial to NSRAA, to fishermen, and to the community.

We strongly encourage you to support this project.

Sincerely,

Steve Reifenstuhl,
General Manager NSRAA

University of Alaska Southeast

Juneau . Ketchikan . Sitka Ketchikan Campus

October 18, 2010
Dear Sitka City and Borough Assembly,

The Fisheries Technology Program (FT) at the University of Alaska Southeast – Ketchikan enthusiastically supports the Sitka Sound Science Center's (SSSC) request for funding to purchase the Sage Building at the former Sheldon Jackson College. The FT program offers an AAS and a Board of Regent's Certificate in Fisheries Technology and we train people to enter the finfish aquaculture or fisheries management workforce. We have 39 degree-seeking students, several of whom reside in Sitka. The FT program also has a faculty member residing in Sitka, making a partnership with SSSC important so we may collaboratively train a fisheries workforce in the region.

There is a significant need both regionally and state-wide for skilled fisheries workers. In 2008, after the closure of Sheldon Jackson College (the most important higher education trainer of hatchery workers), the FT program coordinated a meeting at the Sage Building to determine how the newly formed SSSC may be able to continue the important training and education that SJ had begun related to salmon culture. We convened federal and state managers and scientists, University educators and many from the Sitka community and from that meeting garnered consensus that the work begun by SSSC deserved support and needed to continue. The Sage Building is an important piece of educational infrastructure and needs to be in the hands of the SSSC so that education and training may continue there.

In the past two years, the FT program has held UAS college classes in partnership with the SSSC at the Sage Building and we look forward to increasing this partnership once the building is acquired, which will allow SSSC to stabilize and grow. The FT program is currently conducting a formal needs assessment to determine what training and education is needed by the salmon culture industry in Alaska. We see the SSSC as a critical partner in developing new training and the Sage Building as a place to support such training.

Ownership of the Sage Building is required for SSSC to move onto the next level of development. In order to attract students, researchers and science education programs the facility needs improvement which can only be accomplished after the facility has been purchased. We believe investing in SSSC is an investment in economic development and job creation. We encourage your support of this proposal.

Please feel free to contact me if you have questions or would like additional information.

Sincerely,

Kate Sullivan

Kate Sullivan, Fisheries Technology Program Head
Kate.sullivan@uas.alaska.edu
907 228-4565

From: Taylor White <whitetd@whitman.edu>
Date: Tue, Oct 19, 2010 at 2:54 PM
Subject: My Letter
To: lisajeanbusch@gmail.com

Dear Sitka city and borough assembly members,

I am writing in support of the Sitka Sound Science Center's request for a no-interest loan from the Revolving Loan Fund. I was born and raised in Sitka and am proud to call it my home, though I am currently in Washington working on my undergraduate Whitman College. I have volunteered with the SSSC since its inception. During high school I had work-study at the aquarium and in the summer I volunteered helping to maintain the aquarium, collecting samples and as a tour guide. My work with the science center and the various projects it has presented, be it a beach clean-up, a dive to collect specimens, or a full-on summer camp, has instilled in me a desire to return to Sitka to work in marine biology.

We need the Sitka Sound Science Center in our community.
Sitka should be providing this type of employment in order to attract my generation. SSSC provides this opportunity and my hope is that the City Assembly understands the value behind an entity like SSSC. In receiving financial support in order to develop programs, SSSC will create and future opportunities and employment for our community.

As an Environmental Studies - Biology undergraduate, I am constantly learning more about the relationship between the environment, marine resources and communities. I have discovered that community sustainability often derives from future thinking policy-makers who envision economic development through investment in science education and science research. I urge you to include our future in your consideration and to support Sitka Sound Science Center’s efforts to purchase the Sage Building.

Sincerely,

Taylor White

Alaska Longline
FISHERMEN'S ASSOCIATION

Post Office Box 1229 / Sitka, Alaska 99835 907.747.3400 / FAX 907.747.3462

October 16, 2010

Dear City and Borough of Sitka Assembly Members,

The Alaska Longline Fishermen's Association (ALFA) supports the Sitka Sound Science Center's (SSSC) effort to purchase the property currently occupied by the organization. We believe the SSSC's purchase of this property is worthy of a zero-interest loan from the Revolving Loan Fund established when the Alaska Pulp Corporation ended operations in Sitka.

ALFA is a non-profit association of commercial longline vessel owners and crewmembers committed to continuing the sustainable harvest of sablefish, halibut, and groundfish, while supporting healthy marine ecosystems and strong coastal communities.
ALFA engages in research initiatives and management forums to promote the ongoing health and productivity of fisheries. ALFA is a tenant in the Sage Building and our members are working with the SSSC to develop scientific research and education programs to strengthen the longline fisheries off southeast Alaska.

We believe Sitka Sound Science Center is already a tremendously successful organization. The SSSC's board of directors is comprised of a broad representation of the community, including employees of the Sitka Tribe of Alaska, Wells Fargo, the National Oceanic and Atmospheric Administration (NOAA) and the University of Alaska. The SSSC's research and scientific education work contributes to the health of Sitka's fisheries and is an increasingly critical part of our community's economy. In sum, the SSSC is an excellent long-term economic investment opportunity for the City of Sitka, and we urge you to support their request for a zero-interest loan.

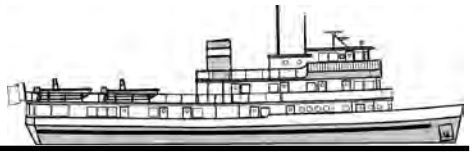
Thank you for your time and consideration.

Sincerely,

Linda Behnken
(Executive Director, ALFA)

THE BOAT COMPANY

Captain Joel Hanson, Alaska Conservation and Vessel Support
417 Arrowhead Street, Sitka, AK 99835 Tel/Fax: (907) 747-9834 Cell: (907) 738-1033



Wilderness Adventure Tours

October 18, 2010

City and Borough of Sitka Assembly
100 Lincoln Street
Sitka, AK 99835

Dear Assembly members,

We respectfully request that you favorably consider Sitka Sound Science Center's efforts to purchase the Sage building property.

The Boat Company has supported this project in recent years through general operating grants, and we expect to continue our support in coming years while the project moves forward and develops. We recognize that SSSC contributes to the success of our business which, in turn, contributes to the long-term economic health and well-being of the Sitka community. It does this via the yearly hatchery releases of juvenile salmon into to the common stock fishery which is of obvious direct benefit to commercial, subsistence and sport fishermen alike…and many of our clients are sport fishing enthusiasts. It also does this through the operation of its aquarium which attracts hundreds of clients off our two small cruise vessels to the Sage building every summer during their overnight stay in Sitka, a built-in part of the cruise package we provide. But of equal importance to The Boat Company and to the community of Sitka—perhaps of greater importance, even—is SSSC's focus on education and research.

Many of you may know that The Boat Company was originally founded thirty years ago as an educational project of the McIntosh Foundation, and we maintain to this day a very high priority emphasis on education. Our interest is to remain in business, of course…but our underlying interest is to instruct Southeast Alaska visitors on the importance of protecting marine and wildlife resources. We recognize SSSC as an important partner in this effort.

We believe that SSSC is a non-profit business worth investing in, and we encourage the Assembly to support a zero-interest loan for their purchase of the Sage building property.

Thank you for your consideration,

Joel Hanson

Marine Advisory Program
University of Alaska Fairbanks
School of Fisheries and Ocean Sciences
1007 W. 3rd Ave. Suite 100 • Anchorage, AK 99501
907.274.9691 • fax 907.277.5242

October 18, 2010

Dear City and Borough of Sitka Assembly,

I am writing to express my support for the Sitka Sound Science Center and the effort to secure the building it occupies through a zero-interest loan. Several years ago, I was asked by the University of Alaska Southeast to facilitate a planning meeting for the future of the Sitka Sound Science Center. I was very impressed with the level of talent and commitment you have in Sitka to support such an effort and it seems that SSSC has continued to move forward.

In a number of communities where Alaska Sea Grant Marine Advisory (MAP) agents live and work, they work to bridge local residents with regionally relevant scientific research. I have been impressed at the high level of interest by community members in places like Nome, Cordova, Ketchikan and Unalaska – where literally hundreds of residents participate in lectures, citizen science monitoring or youth science-based activities. A local science center provides the opportunity to make science relevant and greatly complements the public school system. There seems to be a clear thirst for community involvement in and understanding of scientific research and opportunities for science education with youth and adults.

Although we don't have a MAP agent based in Sitka, and perhaps even more so since you don't, I am sure that your community would benefit greatly by having the Sitka Sound Science Center in your town. The location and the adjacent hatchery seem optimal but not "overbuilt." I have no doubt that Alaska Sea Grant will collaborate with the Sitka Sound Science Center in the future. I encourage your support for this project.

Sincerely yours,

Paula Cullenberg, Associate Director, Alaska Sea Grant
Program Leader, Marine Advisory Program
University of Alaska Fairbanks

SITKA SOUND SCIENCE CENTER BUSINESS PLAN

Created October 1, 2010

Sitka Sound Science Center, Inc.

834 Lincoln St. Sage Building #20
P.O. Box 1373 Sitka, Alaska 99835-1373
907-747-8878
www.sitkasoundsciencecenter.org

Executive Summary

The Sitka Sound Science Center Inc. is a non-for-profit 501c3 business dedicated to marine and terrestrial scientific research and science education in the Eastern Gulf of Alaska. SSSC is already contributing to the common stock salmon fishery and this business plan will demonstrate how our hatchery program not only generates income for the organization but also provides important opportunities for expansion and job creation. With so much of the southeast Alaskan economy depending on its terrestrial and marine ecosystems, scientific research and education have become critically important to the coastal communities. Not only does this type of research and education help policy makers and citizens gain a better understanding of the natural resources that we depend upon but it also becomes another economic generator for Sitka - bringing jobs, and resources to communities that depend upon scientific intellectual capital.

This business plan outlines how the Sitka Sound Science Center (SSSC) meets the needs of the scientific research, fishing industry and science education community. It also describes how, through building upon current partnerships and existing community resources, the SSSC will expand and improve its current services in order to provide the most effective ways of meeting these needs.

The vision of the SSSC includes recruiting scientists to study the local ecosystems, providing scientific research facilities for visiting scientists, establishing long term scientific research based programs in the Gulf of Alaska, and creating scientific educational opportunities for primary, secondary and undergraduate students as well as the general public.

Our activities currently include a partnership with University of Alaska Fish Technology Training Program to train students in fisheries enhancement and aquaculture careers. We also operate the Molly O. Ahlgren Aquarium that is used as an educational tool for local primary schools, the local community, and the thousands of visitors that tour Alaska by cruise ship each year. Additionally, SSSC sponsors a lecture series presented by visiting scientists and administers scientific studies conducted by University of Alaska and Scripps Institute researchers.

The SSSC is currently in the process of maximizing revenue streams from existing operations in order to generate a consistent cash flow. Having this stable revenue stream provides us a strategic advantage over other similar organizations because grant income will be an augment to these funds instead of the sole source of revenue. These revenues will allow us to improve our

facilities to attract and build new partnerships with academic institutions and research agencies while broadening our educational activities to attract more visitors and improve local scientific education.

Background and History

Sitka Sound Science Center was organized in 2007 as a response to the closure of the Sheldon Jackson College. The 501(c)(3) non profit was organized by scientists and science educators dedicated to continuing Sitka's legacy of scientific research and education.

Sheldon Jackson College was formed in 1880 to train Alaska Natives in vocational trades. Gradually the college became well known for its marine science and environmental education programs and began to attract students from around the country. In 1975, the college received a permit to operate an educational fish hatchery which trained some of Alaska's foremost fish biologists, policy makers, and fisheries managers. It has become known for its providing training opportunities and having the only cold water salmon educational hatchery in the country.

At the college's demise the original founders of the SSSC believed that these opportunities were too valuable for the state of Alaska, in particular the Southeast, to lose. The SSSC took up the cause and now operates the SJ Hatchery and its surrounding facilities. To further reinforce their position the SSSC recently applied for the hatchery permit which the Sheldon Jackson College trustees relinquished the hatchery permit in July 2010 with the specific goal of passing it on to the SSSC.

Since the inception of SSSC, the Sitka community has demonstrated immediate and strong support of our mission and our future through donations from the Sitka Charitable Trust, partnerships with local aquaculture associations, support from the University of Alaska Southeast, a multitude of unsolicited donations, in-kind donations, and technical support from the prominent members of the fish processing industry.

The board of directors of Sitka Sound Science Center is comprised of some of the region's most well-known scientists, educators and community business leaders.

Mission Statement

The Sitka Sound Science Center is dedicated to increasing understanding and awareness of terrestrial and aquatic ecosystems of the Gulf of Alaska through education and research.

Vision Statement

We will achieve our mission by:

- Developing a functional modern research and education facility owned and managed by the Sitka Sound Science Center.
- Creating financial stability through diversity
- Promoting active, functional community engagement in science
- Providing unparalleled access to unique marine and terrestrial ecosystems for scientific study

Meeting the Need

Sitka has a long history of scientific research and education. Sitka's geography has given it a major advantage in the study of terrestrial and marine ecosystems. Located on the outside coast of the Tongass National Forest, Sitka's long relationship with natural resource extraction – fisheries, mining and timber--- has created an intrinsic need to understand the natural world.

The Tlingit people who have been in Sitka for thousands of years have a long tradition of knowing and understanding the natural world and have taught generations of children their knowledge system. During Russian acculturation in the 1700s, the Russians established a geophysical observatory in Sitka keeping climatic and oceanic records of the North pacific for decades. In the 1950s and 60s the textbook, "Between Pacific Tides" was written in Sitka and became the definitive resource for intertidal studies in the North pacific for generations.

The Alaska Pulp Corporation closed its doors in 1993, ending nearly a century of logging-dominated activity in the Tongass National Forest. Now, the USFS is transitioning its emphasis from old-growth logging to multiple services, including ecosystem management and habitat restoration.

Today, the fishing industry employs more people than any other sector in Sitka and aquaculture is an important part of that industry in Southeast Alaska. The need to understand the marine ecosystem is urgent especially as issues such as climatic changes and ocean acidification will have huge impacts on policy, conservation, and fishery management. While great attention is being spotlighted on the Bering Sea and the western Gulf of Alaska, the Eastern Gulf has yet to receive the scientific research attention that it badly needs in order maintain its current standing in the global marine ecosystem. Major baseline data sets such as ocean temperatures, marine mammal populations and fisheries biology still have yet to be determined.

Finally, perhaps the greatest concern for the SSSC, is the significant need for science education in our community and throughout our country. It has been established by the National Academy of Science that the United States, once dominant in science and technology, has fallen drastically behind other industrial nations. In order to adapt to a shifting environment and keep our population apprised of our changing planet, we must find ways to improve science literacy both formally and informally.

By attracting researchers to the Eastern Gulf of Alaska we are helping to solve the marine and terrestrial ecosystem issues that impact our state and local economy. By creating innovative and culturally sensitive science and vocational education programs for primary, secondary, and post-secondary students we are helping to build interest and fill the education void. By providing adult science experiences we are education the public on the environmental needs of this country, the state of Alaska and the local community. By developing our unique vision for a locally-based research, outreach, and education entity we are creating the platform to meet all of these objectives.

Donors/Membership

The Friends of the Hatchery, an entity developed independently from the SSSC, has made significant donations to the operation of the hatchery over the past several years. That entity with 160 members has been absorbed by the SSSC and is the launching point for our donor campaigns. Other current donors include an extensive list of Sitka community members, Sheldon Jackson alum, and supporters from outside of the community. All of these supporters are being combined into one central list that will be expanded each year as more and more visitors and residents see the value of SSSC mission. Our individual donor list goals:

2011: 300 individual donations between $50-500, average $75

2012: 400 individual donations

2013: 450 individual donations

2014: 500 individual donations

Donor benefits will begin with an annual newsletter and expand to include discount benefits at the aquarium and fish hatchery in subsequent years and eventually benefits at a science education retail store.

Activities

Operating the Sheldon Jackson Hatchery and the Molly Ahlgren Aquarium are the two largest activities currently taking place at the SSSC. We also sponsor a two week summer science camp that targets Alaska Native students and we host a year-long scientist lecture series. We provide educational programs at our facility for elementary and secondary students from both the Sitka School District and the Mt. Edgecumbe state boarding high school. Thousands of tourists come to our facility for educational programs each summer. We direct research projects funded by NOAA on sperm whales and the commercial fishing industry. We also have created a partnership with the University of Alaska Southeast Fisheries Technology Training program to provide hands-on fisheries enhancement programs and to encourage careers in aquaculture among high school age students throughout the region.

The Facility

Sitka Sound Science Center is currently housed within the Sage Building, the historic science laboratory that was once part of Sheldon Jackson College. The 1929 building is part of the Sheldon Jackson National Historic Landmark designated by the National Park Service on Aug. 7th, 2001. It is located on the waterfront, immediately adjacent to Crescent Park, within walking distance of the downtown business district of Sitka. It is also on the walking path leading from the cruise ship lightering facilities to Totem Park, which makes it an ideal stop for passengers traveling by foot. The Sage building contains the Molly Ahlgren Aquarium which has touch tanks, aquaria and interpretative material about the marine ecosystem. The building also contains salmon nursery and hatchery equipment. Directly behind the building are the hatchery tanks, raceways and sorting facilities.

The City of Sitka Electric Department is working with the SSSC to set up a salt water heat exchange pump demonstration system that will save the

organization on fuel costs while creating an educational opportunity for energy conservation and alternative energy issues.

The City of Sitka has funding and is taking the first steps in the construction of The Sitka Seawalk which will create a new pedestrian pathway for visitors and residents. The new walkway is currently under design and the trail is proposed to lead directly through the hatchery grounds. It will include interpretative signs that could be used on self guided tours and as educational materials for residents and visitors. This City sponsored project will dramatically increase the number of visitors to the facility.

Innovative New Programs

In the next five years, Sitka Sound Science Center will develop several new innovative programs that will promote scientific research and education in the Eastern Gulf of Alaska. These programs will create jobs, raise the profile of scientific ideas and also provide income to the Science Center through grant administration, equipment and office rentals.

Salmon School: Fisheries Technology Training Center – This program will expand the Fisheries Tech Training Program to include full-utilization of salmon training. This vocational education will increase the number of students in the University of Alaska program and broaden the understanding of the fish processing industry for that program. Additionally, the Salmon School will provide vocational training apprenticeships for other trades needed by the fish processing industry. Funding Sources: Rural Economic Development, Alaska Sustainable Salmon Fund, Alaska Department of Labor, Alaska Works Inc.

Scientist in Residency Fellowship (SIRF) – is a one month mini sabbatical program for scientists. Visiting scientists provide lectures in the schools, give public lectures at the Science Center building and participate in community forums to discuss current scientific ideas such as on public radio and monthly multi-disciplinary luncheons with the fishing and conservation communities. This program will introduce scientists from around the nation to Sitka and its scientific resources. It will also provide these professionals with important education and outreach opportunities. It will encourage these scientists to return with partnerships and other researchers. Funding sources include: National Science Foundation, Rasmuson Foundation, Skaggs Foundation, Office of Naval Research, NOAA informal education.

Semester in Alaska program - Semester abroad programs have sky-rocketed in the past five years. One in three undergraduates in this country now hopes to

attend an off-campus program during their junior year of college. The Sitka Sound Science Center will create an off-campus program based in Sitka for undergraduates from other academic institutions. Student will be in the ideal outdoor classroom for studying environmental issues in the North. Students will learn about coastal communities, commercial fishing, natural resource extraction with regular field trips to natural settings on the water and the land. Interest in this program has already been demonstrated by Duke University, University of San Francisco, Stanford, Yale University and Whitman College. Funding sources include: Mellon Foundation, Pew Charitable Trust, Murdoch Foundation, Rasmuson Foundation, Ford Foundation.

Science Mentoring – the SIRF will also provide mentoring opportunities for students in Sitka and from students from around the State who attend the state-operated boarding school Mt. Edgecumbe, which has a long history of training Native leaders. The mentoring program will encourage students to get a deeper understanding of the way scientific research is conducted today, look at scientific questions and expose them to careers in science.

Making Waves –SSSC will expand our summer science camp program to improve promotion of the marine science camp that will eventually become a two week residential camp for students from around the state of Alaska. Making Waves will have programs for science educators in need of continuing ed credits and for students who will exposed to scientific concepts as well as scientific careers. Funding Sources include: National Science Foundation, NOAA, Office of Naval Research, Sitka Charitable Trust, and Crossett Foundation.

Citizen Science with Coastal Residents– Engaging citizenry in scientific questions and current scientific research is important in helping the public understand the relevance of this kind of study. Citizen projects that engage communities help raise the profile of issues and are proven to engage people in the issues. SSSC will develop citizen science projects that partner University of Alaska scientists studying ocean acidification and climate change with commercial fishermen and the state and federal land management agencies to study and monitor wildlife and wild salmon habitat Funding Sources include: National Science Foundation, NOAA, NASA and Office of Naval Research, North Pacific Research Board and Fishing organizations.

Aquarium Docent program – develop a group of volunteer interpretative staff to act as aquarium docent to educate visitors about the facility and the marine and terrestrial ecosystem.

Tech Training for Electronic Monitoring- the North Pacific Fishery Management Council recently approved an observer requirement on fishing boats under 60 feet and on halibut boats. Video or electronic monitoring is one possible solution to providing observations. SSSC will train people in electronic monitoring, installation and troubleshooting. In addition we will train people to do video review, identification of fish and fish biology for that review.

Ecosystem research- The opportunities for scientific research in the Eastern Gulf are endless. SSSC will encourage research work in marine and terrestrial ecosystems including marine mammal research, fish biology, fisheries enhancement research, baseline data collection on beaches and forest quadrangles, deepening the understanding between the relationship between the forest and the ocean, rivers and tidelands.

Job Creation

The Sitka Sound Science Center already had 14 people on the payroll. We provide five positions at the facility and 9 off site that participate in scientific research. These are midlevel, well paid positions. The SSSC also provides employment through the contributions we make to the common stock fishery particularly the multi-million dollar Deep Inlet fishery. Our organizations helps to create work for commercial and sport fishermen, NSRAA, cold storage workers and the support staff at state and national agencies. SSSC's contribution to the local fishery can be conservatively estimated at over $500,000 per year based upon 10 million chum, 3 million pink, and 250k coho released.

In the next five years the SSSC will increase the number of people working at the facility. There is already a need for a hatchery manager and a program coordinator. We will also create employment through our new programs. In the next ten years we can expect the Electronic Observer program to create 10 positions, science camp and semester programs will create 5-10 positions; the Scientist in Residency Fellowship: 2 positions; hatchery training programs 4 positions; outreach and education programs: 2 positions

Revenue Generation and Expanding Services

Currently the Sitka Sound Science Center is supported by revenue generated by donations from visitors, and members of the Friends of Sheldon Jackson Hatchery. We also generate income by renting out space within the facility to complimentary programs. Major revenue is generated from our partnership with the Northern Southeast Regional Aquaculture Association (NSRAA) and

cost recovery operations from salmon returning to the Sheldon Jackson Hatchery (SJH).

Owning the Sage building will increase revenue income by the ability to rent regular office and laboratory space to federal, state and scientific agencies such as NOAA, the University of Alaska and the U.S. Fish and Wildlife Service which have all indicated an interest to move into our building.

Revenue will also be generated by charging 20 Percent administration fees for grant programs. While this kind of soft money is not dependable for regular operations it will offset the costs of running these programs. Additionally, the development of a long term undergraduate program will provide regular income to the Science Center.

There is a great potential for expanding our tourism trade. The City of Sitka is planning the construction of a downtown SeaWalk which will bring hundreds of thousands of cruise ship passengers along a pedestrian walkway that can be designed to be integrated with the grounds of the Sitka Sound Science Center. This will create new opportunities for revenue generation as SSSC will develop new on-shore experiences such as fishing tours that include a tour of the hatchery, the aquarium and the harbor.

Financials

When SSSC began, it operated only from grant revenue and a one-time expenditure from the State of Alaska. Today it generates its own income primarily through cost recovery from our fish hatchery operations, donations to the aquarium, administration of grants, and partnerships through the fish hatchery. It also receives money through the Fish Box Tax collected by the City of Sitka. In the next five years, SSSC has even more ways to generate its own income rather than depending on grant revenues. As our hatchery becomes more streamlined and modernized, we expect cost recovery revenues will increase. We also expect to generate more income off of each fish as our facilities expand to process the salmon more fully.

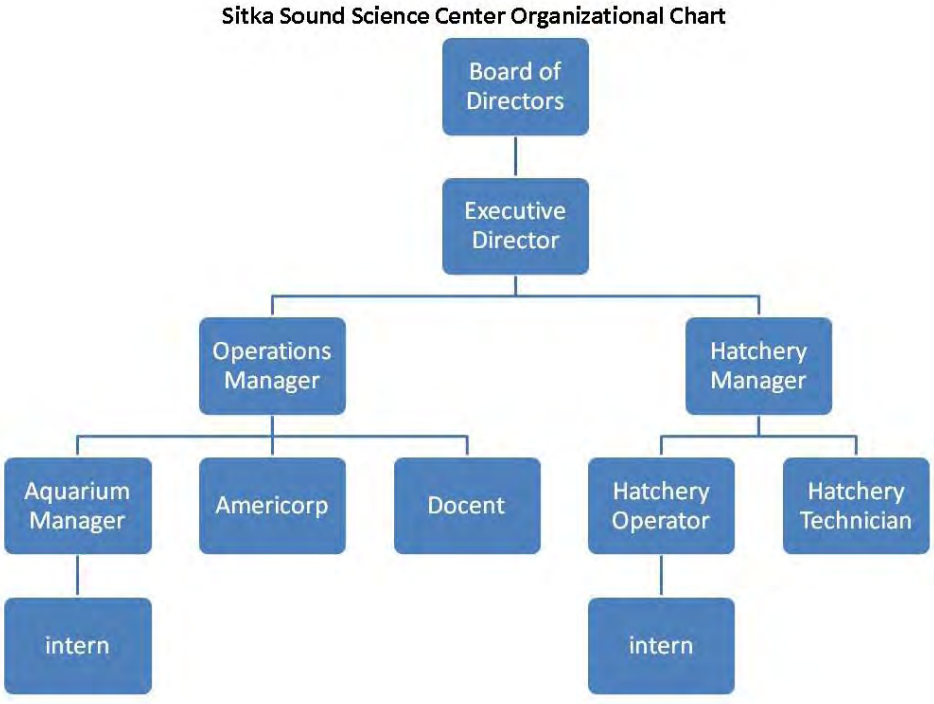
Grants will be obtained from state, federal agencies for programs and for our facility improvements. Each year our organization will improve the facility to make it more attractive for research, more energy efficient and a better teaching tool for students.

Sitka Sound Science Center also has access to the Alaska Division of Renveue PNP Revolving Loan Fund which provides low interest loans to fish hatcheries. These loans will be accessed to help improve and modernize our fish hatchery equipment to better optimize revenue potential. This gives us access to very

low interest loans which can allow us to build infrastructure which, in turn, will generate more revenue through more efficient operations and provide better teaching tools. Other long term revenue generation includes rentals for lab and office space; tuition fees for undergraduate programs; establishment of a science education retail operation; admission fees for hatchery and aquarium tours, formal relationships with cruise lines and local tour operators, and regular annual memberships.

Within three years, SSSC will make our executive director and operations manager positions full time. In year four and five we plan to hire a hatchery manager which we believe will increase our hatchery efficiency and help expand our partnership with the University of Alaska Fisheries Tech Training Program. We also plan to add a full-time maintenance engineer. In year four a program director will be added to the staff to oversee the operations of the research and education programs. In year five we will expand the educational coordinator position to include volunteer organizing.

Current Organizational Chart (2010)



Sitka Sound Science Center

FY2010-2014 Pro Forma

Revenue vs. Expenditure

REVENUES	**2010**	**2011**	**2012**	**2013**	**2014**
Aquarium	18,000	24,000	25,000	28,000	28,000
Donations	15,000	30,000	40,000	55,000	62,000
Indirect Revenue from grants	25,000	55,000	75,000	80,000	90,000
Cost Recovery	52,000	78,000	78,000	79,000	80,000
Partnerships	132,500	132,500	120,000	129,000	100,000
Rental Income	3,600	5,000	5,000	9,000	12,000
Operating Grants		35,000	35,000	45,000	15,000
Total Revenues	**246,100**	**359,500**	**378,000**	**425,000**	**387,000**
EXPENDITURES					
Wages and Benefits	151,685	159,400	188,560	221,083	227,365
Travel	3,608	3,000	4,000	5,000	6,000
Utilities and Maintenance	45,012	60,000	60,000	70,000	70,000
Supplies	9,217	10,000	10,000	10,000	10,000
Boat Repair and Maintenance	12,325	35,000	37,000	37,500	39,000
Professional Services	54,499	60,000	60,000	65,000	70,000
Miscellaneous	250	250	250	250	250
Total Expenditures	**276,596**	**327,650**	**359,810**	**408,833**	**422,615**
Fund Balance Gain/(Loss)	(30,496)	31,850	18,190	16,167	35,615
Fund Reserves	**52,000**				
Carryover	26,904	58,754	76,944	93,111	128,726

Capital Budget for Facility Renovation

POTENTIAL REVENUES for 2011-2014	
EDA	800,000
historic preservation funds	15,000
USDA Rural Development	367,000
Karsh Foundation	100,000
Murdoch Foundation	50,000
Division of Investments Loan	307,500
City of Sitka	200,000
capital campaign	80,000
Total Revenues for Capital	**1,919,500.00**

EXPENDITURES	
Building purchase	469,000
Roof	94,500
Windows	95,000
electrical and plumbing upgrades	750000
Expansion of fish processing	211,000
Replacement of heating system	50,000
modernization of hatchery equipment	250,000
Total Expenditures	**1,919,500.00**

A young supporter of the SSSC, September 2010 egg take.

APPENDICES

Key Financials

Resumes of Key Personnel and Board of Directors Bios

SSSC pamphlet

Final Report of University of Alaska 2008 conference on Fisheries Science

McDowell Economic Report on Southeast Alaska Aquaculture Associations

RECENT FINANCIALS

2009 balance sheet

2009 income statement

2010 balance sheet

Sitka Sound Science Center
Income Statement
January through December 2009

	Jan - Dec 09
Ordinary Income/Expense	
Income	
4000 · Grant Income	237,166.96
4010 · Friends of the Hatchery	23,513.00
4020 · Donation Income	1,571.79
4030 · Cost Recovery	17,332.11
4050 · City Fish Box Grant	32,500.00
4060 · Camp Tuition	1,510.00
4080 · Fund Raising	2,103.00
4090 · Rental Income	
Sales Tax	-60.00
Tax Exempt	900.00
4090 · Rental Income - Other	2,223.50
Total 4090 · Rental Income	3,063.50
Total Income	318,760.36
Expense	
100 · Personnel Services Expense	
110 · Payroll Tax Expense	10,955.79
120 · Director Salary	41,599.92
125 · Wages	75,685.60
130 · Worker's Comp	4,291.00
Total 100 · Personnel Services Expense	132,532.31
200 · Travel	
210 · Boat Fuel	925.19
230 · Training/Staff Development	1,270.80
240 · Project Travel	3,762.25
200 · Travel - Other	1,600.00
Total 200 · Travel	7,558.24
300 · Facility Expense	
320 · Bldg/Leasehold Maintenance	2,464.73
330 · Heating Fuel	6,554.94
340 · Janitorial	1,067.30
350 · Postage, Shipping & PO Box Rent	456.66
360 · Sage Building Rent	19,560.00
370 · Telephone/Internet	450.46
380 · Water, Electric, Sewage	12,332.96
300 · Facility Expense - Other	1,070.00
Total 300 · Facility Expense	43,957.05
400 · Supplies	
410 · Office	423.40
412 · Program	22,434.20
Total 400 · Supplies	22,857.60
500 · Equipment	
510 · Boat Insurance	876.00
520 · Boat Repair & Maint.	265.39
530 · Hatchery Equipment	4,389.97
560 · Moorage & Storage	1,309.99
580 · Equipment Purchase & Rental	1,031.91
Total 500 · Equipment	7,873.26
600 · Other Expense	
610 · Advertising/Printing	657.60
630 · Insurance	
639 · Liability	5,158.00
Total 630 · Insurance	5,158.00

Sitka Sound Science Center
Income Statement
January through December 2009

	Jan - Dec 09
640 · Fund Raising Expense	871.15
645 · Meeting Expense	146.64
660 · Guest Faculty Contracts	5,400.00
665 · Dues, Subscript. & Memberships	-253.00
670 · Hatchery Management Contract	60,000.00
675 · Cost Recovery & Broadstar Exp.	3,289.08
680 · Legal & Professional Services	
681 · Other Professional Services	4,218.10
685 · Accounting	3,438.22
689 · Legal	603.75
680 · Legal & Professional Services - Other	0.00
Total 680 · Legal & Professional Services	8,260.07
690 · Staff Development	650.00
695 · Taxes, Licenses & Permit	600.00
Total 600 · Other Expense	84,779.54
Total Expense	299,558.00
Net Ordinary Income	19,202.36
Other Income/Expense	
Other Income	
ask Tory	200.00
Interest/Div Income	1,004.44
Total Other Income	1,204.44
Other Expense	
Bank Charges	22.38
Total Other Expense	22.38
Net Other Income	1,182.06
Net Income	**20,384.42**

Sitka Sound Science Center
Balance Sheet
As of December 31, 2009

	Dec 31, 09
ASSETS	
Current Assets	
Checking/Savings	
ALPS CD	50,894.90
ALPS Savings	20,109.45
Friends Of The Hatchery Account	24,248.35
Petty Cash	237.04
SSSC Checking	17,193.30
Total Checking/Savings	112,683.04
Accounts Receivable	
11000 · Accounts Receivable	32,780.18
Total Accounts Receivable	32,780.18
Total Current Assets	145,463.22
TOTAL ASSETS	**145,463.22**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
20000 · Accounts Payable	-1,350.18
Total Accounts Payable	-1,350.18
Credit Cards	
Bank of America	180.20
Total Credit Cards	180.20
Other Current Liabilities	
24000 · Payroll Liabilities	3,946.06
Total Other Current Liabilities	3,946.06
Total Current Liabilities	2,776.08
Total Liabilities	2,776.08
Equity	
32000 · Retained Earnings	122,302.72
Net Income	20,384.42
Total Equity	142,687.14
TOTAL LIABILITIES & EQUITY	**145,463.22**

Sitka Sound Science Center
Income Statement
January through September 2010

	Jan - Sep 10	
Ordinary Income/Expense		
Income		
4000 · Grant Income		147,851.80
4010 · Friends of the Hatchery		19,216.72
4020 · Donation Income		12,838.99
4030 · Cost Recovery		38,185.90
4040 · Lab & Bench Fees		780.00
4060 · Camp Tuition		1,600.00
4080 · Fund Raising		759.00
4090 · Rental Income		
Sales Tax	-260.04	
4090 · Rental Income - Other	6,115.60	
Total 4090 · Rental Income		5,855.56
4099 · Overhead Transfer		8,020.73
Total Income		235,108.70
Expense		
100 · Personnel Services Expense		
110 · Payroll Tax Expense	10,932.36	
120 · Director Salary	37,600.00	
125 · Wages	118,981.07	
130 · Worker's Comp	3,739.00	
Total 100 · Personnel Services Expense		171,252.43
200 · Travel		
210 · Boat Fuel		
211 · Aquarium Boat Fuel	187.23	
212 · Hatchery Boat Fuel	115.81	
210 · Boat Fuel - Other	1,416.89	
Total 210 · Boat Fuel		1,719.93
220 · Milegage Reimbursement		560.00
230 · Training/Staff Development		500.00
240 · Project Travel		12,090.64
Total 200 · Travel		14,870.57
300 · Facility Expense		
320 · Bldg/Leasehold Maintenance		1,725.68
330 · Heating Fuel		5,500.00
340 · Janitorial		1,048.73
350 · Postage, Shipping & PO Box Rent		265.83
360 · Sage Building Rent		15,750.00
370 · Telephone/Internet		1,665.08
380 · Water, Electric, Sewage		8,207.22
Total 300 · Facility Expense		34,162.54
400 · Supplies		
410 · Office		1,651.57
412 · Program		4,453.73
430 · Hatchery Supplies		4,427.02
440 · Aquarium Supplies		948.74
400 · Supplies - Other		4.99
Total 400 · Supplies		11,486.05
500 · Equipment		
510 · Boat Insurance		895.00
520 · Boat Repair & Maint.		1,019.69
530 · Hatchery Equipment		1,002.59
550 · Maintenance		
552 · Sage Building	10.80	
550 · Maintenance - Other	29.27	
Total 550 · Maintenance		40.07

Sitka Sound Science Center
Income Statement
January through September 2010

		Jan - Sep 10
551 · Hatchery Equipment/Maint		758.80
560 · Moorage & Storage		1,004.06
580 · Equipment Purchase & Rental		1,949.66
Total 500 · Equipment		6,669.87
600 · Other Expense		
610 · Advertising/Printing		1,957.76
630 · Insurance		
635 · D&O	1,195.00	
639 · Liability	4,065.00	
630 · Insurance - Other	222.00	
Total 630 · Insurance		5,482.00
640 · Fund Raising Expense		644.35
645 · Meeting Expense		168.51
660 · Guest Faculty Contracts		3,850.00
665 · Dues, Subscript. & Memberships		185.00
675 · Cost Recovery & Broadstar Exp.		2,916.80
680 · Legal & Professional Services		
681 · Other Professional Services	28,710.00	
685 · Accounting	3,555.00	
689 · Legal	408.75	
Total 680 · Legal & Professional Services		32,673.75
688 · Americorp		5,400.00
690 · Staff Development		93.54
695 · Taxes, Licenses & Permit		600.00
Total 600 · Other Expense		53,971.71
Total Expense		292,413.17
Net Ordinary Income		-57,304.47
Other Income/Expense		
Other Income		
Interest/Div Income		122.96
Total Other Income		122.96
Other Expense		
Bank Charges		48.16
703 · Overhead Expense		8,020.73
Total Other Expense		8,068.89
Net Other Income		-7,945.93
Net Income		**-65,250.40**

RESUMES OF KEY PERSONNEL

List of SSSC Board of Directors

Lisa Busch, Director

Tory O'Connell, Operations Manager

Jim Seeland, Hatchery advisor

Lynn Wilbur, Aquarium Manager

Board Biographies

Lisa Busch
215 Shotgun Alley
Sitka, Alaska 99835
(907) 747 6481
@gmail.
.encountersnorth.

EDUCATION

University of Alaska. Fairbanks 2005-08. MA. Northern Studies
University of Colorado. Boulder, Colorado 1999-2000. Ted Scripps Fellow for Environmental Journalism: History and Philosophy of Science.
Tufts University. Medford, Massachusetts 1984-1988. B.S. Geology, Environmental Studies

WORK EXPERIENCE

Director
Sitka, Alaska. Sitka Sound Science Center. Direct and manage a non profit dedicated to scientific research and science education. Oversee the operation of an educational aquarium and salmon fish hatchery that partners with the University of Alaska Fish Tech Training program.2010

Executive Producer
Sitka, Alaska. Produce, edit, report and manage weekly national public radio program called *Encounters:Radio Experiences in the North* hosted by cultural anthropologist Richard Nelson and featuring NPR reporter Elizabeth Arnold. The program is about the human relationship to nature. .encountersnorth. 2003-2009

Executive Producer
Sitka, Alaska. Executive producer of a ten-part series for public radio entitled *Common Knowledge: Science and Tradition in Native America,* profiling issues where science and traditional Native ways of knowing intersect and overlap. Also of Alaskan Women in Science, profiling women working in diverse sciences in Alaska. Distributed by PRI and Voice of America.1999-2003

Associate Producer
Sitka, Alaska. Discovery Channel Online and OnHealth.com. Organized experts on a wide range of scientific and health topics to participate in regular sessions for online magazines. 1997-1999.

Science Writer
Washington, D.C. U.S. News and World Report magazine. Write science stories for the science and society section. 1993.

HONORS

1988 AAAS Science in the Mass Media Fellowship
1989 Best News Cast-- Awarded by the Alaska Press Club
1991 Best Daily News Cast- awarded by the Public Radio News Directors Association
1992 Best Health and Science Documentary--awarded by the American Association for Professional Journalists
1992 Best Documentary-- awarded by the Alaska Press Club for half-hour piece on the acoustics of Whales.
1995 Best Documentary Series- awarded by the Alaska Press Club for series on Alaskan Women in Science.
1999-2000 Ted Scripps Fellowship for Environmental Journalism
2001- Best Science Feature Alaska Press Club
2005- Volvo For Life Award for environment.

COMMUNITY SERVICE

Co-Founder Sitka Trail Works
Founder Sitka Tree and Landscape Committee for City and Borough of Sitka
Mini Sitka Fine Arts Camp Cofounder, K- graders
Mt. Edgecumbe Preschool Board of Directors-Director of Building Committee
Communication Badge Instructor for the Boy Scouts 7-9 grade boys
CHUMS program founder for Sitka High School
Artist in Residence advocate for Sitka School District K-12

Victoria M. O'Connell
Sitka Sound Science Center, Operations Manager

P.O. 1373 Sitka, AK 99835
907-738-4000 victoria.oconnell@gmail.com

Marine fisheries biologist with thirty years experience working with marine fisheries, research, and assessment including in-situ submersible and scuba surveys, fisheries management, marine mammal and fishery interactions, project management, grant writing, and outreach through peer-reviewed and popular publications, and scientific, public, and classroom presentations. Specializing in collaborative projects between the fishing industry, science, and government.

Education

Friday Harbor Laboratory, Marine Zoology & Botany	1982
University of Washington, Fisheries	1979-81, B.S.
Rutgers University, Fisheries, undergraduate	1977-78

Employment

- Fisheries Consultant, dba Coastal Marine Research, 2007 to present
- Commercial longline deckhand (cooking, baiting, gutting), F/V Cherokee, 2007-present
- Elderhostel group leader, Southeast Rainforest program, 2008
- Marine Debris Coastal Cleanup, project leader, Sitka, Southeast Alaska 2008-present
- State of Alaska, Department of Fish and Game, Commercial Fisheries Division:
- Groundfish Project Leader, Fisheries Biologist III, 1995 to 2006
- Project Assistant: Fisheries Biologist II, ADF&G, 1988-1995
- Research Biologist: Fisheries Biologist I, ADF&G, 1983-88
- Port Sampler: Fisheries Technician III, ADF&G, 1982-83
- Biological Consultant/Diver, Alaska Coastal Research, 1981-82
- Field Technician, Moclips Cetalogical Society, Hawaii, 1979
- Student Volunteer, National Marine Fisheries Service, Marine Mammal Laboratory, *R/V Western Viking*, Bering and Chukchi Seas, summer 1978

Experience

Operations Manager, Sitka Sound Science Center. Responsible for overseeing operations of the SSSC facillity and programs. Facility includes an educational fish hatchery, and aquarium. Develop, coordinate and oversee educational and scientific research programs based at the SSSC.

Coastal Marine Research: Scientific Consultant for marine fish research, education and management projects including fish, marine habitats, marine mammal/fishery interactions, spatial management and marine protected areas, and movement studies of whales, grant writing and administration, field work, outreach, publication and presentations.
Contracts include:

- **Research Biologist and administration of the Fishermen's Conservation Network** to reduce multispecies rockfish bycatch by identifying and GIS mapping areas of high bycatch (Alaska Longline Fishermen's Association ALFA). This project established an

incentive based multispecies bycatch reduction network for sablefish and halibut longline fishermen fishing in the Gulf of Alaska. Conceived project, wrote grant, and secured foundation funding for ALFA for project collaborating with longliners in the Gulf of Alaska; developed logbooks and data protocols including development of multi-layer GIS maps, displaying and analyzing data; public outreach and media events (print and radio) to inform potential participants; conducted field trials on longline vessels; responsible for quality control of database; collected and analyzed confidential fishery data; responsible for awarding stipends for participants involving cash and non cash payment for navigation software upgrades and providing participants with GIS products resulting from data analysis.

- **Research Fish Biologist for the Southeast Alaska Sperm Whale Avoidance Project** (Alaska Longline Fishermen's Association, University of Alaska Southeast, Scripps Oceanographic Institute), including real-time reporting network for sighting data and field testing of deterrent onboard longline vessels. Working with scientists and fishermen developed potential sperm whale deterrent devices and tested these devices in field trials onboard sablefish longline vessels to be conducted in July 2010. Presented project overview and results at several venues.
- **Spatial management of rockfishes in the Bering Sea and Aleutian Islands** (Alaska Marine Conservation Council). Working with AMCC and Ecotrust, and utilizing existing observer and survey data, advanced the discussion about how to refine spatial management for rockfish. Through this GIS analysis we presented spatial patterns of rockfish catch relative to biological data about rockfish distribution, general genetic information available on some species and existing habitat conservation measures in the Bering Sea and Aleutian Islands.
- **Research Biologist for in-situ Submersible Survey of Fish Abundance in Marine Protected Areas of Central California** (Moss Landing Marine Laboratories). Participated as an observer conducting line transects from a research submersible for multispecies assessment of Marine Protected Areas of Central California. Responsibilities included species identification, enumeration, transcription and providing review and data quality of other observer's data, working in a shipboard lab.
- **Rockfish Habitat Associations** (National Marine Fisheries Service). Reviewed submersible video tapes identifying rockfish, habitat, and associations.
- **Facilitator for recreational fishing education** (Alaska Conservation Foundation). Wrote and received funding to bring graduate students to Sitka to discuss their research results regarding rockfish survival and release of fish at depth. Contacted the media and provided outreach advertising the workshops. Developed brochure to provide to public and constructed rockfish release devices for lending.

Group Leader, Alaska Share – Elderhostel: Group leader for Elderhostel residential program "Southeast Rain Forest Discovery". Responsible for week-long residential Elderhostel groups, including daily oversight, transportation, group discussion, logistics, and presentation, education, and field trips on marine biology and fishery portions of presentations to group.

Groundfish Project Leader: Southeast Region, Commercial Fisheries Division, Alaska Department of Fish and Game (ADF&G). Project Leader responsible for research, assessment and management of southeast Alaska commercial groundfish fisheries including longline and pot fishery for sablefish, longline fishery for rockfish, and troll fishery for lingcod. Work

proactively and directly with agency personnel, commercial fishermen and scientists to develop and implement groundfish port sampling programs, groundfish resource assessment surveys, sablefish tagging studies, rockfish break-away tagging, studies of life histories of groundfish species, onboard observer programs, management plans, and evaluation of marine protected areas; conduct in-situ surveys using SCUBA and submersibles and stock assessment for demersal shelf rockfish and lingcod; analyze confidential commercial fishing information for use in management and assessment of commercial groundfish species; author peer- reviewed journal papers on stock assessment, life history, and tagging; write grants to acquire funding for projects: administered annually 6 grants worth a total of 1.1 million dollars; supervisory responsibility for 1 research analyst, 3 biologists and 3 technicians; responsible for public outreach, education, and presentation of management and research objectives and activities to diverse user groups including commercial fishermen, conservationists, agency personnel, stock assessment scientists, and regulatory authorities at the local, state, national, and international level.

Principal Investigator for the following ADF&G projects:

- 1996-2007: Eastern Gulf of Alaska Demersal Shelf Rockfish Assessment Project: The use of Sidescan Sonar in Seafloor Classification with a Direct Application to Commercial Fisheries Management.
- 1994-2007: In-situ Studies of DSR and lingcod: Using sidescan sonar and Direct Observation to Define the Relationship between Fish Density and Habitat Complexity.
- 1997-1999: Characterization and Implementation of a No-Take Groundfish Marine Reserve at the Edgecumbe pinnacles area.
- 1989: Evaluation of Submersibles and ROVs as Tools for Estimating the Abundance of Rockfish and Inventorying Rockfish Habitat.
- 1990 and 1991: Definition of the Relationship between Demersal Shelf Rockfish Abundance and Habitat Complexity Based on in-situ Observations from a Submersible.
- 1992: Depth distribution of lingcod (Ophiodon elongatus) egg-masses in central Southeast Alaska using scuba and submersible surveys.

Co-investigator for the following project:

- 2005-present: Sperm whale and longline fishery interactions in the Gulf of Alaska, Cooperative Research between scientists, fishermen and government.

Appointments

- Member, NMFS False Killer Whale Take Reduction Team, Hawaii, 2010-present
- Board Member, Executive Committee, Sitka Sound Science Center, 2009-present
- Sitka Fish and Game Advisory Committee, Executive Committee, 2008-2010
- Member and stock assessment author, Plan Team of the North Pacific Fishery Management Council's Gulf of Alaska Plan Team, 1994 to 2006.
- Alaska Representative to the Technical Subcommittee of the Canada/United States Groundfish Committee, 1994 to 2006, Chairman in 1996, 2003.
- Member, National Academy of Sciences Ocean Studies Board Committee to study Recreational Fisheries Survey Methods, 2005-2006
- Member, National Marine Fisheries Service National Ecosystem Principles Advisory Panel, 1997-1999

Member, North Pacific Fishery Management Council's Essential Fish Habitat Technical Committee, 1997-1998.

- Secretary/Treasurer of the Marine Fisheries Section of the American Fisheries Society, 1993-1996.

Awards

- Western Groundfish Conference Achievement Award 2010
- Director's Achievement Award, 2006, Commercial Fisheries Division, Alaska Department of Fish and Game

Selected Publications

Yoklavich, M.M. and **V. O'Connell**. 2008. Twenty years of Research on demersal Communities Using the Delta Submersible in the Northeast Pacific. Marine Habitat Mapping and Technology for Alaska, J.R. Reynolds and H.G. Greene (eds). Alaska Sea Grant College Program, Univ. AK Fairbanks. Doi:10.4027/mhmta.2008.10

Thode, A, J. Straley, K Folkert, **V. OConnell**. 2007. Observations of potential acoustic cues that attract sperm whales to longline fishing in the Gulf of Alaska J. Acous. Soc. Am. 122(2), 1265-1277.

Tiemann, C, A. Thode, J. Straley, K Folkert, and **V. OConnell**. 2006. Three-dimensional localization of sperm whales using a single hydrophone. J. Acous. Soc. Am. 120 (4), 2355-65.

Starr, R., **V. O'Connell**, and S. Ralston. 2004. Movements of lingcod (*Ophiodon elongates*) in Southeast Alaska: potential for increased conservation and yield from marine reserves. Can J Fish Aquat Sci 16:1-13.

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James A. Seeland

312 Cascade St., Sitka, AK 99835
907-738-1190
jseeland@gci.net

SUMMARY OF QUALIFICATIONS

- 2.5 years as adjunct professor of fisheries for UAS/Ketchikan Fisheries Tech Program
- 22 years as hatchery manager/assistant manager at a large salmon production facility
- 2 years living and working at a remote salmon production facility
- 3 years self-employed as a wildlife naturalist on boat tours and running a small business
- 3.5 years as a laboratory assistant in virology, serology, and pesticide laboratories
- 2 years as adjunct professor at Sheldon Jackson College instructing mariculture courses and providing program development
- 3 years as self-employed fisheries consultant

EDUCATION

B.S. in Fish and Wildlife Biology, University of Missouri, Columbia, MO

RELEVANT SKILLS AND EXPERIENCE

Instruction

- Work with UAS staff to promote Alaska Tech Prep programs and other outreach to Southeast Alaska schools.
- Develop and implement "Alaska Fish Culture Techniques", a college-level course designed to instruct students in hatchery techniques.
- Instruct college level fisheries students using distance-delivered methods, specifically Elluminate through the UAS system. Help develop FT122/222, Fin Fish Culture course. Work includes monitoring student progress, communicating with students through email, phone, and live/online in class.
- Instructed 300 level mariculture courses at Sheldon Jackson College. Develop curriculum, evaluate student progress, work with industry professionals to develop the program. Course was instructed on campus and included lab sessions as well as lecture.

Fish Culture

- Extensive knowledge of fresh and saltwater culture of pink, chum, coho, and Chinook salmon.
- Knowledge of specialized equipment associated with salmon and trout culture including coded wire tag machines, egg picking machines, size grading equipment, vaccination and enumeration equipment and all manners, and others.
- Knowledge of record-keeping associated with a fish production facility including: growth, feeding, environmental, and inventory.
- Actively involved in carrying out fish culture duties from planning to implementing.

Supervisory

- Oversee annual and ongoing project planning
- Responsible for scheduling, hiring, and supervising 5 permanent employees as well as up to 6 seasonal employees.
- Work with employees to provide a safe workplace. Develop various policies and procedures to assure workplace safety and comply with OSHA standards.
- Communicate with employees about personal and workplace concerns on both personal and group levels.
- Act as a team leader whose job is to provide employees with the tools and training they need to get their job done, encourage teamwork and recognize individual achievements.
- Develop and maintain an annual hatchery budget in excess of one million dollars.
- Develop new programs and assess the performance of existing programs.
- Oversee the maintenance of facilities and assure that materials are purchased, scheduled work is done, and projects are completed on time.

Personal Skills

- Operation of all manners of power tools, backhoe, diesel forklift, various hoists, many types of boats up to 27 feet.
- Help to set up and operate remote field camps and live/work in the camps.
- Open Water Diving Certification is used extensively for hatchery work in repairing structures, retrieving mortalities from net pens and other work as needed.
- Proficient in the use of various computer programs such as: MS Word, Excel, PowerPoint.
- Provide written and oral presentations to the NSRAA Board of Directors twice yearly. Other reports include: Annual Report to the Dept. of Fish and Game, reports to the Dept. of Environmental Conservation, and Dept. of Natural Resources.
- Attend and make presentations to the State of AK Hatchery Managers Meeting each year.
- Maintain open communication with other NSRAA project leaders as well as peers employed with other aquaculture associations.
- Encourage tourism and public relations through: commercially-operated tours, annual community Open House, working with Sheldon Jackson College students and staff, working with local elementary schools, educating all visitors to the hatchery site regarding NSRAA and AK salmon fisheries issues.
- USCG 50 ton Masters License
- Communicate well with students to help them succeed in college-level courses by listening to their needs and providing necessary resources.
- Problem-solving skills include program development, budget development, public interactions, college-level instruction, boat mechanical issues as well as helping to raise two adult children.

Personal Interests

- Fishing, hunting, camping, seafood harvesting of all manners.
- Diving
- Educating visitors about Alaska's natural resources and, in particular, salmon fisheries issues.
- Helping to educate children
- Reading

WORK HISTORY

University of Alaska Southeast	2005 - present
Northern Southeast Regional Aquaculture Assn.	1982 – 2005
Sheldon Jackson College	Winter/Spring 2005
Prince Wm. Sound Aquaculture Assn.	1980 - 1982
Troutlodge Inc.	1977 - 1980
University of Missouri Medical Center	1974 – 1977

REFERENCES

Kate Sullivan, Assistant Professor of Fisheries Technology, 2600 Avenue, Ketchikan, AK 99901; Ph: (907)228-4565. e-mail: kate.sullivan@uas.alaska.edu

Mark LaRiviere, Senior Fisheries Biologist, Tacoma Power, Generation Division / Natural Resources Section, 3628 S. St., Tacoma, WA 98411. Ph. (253) 502-8767, e-mail: @cityoftacoma.

Steve Reifenstuhl, Executive Director, NSRAA, 1308 SMC Rd., Sitka, AK 99835. Ph: (907)747-6850, e-mail: steve_reifenstuhl@nsraa.org.

617 Katlian St. Sitka Alaska 99835 (907) 752-0011 lwilbur@sitkasoundsciencecenter.org

Lynn Wilbur

Objective

To participate in Sitka's community, to enhance the learning experience in the marine sciences for Alaska's youths, and to facilitate partnerships between Sitka's scientific community, the public, and the global community.

Work Experience

2008-present Sitka Sound Science Center Sitka, Alaska

Aquarium Manager

- Oversees day-to-day routines at the Molly O. Ahlgren Aquarium, including supervision of seasonal interns, high school work-study students, and the middle school volunteer program; organizing activities for youths.
- Develops, implements, and leads annual summer science day camp.
- Develops proposals and requests for grant funding for in school and out of school projects geared toward enhancing students' learning experience in marine science.
- Ensures smooth operation of Molly O. Ahlgren Aquarium including maintenance of saltwater flow, providing habitat and sanctuary for aquarium residents, developing new displays, and collecting marine organisms.
- Conducts marine science research projects, and organizes marine debris removal events.

2007-present Sitka Native Education Program Sitka, Alaska

High School Tutor

- Provides in-class and after school assistance to Sitka High, Pacific, High, and Blatchley Middle School youths in academic curriculum including language arts, mathematics, chemistry, biology, reading, initiatives, and expeditionary learning venues

2007-present Southeast Alaska Regional Health Consortium, Gunanaasti Healing Center Sitka, Alaska

Counselor Trainee, Chemical Dependency Counselor I candidate

- Provided assistance, counseling, and support to chemically addicted adult clients in a residential setting
- Completed training and practicum requirements toward CDC I certification
- Participated in ropes course and other initiative activities

2004-2006 Sitka Counseling and Prevention Services Sitka, Alaska

Behavioral Health Technician

- Worked with SED youths in a community and school setting
- Acted as liason between school, agency, and home, and between the youth and adult programs
- Developed and coordinated a wilderness retreat for youths during the summer of 2004

617 Katlian St. Sitka Alaska 99835 (907) 752-0011 lwilbur@sitkasoundsciencecenter.org

Lynn Wilbur

2004 Center for Community Sitka, Alaska

Skills Trainer

- Worked with developmentally disabled youth in a school and community setting
- Specialized in therapeutic activities with seizure disordered and autistic children

1997-2002 Susan Hunter-Joerns, MD Juneau, Alaska

Office Manager for private practitioner of neurology

- Responsible for records management, payroll, scheduling, and accounts receivable and payable
- Maintained knowledge of Medicaid and Medicare regulations, assisted VA recipients and other clients in authorizing and coordinating services
- Developed and implemented records archive system.

1993-2002 Juneau Youth ServicesJuneau, Alaska

Mental Health Associate/Administrative Assistant

- Worked with SED youths in a residential setting for runaways, sex offenders, and youths in the juvenile justice system
- Participated in an agency wide spectrum of training, which included in-school counseling and support, treatment planning, residential counseling and support, and wilderness excursions
- Maintained client database, became proficient in state Medicaid regulations, audited program treatment notes, and implemented training for employees

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Lynn Wilbur

Education

2007 University Of Otago Dunedin, New Zealand

MSc candidate, Marine Science Program

Proposal for MSc thesis: An investigation of polyaromatic hydrocarbon contamination in benthic assemblages surrounding oil drilling platforms and produced water outfalls in Upper Cook Inlet, Alaska.

2006 University of Otago Dunedin, New Zealand

Post Graduate Diploma in Marine Science

Achievements: Developed a behavioral biomarker study using native asteroidean in For the purpose of measuring pollution in Otago Harbour.

1992-1993, 2002-2003 Sheldon Jackson College Sitka, Alaska

B.S., Environmental Science with emphasis in marine biology

Achievements: Graduated Cum Laude.
Developed coastal marine debris study in Sitka Sound, which led to the first Ocean Conservancy sponsored cleanup in Sitka.
Submitted manuscript of research results for publication in the Alaska Fisheries Journal.

Interests

Kayaking, skiing, hiking, trail running, horseback riding, weight training, yoga, sailing, SCUBA diving, gardening, biking, traveling, wilderness ecology, species preservation, marine pollution, beach combing, glasswork, canning, arts and crafts, reading, playing music, etc.

Board Biographies

Scott Harris, Chair. Mr. Harris has extensive project management experience as a program manager for NASA Ames Research Center. He was Assistant Professor for the Outdoor Education Program at Sheldon Jackson College and a senior staff instructor for the National Outdoor Leadership School. He holds a B.S. in Aerospace Engineering from University of Texas and a M.S in Natural Resource Management from University of Alaska Fairbanks.

Jan Straley has been an Assistant Professor of Biology at the University of Alaska Southeast since 1999 and an independent marine biologist studying humpback whales and other large cetaceans in southeastern Alaska since 1979. She holds an MS from the University of Alaska Fairbanks in Biological Oceanography and has held federal research contracts and published journal articles focusing on population dynamics, feeding ecology, and social structure of large whales. She was a founder and served as board president of Sitka WhaleFest until 2007 when she became the Science Director. Jan is a founder of the Sitka Sound Science Center.

Bill Smoker is Emeritus Professor of Fisheries after 32 years at the University of Alaska Fairbanks, School of Fisheries & Ocean Sciences, based in Juneau. He has supervised 30 graduate students and, during the past decade, served as Director of Fisheries, a program that has grown to 14 full time faculty members, 70 undergraduate and 69 graduate students located across Alaska. Bill's research has been devoted to local adaptation in salmon populations in Alaska particularly as it relates to genetic interactions of hatchery-produced and wild salmon. He's been among the leaders of a 30-year series of experiments on pink salmon, a decade-long experimental study of outbreeding depression in coho salmon, a multiyear study of the estuarine ecology of hatchery & wild chum salmon fry, and of development of fish culture practices for the Alaska salmon fishery enhancement program. He was a member of Congress's Hatchery Scientific Review Group in Washington and a member of the Northwest Power and Conservation Council's Independent Science Review Group which he continues to serve on its Peer Review Group. He serves on the boards of directors of Prince William Sound Aquaculture Corporation, one of Alaska's private nonprofit salmon hatchery corporations, and of the Sitka Sound Science Center. He's a Fellow of the American Institute of Fishery Research Biologists.

Jim Seeland, Vice Chair. Jim is B.Sc. in Fish and Wildlife Biology, 30 years of experience in trout and salmon biology. Move to AK in 1980, to Sitka in 1982 to work at the "new" Medvejie Salmon Hatchery operated by NSRAA. I worked for NSRAA from 1982 to 2005, first as technician and for 15 years as manager. During that time I worked closely with SJC fisheries programs and helped facilitate a collaborative relationship. Hired by UAS Fisheries Technology Program as adjunct professor in 2005 and the as full time Assistant Professor in 2009, Jim has a strong background in salmon hatchery management/operations/budgeting. His greatest assets are to help with management and development of the existing hatchery program, and to help bridge collaboration between NSRAA, UAS Fisheries Technology Program and SSSC.

Allen Turner has 25 plus years as small business owner. He has financial industry experience in both insurance and investments. As the business relationship manager at Wells Fargo Bank in Sitka, Allen has first hand contact with the business community on island and in the region.

Keith Cox currently works for the National Oceanic Atmospheric Administration (NOAA) as a research marine biologist and also am the liaison between the University of Alaska, Alaska Native Science and Engineering Program (ANSEP) and NOAA. Keith has formulated and conducted innovative research on a broad range of fisheries management and fish ecology issues. His research has been used by management agencies for use in management decisions. My educational background gave me a strong research foundation and includes a B.S. in biology, a M.S. in aquatic biology and a Ph.D. in fisheries with post-doc opportunities at Oregon State University, USDA and University of Alaska Fairbanks. While employed at Sheldon Jackson College in Sitka, Keith was Environmental Science Departmental Chair while holding the endowed position of Chair of the At-Sea Professorship of Fisheries Biology. Keith supervised all science research programs at the college. Upon closure of the college in 2007, Keith was one of the founding members and the first president of the Sitka Sound Science Center (SSSC).

Dave Arp is the Sitka School District Business Manager where he oversees a $24 million organizational budget. He was vice president of investments for Stolat Partners LTD in Duluth, Minnesota working as a mortgage-backed securities broker and in a private investment fund. He has experience on the board of other non-profits including United Way of Greater Duluth, in Duluth, MN where he was on the finance and technology committee. He holds a business administration and finance degree from University of Minnesota and has served on the SSSC since its inception. He is past vice chair and treasurer.

Heather Woody, Treasurer. Heather is a research biologist with the Sitka Tribe of Alaska. Heather earned her BS in marine biology from Sheldon Jackson College in 1996 and has a deep understanding of the legacy of Sheldon Jackson's science program and the need for the SSSC in the community. She has worked for National Marine Fisheries Service, the Alaska Department of Fish and Game and Northerner Southeast Aquaculture Association. Her focus is on Pacific herring and marine invasive species.

Kitty LaBounty is an Assistant Professor at the University of Alaska Southeast (UAS) in Sitka where she has developed biology and natural history courses for both traditional college students and community outreach. She is botanist with over 20 years of experience working in Southeast Alaska for multiple federal land management agencies. Current research projects include rhizosphere fungi of muskegs and ecology of cedar epiphytes

Photo: Jan Straley

The Science Center builds upon Sitka's legacy as a research community. Sitka has a maritime tradition and commercial, sport, and subsistence fishing all still play vital roles in the economy and culture of our community. Sitka also has ample opportunities for outreach and education. For example, in addition to local K-12 and university education, approximately 200,000 tourists visit Sitka every summer.

Photo: James Poulson, Sitka Sentinel

The Sitka Sound Science Center, a 501 c3 nonprofit corporation, is based in Sitka, Alaska - the only full-service community on the outer coast of Southeast Alaska. The Sitka Sound Science Center is uniquely qualified to provide unparalleled access for research and education programs in the Gulf of Alaska, Eastern Pacific Ocean, and North American Coastal Temperate Rainforests.

If you would like to make a donation, please use the pay-pal system on our website.

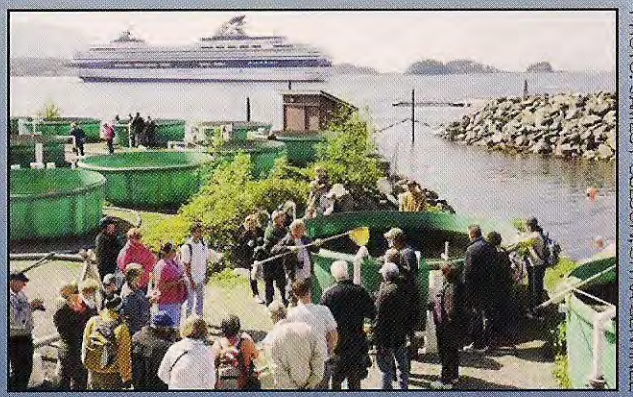
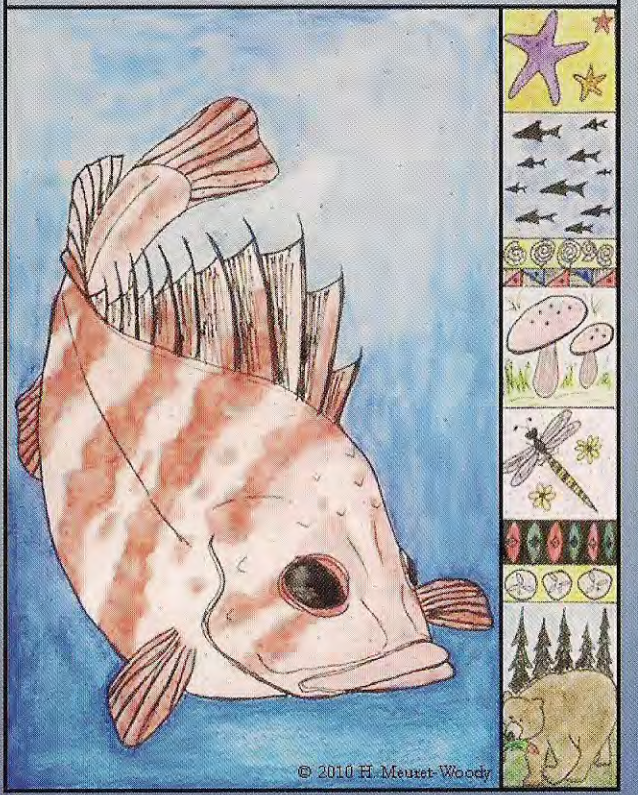


Photo: James Poulson, Sitka Sentinel

Natural History Seminar Series

The goal of the Natural History seminar series is to provide Sitka with access to information about the Natural History of Sitka and Southeast Alaska. Speakers include researchers and resource managers who are studying and managing local natural resources and processes of Southeastern Alaska. Emphasis is placed on terrestrial organisms and processes of the temperate rainforest.

Sitka Sound Science Center



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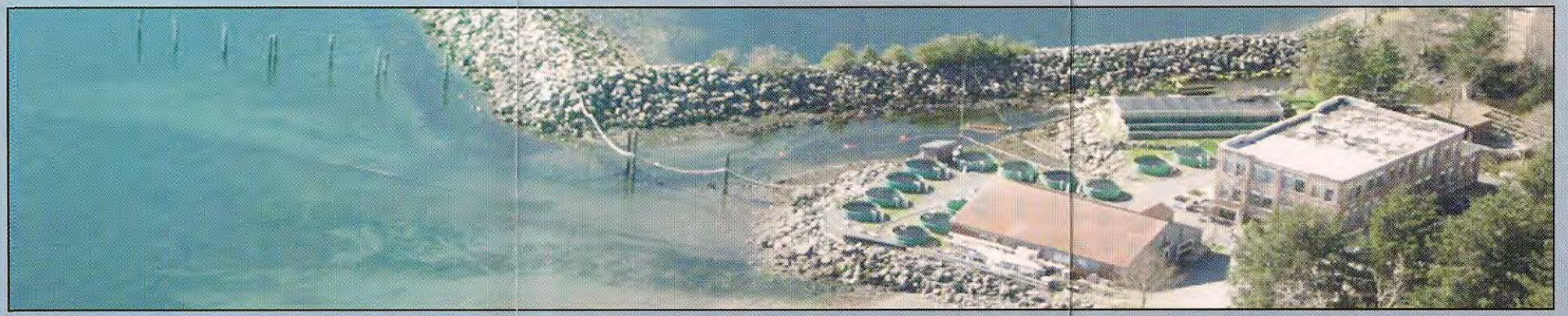
The Sitka Sound Science Center is dedicated to increasing understanding and awareness of terrestrial and aquatic ecosystems of the Gulf of Alaska through education and research.



Sitka Sound Science Center

Photo: John Stein

Molly O. Ahlgren Aquarium

The Molly O. Ahlgren Aquarium is the focal point of our community education program. We have 12 tanks and 3 touch tanks. Each year, hundreds of local K-12 and students participate in educational programs at the aquarium and hatchery. We are developing international university partnerships as well as providing outreach for Sitka visitors each year.

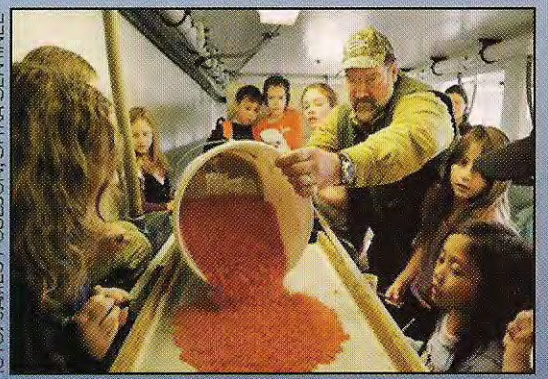


Photo: James Poulson, Sitka Sentinel

Sheldon Jackson Hatchery

The SJ hatchery at the Sitka Sound Science Center is the only facility of its kind in the State of Alaska. We provide aquaculture technology training for hatchery professionals in partnership with the University of Alaska and local organizations and businesses. The SJ hatchery rears and releases up to 2.5 million fish, representing four species of salmon, and up to an additional 9 million salmon off-site.

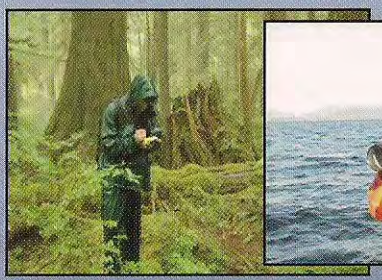


Photo: Scott Harris

Photo: Jan Straley

Marine and Terrestrial Research

The Sitka Sound Science Center provides facilities, logistical support, and partnership development for visiting and local researchers. Our facilities include the ocean-side historic Sage Building, only 2 blocks from downtown Sitka. The Sage Building has salt-water and fresh-water labs, an educational aquarium, a research and training salmon hatchery, classrooms, office space, and a GIS lab. We also have 2 boats with USCG licensed captains and research divers.

REPORTS

University of Alaska report on Collaboration Meeting to develop future potential for Sheldon Jackson Hatchery

McDowell Study on Economic Impact of Aquaculture (attached separately)

Sheldon Jackson Hatchery Collaboration Meeting
April 1-2, 2008 Final Report

Purpose: The University of Alaska Southeast Ketchikan campus organized and sponsored a collaborative meeting in Sitka on April 1 – 2, 2008 to explore potential future operation and functions of the Sheldon Jackson Hatchery facility.

The desired outcome of the day and a half meeting was to offer a thorough assessment of legitimate capacities, resources and interest(s) of participating organizations in SJ Hatchery operation, use & management.

Attendees: Representatives from a wide variety of agencies and organizations were present at the meeting. Please see Appendix A for attendance roster details.

Assessment of Capacities:

The group reviewed past capacity and was given a tour of the hatchery. The possibilities for the facility were discussed at length, both in small break out groups and as a whole. The general consensus was that the facility would be most effective as:

1. Education/Training facility
2. Production facility
3. Research facility

Within each of the three major categories, a wider variety of options were expressed for potential income, use, and staffing of the facility in best case scenarios. Appendix B outlines the full list of potential uses.

Assessment of Resources:

Financial

The issue of financial resources was a critical discussion during the entire meeting. Currently, the Sitka Sound Science Center (SSSC) organization has a short-term contract from Chilkat Services to run the hatchery. Chilkat Services represents Alaska Growth Capital (AGC is the primary debtor owned money by SJ College) and is coordinating the management of SJ assets and real property. SSSC, in turn, has contracted with Dan Goodness, former SJ hatchery manager, to maintain the current hatchery stock and manage the hatchery. All other uses, including the touch tanks/aquarium have ceased to operate.

The SSSC is a new 501(c)3 with a board of seven directors. Keith Cox, former SJ Science faculty chair, is acting SSSC Executive Director and is working for NOAA as a researcher. SSSC does not have a business plan developed for the continued operation of the hatchery. Currently, the board is limited in resources. There is some hope for funding from the State, but short-term stop-gap funding is scheduled to run out April 30, 2008.

One primary issue limiting the SSSC ability to seek funding sources is the continued uncertainty of Sheldon Jackson College debt, attachment of this debt to the hatchery and surrounding grounds and the commitment by the Board of Trustees to retain the hatchery and surrounding property.

Through the meeting process, Chilkat Services assured the group there is no intention of selling the hatchery or surrounding property. In addition, both the President of Sheldon Jackson

David Dobler and Board of Trustee Gary Paxton reasserted the college's intention to keep the hatchery and facilitate uses of it that best suit the community.

With that noted, financial resources are critical to the continuation of the hatchery. Long-term areas of potential revenue included:

- Increase the number of Deep Creek Chum salmon on the permit as a way to increase revenue (10 million chum?) – can increase SJ revenue to about $150K/year, increase commercial harvest, increase NSRAA cost recovery – about 6 years to see return
- Make full use of the building to generate revenue – touch tanks, classes, services, gift shop, use of building as part of overall business plan
- Assess viability of a shellfish nursery – is the industry willing to pay?
- Fish Tag Lottery as fund raiser
- Consider membership fees in SSSC
- Power generation as a possible income source
- Assess costs associated with different species of salmon, raise the number of fish needed to maintain broodstock
- How to get return from sport fishermen – they contribute $30 million year to local economy but no contribution to the SJ Hatchery or NSRAA
- Contact State Revolving Loan Fund Program – request extension on outstanding debt (about $180K) and/or ask for additional loan.
- Consider an Economic Development Loan from City or asking for some of the head tax or fish box tax income
- Pursue state and federal requests
- Follow up on EDA $$ and pursue match for it (Alaska Growth Capital loan for match as a way to increase their assets?)

Management

Management of the hatchery was discussed at length. In addition to the hatchery, the Sage Building itself presents management challenges including, but not limited to, maintenance and repair, heating, public access and classroom rental or other usage.

The SSSC was seen as the de facto organization to continue management of the facility. The board needs some assistance, but in general, it was perceived by the group that the SSSC's mission best matched that of the hatchery's purpose. The permit for the hatchery remains with Sheldon Jackson College, but management can be delegated to anyone Sheldon Jackson deems appropriate.

The bigger issue is establishment of a long-term lease with Chilkat Services for the hatchery, Sage Building and surrounding property. Currently there is a 90-day lease with Chilkat Services. Key issues to resolve for management success included:

- Long term lease with Chilkat for building/grounds/hatchery use

- Long term commitment for Chum production with NSRAA
- Strengthened SSSC organizational structure
- Business plan for financial success
- Seasoned management team to manage facility/grounds/hatchery

Interest(s):

The overall interest of participating organizations was strengthened over the course of the day and a half of meetings. The group generally agreed that major players including Sheldon Jackson, Chilkat Services, NSRAA, SSSC, and the community of Sitka were committed to keeping the hatchery operational and the Sage Building a functioning educational/training facility for fisheries/mariculture/aquaculture interests.

The group agreed that through concerted effort, the SSSC could forge partnerships with other organizations to provide a variety of services/functions/components to keep the hatchery functioning.
Some of these organizations included:

- Alaska Department of Fish and Game (ADFG)
- National Oceanographic & Atmospheric Administration (NOAA)
- City & Borough of Sitka
- University of Alaska
- Northern Southeast Regional Aquaculture Association
- Education Consortium of Sitka
- Other non-profit organizations in Sitka
- High Schools in Sitka/Region
- Alaska Native Tribal Organizations
- Commercial/Sport Fishing Organizations

A full list of organizations and suggested partnership components are listed in Appendix C.

Recommendations & Next Steps:

At the conclusion of the meeting, the group agreed that with a determined effort on the part of the SSSC board of directors, the future of the Sheldon Jackson Hatchery has promise. To that end, the group offered a list of specific tasks, both short and long term, for SSSC to be successful in its endeavor to keep the hatchery producing. Recommendations were made by participants with 20 plus years of fisheries management, state agency management, educational and research experience with the goal for SSSC to be successful.

Immediate Short Term Steps:

1. Clarify Roles: Can Chilkat Services make a long term (10 years +) lease to SSSC? Is there any problem with SJ giving SSSC long term management authority to operate the hatchery/facility? (Gary Paxton, Keith Cox, Russ Thorpe will clarify and investigate that and have that information available to Board of Trustees meeting on **May 1**).

2. Board of SSSC meets on **April** . At that time, SSSC should vote to add and diversify its board membership through recruitment of new members immediately. (Keith, Kitty)

   The following individuals volunteered to join the board: Steve Reifenstuhl, NSRAA; Gary Paxton, Sitka Economic Dev Assoc; Bill Smoker, UAF Fisheries, UAF; Karen Schmitt, UAS Dean of School of Management and School of Career Education.

   John Stein, City of Sitka was volunteered. Other names suggested included: Seafood Processors – Rick; Sitka Tribe – Director; Educational Consortium of Sitka – Karen; a tourism/charter representative. Commercial fishing rep – Eric Jordan? Cruise Ship rep? Recommended Ex-Officio members include: NOAA – Doug Mecum and Doug DeMaster should be recruited; Chilkat Services, Russ Thorpe; ADF&G; USFS; National Park Service.

3. Create a short needs statement & facility development proposal describing the management approach planned by the SSSC to make the hatchery a sustaining facility/resource for the City/Borough. (Keith, Dave and others)

4. A press release/media kit will be developed by UAS Ketchikan for SSSC use outlining the meeting and plans to move forward. SSSC will send out the information to the media before the May 1 Sheldon Jackson Board of Trustees meeting. (Cathy LeCompte, UAS Ketchikan Campus Director will have this developed, Keith will send it out).

5. The SSSC should ask the City of Sitka for financial assistance – particularly for these next few months. Provide the Council members with the short proposal mentioned above. (Russ will check on timeline to approach City; Gary and Keith will work on how/when to approach them).

Recommended Long Term Steps:

1. Develop a 10-year business plan for the hatchery, Sage Building and surrounding grounds. Contact UA Marine Advisory Program Business Specialist Glenn Haight for help with Business Plan development or ask Rasmuson for Tier 1 grant to develop Business Plan.
2. Make sure any outstanding debt is understood by all parties, how each is affected and how debt will be dealt with long term.
3. SSSC should pursue Board of Director training, possibly from the Foracker Group.
4. SSSC should hire a strong executive director/business manager/coordinator with proven experience and skills in creating partnerships and raising funds.
5. The SSSC should remain autonomous from Sheldon Jackson College/Foundation so they are able to apply for funding and build a program without concern by funders that SJ's issues will be part of the SSSC.

Appendix A: Attendance Roster

SHELDON JACKSON HATCHERY MEETING				
APRIL 1 & 2, 2008 - SITKA, ALASKA				
Actual Attendance				
#	Participant	Title	Organization	e-mail
1	Kate Sullivan	Asst. Prof. Fish Tech	UASK	kate.sullivan@uas.alaska.edu
2	Jim Seeland	Adj.Prof. Fish Tech	UASK	jseeland@gci.net
3	Bill Smoker	Director JCSFOS	UAF	bill.smoker@uaf.edu
4	Bill Davidson	Reg. Mgmt. Coord.	ADFG	bill.davidson@alaska.gov
5	Daniel Goodness	Manager	SJ College Hatchery	daniel.goodness@gmail.com
6	Wendy Gierard	AD of WFD	UASK	wendy.gierard@uas.alaska.edu
7	Cathy LeCompte	Campus Director	UASK	cathy.lecompte@uas.alaska.edu
8	Keith Cox	SSSC Director	SSSC	marlinkcox@gmail.com
9	Gary Freitag	MAP Agent	UAF Sea Grant	freitag@sfos.uaf.edu
10	Karen Schmitt	Dean Career Ed	UASK	karen.schmitt@uas.alaska.edu
11	Ray RaLonde	MAP Specialist	UAF Sea Grant	afrlr@uaa.alaska.edu
12	Paula Cullenberg	MAP Program Leader	UAF Sea Grant	anpjc@uaa.alaska.edu
13	Frank Thrower	Research Biologist	NMFS- Juneau	Frank.Thrower@noaa.gov
14	Jeff Johnston	Campus Director	UAS Sitka	Jeff.Johnston@uas.alaska.edu
15	Steve Reifenstuhl	Operations Manager	NSRAA	steve_reifenstuhl@nsraa.org
17	Tommy Sheridan	Fish Tech student	NSRAA	tommy_sheridan@nsraa.org
18	Keith Perkins	Area Director	USDA Rural Devel	keith.perkins@ak.usda.gov
19	Peter Jones	Policy/Prog Analyst	NOAA Fisheries	Peter.D.Jones@noaa.gov
20	David Dobler	President	SJ College	dldobler@yahoo.com
21	David Arp	Board Member	SSSC	dave_arp@yahoo.com
22	John Stein	Manager	City of Sitka	johnstein@cityofsitka.com
23	Kristy Smith	Administrative Manager	UAS Juneau	kristy.smith@uas.alaska.edu
24	Russ Thorpe	SJ Project Manaer	Chilkat Services	
25	Sky O'Shea	Property Manager	Chilkat Services	
26	Troy Tydingico	Area Mngmt Biologist	ADFG	troy.tydingico@alaska.gov
27	Polly Bass	Adjunct Prof/Research Prof	UAS/UAF	fnpb2@uaf.edu
28	Chris Rose	Exec Director	Renewable Energy Alaska Project	crose@alaska.net
29	Gary Paxton	Board of Trustees	Sheldon Jackson	

Appendix B: Full Use Potential
Small Group Breakout

Uses - Brainstorming ideas for hatchery, Sage Building and surrounding property

- Mariculture expansion – shellfish nursery to supply industry with seed
- Wild stock restoration research – wild stock rockfish and abalone
- Salmon imprinting
- Tourism/outreach – cruise ship shore excursions
- Ecotours/small operator tours
- Touch tanks
- Gift shop
- Information center: USFS, trail information center, contract with them?
- Research – herring management, establish a NERR, AOOS, salmon hatchery, oceanography, technology/logistics hub for research
- Demonstration site for renewable energy projects (SSScience Center – so other kinds of science may be appropriate. Hydro turbine can lower utility costs and be a tourist attraction – city should revisit this
- Seafood processing training facility – EDA funds may support that
- Entrepreneurial focus on training opportunities – consider using building for classes on any subject (i.e. real estate development)
- EDA funded dock could be used by independent day charters, NOAA and other researchers, Allen Marine – could generate income for SSSC
- Cooperative education through partnership with industry
- Commercial uses, joint ventures
- Education
    - Summer high school camps
    - High school student tech prep dual enrollment
    - UAS/UAF grad and undergrad use
    - Hatchery/watershed
    - Workforce training as needed
    - Continuing ed as needed
    - Conferences
    - Other universities
    - Internships/apprenticeships
- Program development through grant writing

Appendix C: Potential Partnerships & Assistance

- ADF&G
  - Guest lecturers/ Sponsor students or continuing education and training at SSSC
  - Rockfish enhancement possible
- NOAA
  - Research hub, Researchers could work out of facility – GOA work increasing
  - Logistics hub
  - Will employ students /funds for education possible / workforce demographics
- City and Borough of Sitka
  - Economic Development Loan (possible for $250K or more for 5-10 years)
  - Cruise ship head tax contribution / Tourism Commission
  - School visits / tourist stop - good examples of returns for this contribution
  - Support for jobs and job training
- University of Alaska
  - Teaching / Summer classes / Internships
  - Facilities use with research projects
  - Workforce development – training site for hatchery /fishery technology program
  - Service such as outreach
  - Special events – Whale fest
  - Accreditation for course work
- NSRAA
  - Technical projects/research site possibly
  - Student hands on work experience / Externships for students
  - Increased chum production
- Renewable Energy Alaska Project
  - Demonstration site for alternative energy / place for project interns
  - Appeal for tourists
  - Performance contracting for "green building" & help with foundation funding
- Chilkat Services - commit the building to "the cause" i.e remove rent
- Education Consortium for Sitka
  - Assistance with grant writing/ educational funding opportunities
- Mt. Edgecombe
  - Students use facility / IBM partnership possible carryover
- USDA Rural Development
  - Infrastructure funding
- Universities - facility for students/classes/research – i.e. Univ of HI culinary arts
- Oceans Alaska (Ketchikan)
- Sitka sport charter operators / Commercial fishermen – Deep Inlet chum production / SARDFA – potential research interest
- Sitka residents / Alumni of SJ fisheries / "Friends of SSSC" organization
- Tribes/Native organizations
- Cruise ship companies / Tour companies
- USGS, Nature Conservancy, Stanford (all are recent examples) SSSC could provide location, boats, local information, lab space, logistical information

Economic Impacts of Private Nonprofit Aquaculture Associations in Southeast Alaska

Prepared for:
Northern Southeast Alaska Regional Aquaculture Association, Douglas Island Pink and Chum, Inc., and Southern Southeast Regional Aquaculture Association

Research-Based Consulting
Juneau
Anchorage

May 2010

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PREPARED BY:

McDowell GROUP

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May 2010

Table of Contents

Executive Summary

Southeast Alaska's three largest hatchery associations have contributed millions of pounds of fish to commercial, charter, sport, personal use, and subsistence fisheries, resulting in the injection of hundreds of millions of dollars into the regional and state economies. This study quantifies the economic impacts of Northern Southeast Regional Aquaculture Association (NSRAA), Douglas Island Pink and Chum, Inc. (DIPAC), and Southern Southeast Regional Aquaculture Association (SSRAA) from 2001 to 2008. Major findings about the combined impacts of these organizations follow:

Total Economic Impacts

- In 2008, hatchery operations and the commercial harvesting and processing of salmon produced by NSRAA, DIPAC, and SSRAA generated total direct, indirect, and induced economic output of $233 million.

- In 2008, direct, indirect, and induced employment and payroll generated as a result of NSRAA, DIPAC and SSRAA operations totaled 1,192 jobs and $59 million in labor income. Direct employment is estimated at 821 with $39 million in labor income in 2008, while economic multiplier impacts (indirect and induced) of the rearing, harvesting, and processing of hatchery-produced salmon added 371 jobs and $19 million in labor income.

Commercial Ex-vessel Volume and Value

- In common property fisheries from 2001 to 2008, the commercial fleet harvested 324 million pounds worth $145 million in ex-vessel value of salmon produced by NSRAA, DIPAC, and SSRAA. Cost recovery efforts added 182 million pounds of salmon worth $82 million.

- From 2001 to 2008, salmon reared by NSRAA, DIPAC, and SSRAA and harvested by commercial fishermen accounted for 31 percent of the ex-vessel value and 24 percent of the volume of the total Southeast Alaska salmon harvest.

Processors' First Wholesale Value and Gross Revenue

- From 2001 to 2008, the first wholesale value (meaning the value of the products processed in Alaska before export) of processed salmon produced by these aquaculture organizations totaled nearly one-half billion dollars ($497 million) in first wholesale value for seafood processors. In 2008, seafood processors earned $142 million in first wholesale value by processing hatchery-produced salmon.

- From 2001 to 2008, processors earned $258 million in gross revenues (meaning the first wholesale value, less the ex-vessel price paid to fishermen) as a result of processing NSRAA, DIPAC, and SSRAA salmon. In 2008, seafood processors earned $77 million in gross revenue by processing hatchery-produced salmon.

Direct Impacts of Aquaculture Association Operations

- In 2008, the three associations contributed nearly $21 million in payroll and expenditures on goods and services to the regional economy. They employed an annual average of 115 employees earning $4.6 million in payroll. NSRAA, DIPAC and SSRAA also spent $16.3 million on goods and services, the majority of it with local Alaska companies.

Harvesters' Enhancement Tax Return on Investment

- From 2001 to 2008, each $1 of voluntary salmon enhancement tax paid by harvesters returned $9.26 in ex-vessel value from the common property fisheries (excluding cost recovery fisheries).
- From 2001 to 2008, each $1 of voluntary salmon enhancement tax paid by harvesters returned $16.46 in gross processing revenues.
- In 2008, each $1 of voluntary salmon enhancement tax paid by Southeast fishermen generated $18.28 in ex-vessel value from common property fisheries and $35.44 in gross processing revenues.

Community Revenue from Fisheries Business Tax

- From 2001 to 2008, NSRAA, DIPAC and SSRAA salmon generated $6.8 million in fisheries business tax, which is split evenly between the state general fund ($3.4 million) and the local governments ($3.4 million) of the communities where the salmon were landed.

Charter, Sport, Personal Use, and Subsistence Contributions

- From 2001 to 2008, charter and other sport fishermen harvested 383,000 NSRAA, DIPAC and SSRAA Chinook (king) and coho salmon.
- Salmon from NSRAA, DIPAC and SSRAA contribute significantly to the sport, personal use, and subsistence fisheries of residents of the region.

Introduction and Methodology

Introduction

In 1974, the Alaska Legislature authorized the creation of private nonprofit (PNP) hatcheries for ocean ranching in Alaska for the purpose of rehabilitating and enhancing fish stocks. The Legislature also approved the formation of regional associations comprised of representatives from local communities and authorized to operate hatcheries and conduct other enhancement activities that benefit fisheries resources. These associations are authorized to collect a tax on commercial landings for stock enhancement, provide the tax was voluntarily approved by a majority of commercial permit holders in the region.

Two regional associations were created in Southeast Alaska: the Northern Southeast Regional Aquaculture Association (NSRAA), headquartered in Sitka, and the Southern Southeast Regional Aquaculture Association (SSRAA), based in Ketchikan. These organizations were funded through a salmon enhancement tax (of 3 percent), as well as what is referred to as "cost-recovery" income, which comes through the harvest and sale of a portion of returns to the terminal hatchery areas after passing through the common property fisheries.

Other PNP hatcheries also emerged, the largest of which is Douglas Island Pink and Chum, Inc. (DIPAC), based in Juneau. DIPAC is funded by its cost recovery program and state contracts. While other smaller hatcheries also produce salmon, this report focuses on Southeast's three major hatcheries: NSRAA, DIPAC and SSRAA.

Methodology

The data presented in this report comes from a variety of sources, including the aquaculture associations, Alaska Department of Fish and Game (ADF&G), Alaska Commercial Fisheries Entry Commission (CFEC), Alaska Department of Labor and Workforce Development (ADOLWD) and Alaska Department of Revenue (ADOR).

Volume and ex-vessel value estimates of PNP salmon harvested in commercial fisheries are based on the most recent data provided by the aquaculture associations, ADF&G, and CFEC. First wholesale values prior to 2008 are calculated using average annual prices per product form for Southeast Alaska processors, as published by ADOR. Wholesale values for 2008 are estimated by applying the ratio of ex-vessel values to first wholesale values from prior years to 2008 ex-vessel values.

Some first wholesale data is unavailable due to DOR confidentiality regulations. In these instances, McDowell Group used conservative estimates from a range of values. Therefore, wholesale values reported in this study should be considered minimum estimates.

Sport fishing harvest estimates are based on data provided by the hatcheries and ADF&G.

McDowell Group employed economic multipliers to estimate the indirect and induced economic impacts related to PNP operations. Direct impacts were calculated based on the pro-rata share of hatchery fish

moving through the commercial fishing and seafood processing industries in Southeast Alaska. The model linked ADOLWD employment and payroll data, ex-vessel volume and value data, first wholesale value data and other information to generate estimates of average annual employment, income, and total economic output related to hatchery-produced salmon.

Facilities and Operations

Northern Southeast Regional Aquaculture Association

Established in 1978, Northern Southeast Regional Aquaculture Association produces chum, sockeye, chinook, and coho salmon.

Its Medvejie Hatchery, on Baranof Island south of Sitka, has operated for nearly 30 years. Although chum account for the largest returns from Medvejie, the hatchery doubled its chinook production in recent years. It also launched a zero-check chinook program in which smolts are released after only one year of rearing instead of the traditional two.

The state built the Hidden Falls Hatchery on Baranof Island on Chatham Strait in 1978 and operated it until 1988. Since taking over the hatchery, NSRAA has more than doubled its chum production, tripled chinook production, and launched a coho program.

NSRAA also runs a coho rearing program at Deer Lake, on southeastern Baranof Island. In 2009, the association doubled the number of fry in its net-pen system to increase its adult returns by 180,000 to 200,000 coho per year. In addition, NSRAA has three spawning channels and remote incubation boxes near Haines.

Douglas Island Pink and Chum, Inc.

Douglas Island Pink and Chum, Inc. was established in 1976 and operates the Macaulay Salmon Hatchery in Juneau, as well as the state-owned Snettisham Hatchery, 40 miles south of the capital.

The Juneau hatchery, in operation for over 20 years, produces chum, chinook, and coho salmon. The facility also houses the Ladd Macaulay Visitor Center, which maintains an assortment of aquariums and draws more than 100,000 visitors each year. Next to the hatchery is a public dock that is popular among shoreside anglers and children.

In 1996, DIPAC took over management of the Snettisham Hatchery, previously operated by the Alaska Department of Fish and Game. This hatchery, located between Juneau and Petersburg, produces sockeye for local fisheries and the U.S.-Canada Salmon Treaty enhancement programs.

DIPAC does not receive tax revenue from commercial harvests and instead relies primarily on cost-recovery harvests of chum, sockeye, and coho. It also maintains contracts with the state to fund its chinook and transboundary sockeye programs.

Southern Southeast Regional Aquaculture Association

The Southern Southeast Regional Aquaculture Association began operation in 1978 and is based in Ketchikan. Its four hatcheries produce chum, coho, sockeye, and chinook salmon.

SSRAA's hatcheries are at Whitman Lake in Ketchikan; in Neets Bay, about 40 miles north of Ketchikan; Burnett Inlet, 25 miles south of Wrangell; and Crystal Lake, 20 miles south of Petersburg. The association also operates remote sites in Kendrick Bay, Nakat Inlet, Anita Bay, Bakewell Lake, and Neck Lake. In addition, it has wild salmon stock restoration projects at Hugh Smith Lake and McDonald Lake.

SSRAA is funded by a 3 percent ex-vessel tax on landed salmon within its operation area and a cost recovery program, selling a portion of returns to terminal areas after the fish pass through common property fisheries. While other hatchery programs contract processors to purchase their cost-recovery fish, SSRAA is unusual in that it markets its own. The association's cost recovery income is derived from chum salmon flesh, products such as smoked salmon, and from roe, or "ikura," which is coveted in Japan and Eastern Europe.

Economic Impacts of NSRAA, DIPAC and SSRAA

Between 2001 and 2008 NSRAA, DIPAC and SSRAA contributed nearly 47 million salmon to commercial fisheries in Southeast Alaska, plus another 400,000 chinook and coho to the charter and other sport fisheries. In 2008, as the result of contributing 6.5 million fish to the commercial common property harvest, aquaculture association operations generated direct, indirect and induced economic output worth $233 million, employment of nearly 1,200, and income of just under $60 million. These calculations employ economic modeling and include direct economic impacts of aquaculture association operations and the harvesting and processing of the salmon they produce. Also included are the economic multiplier (indirect and induced) impacts of these activities as the impacts circulate throughout the regional economy.

Total Direct, Indirect, and Induced Economic Impacts of NSRAA, DIPAC and SSRAA, 2008

Industry	Economic Output	Employment	Income
Commercial Fishing	$61,000,000	468	$36,600,000
Seafood Processing	$139,300,000	545	$15,000,000
Hatchery Operations	$32,400,000	179	$7,100,000
Total	**$232,700,000**	**1,192**	**$58,700,000**

Source: NSRAA, DIPAC, SSRAA, ADOLWD, ADF&G and McDowell Group estimates.

In addition, NSRAA, DIPAC and SSRAA salmon represent a significant share of the charter and other sport fish harvests. However, accurately estimating the direct, indirect, and induced impacts of sport, personal use and subsistence fisheries is beyond the scope of this study.

Commercial Harvesting Economic Impacts

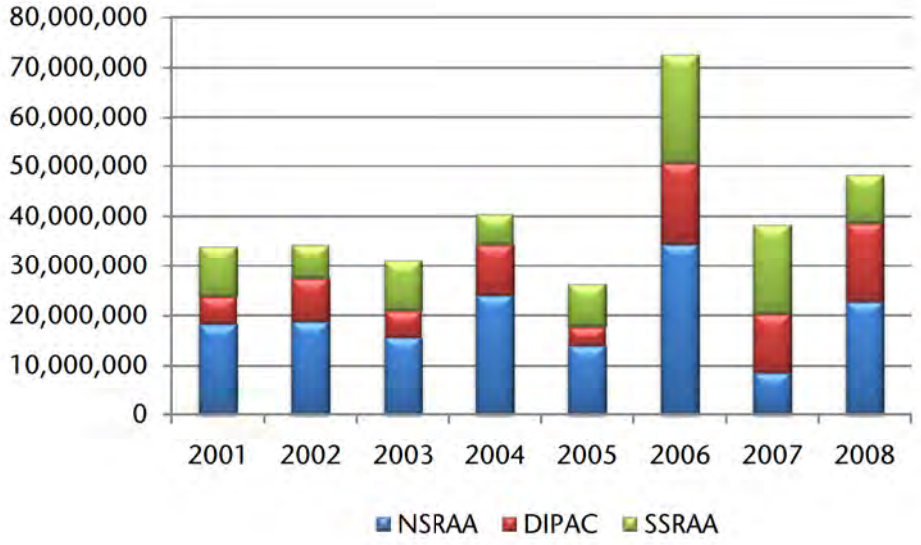
Harvest Volume and Value

Southeast Alaska's three largest aquaculture associations produced 324 million pounds of salmon harvested by the commercial fleet in common property fisheries from 2001 to 2008. That resulted in $145 million in ex-vessel value over those eight years. The three associations produced an annual average of more than 41 million pounds of salmon – worth $18 million – harvested by commercial fishermen each year.

NSRAA fish accounted for the greatest portion of the commercial catch of hatchery fish, producing 48 percent of the volume. Since the previous decade, however, the portions of the commercial harvest coming from DIPAC and SSRAA fish have increased. DIPAC accounted for 15 percent of the 1990-2000 harvest volume, increasing to 24 percent in the 2001-08 period. Similarly, SSRAA produced 12 percent of the 1990-2000 harvest volume, but increased its portion of the commercial catch to 28 percent from 2001 to 2008.

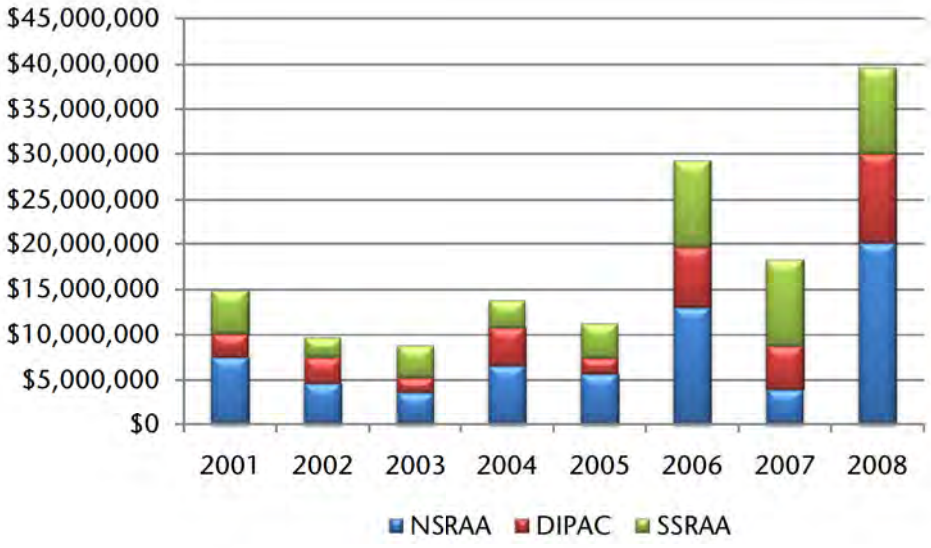
For the 2001-2008 period, NSRAA produced 45 percent of the ex-vessel value of the hatchery fish harvested by the commercial fleet, followed by SSRAA at 32 percent, and DIPAC at 24 percent. The ex-vessel value is the gross amount paid to fishermen for their catch.

Commercial Harvest Volume of NSRAA, DIPAC and SSRAA Salmon2001 – 2008 (in pounds)



Source: NSRAA, DIPAC and SSRAA

Commercial Harvest Ex-vessel Value of NSRAA, DIPAC and SSRAA Salmon, 2001 – 2008 (in $)

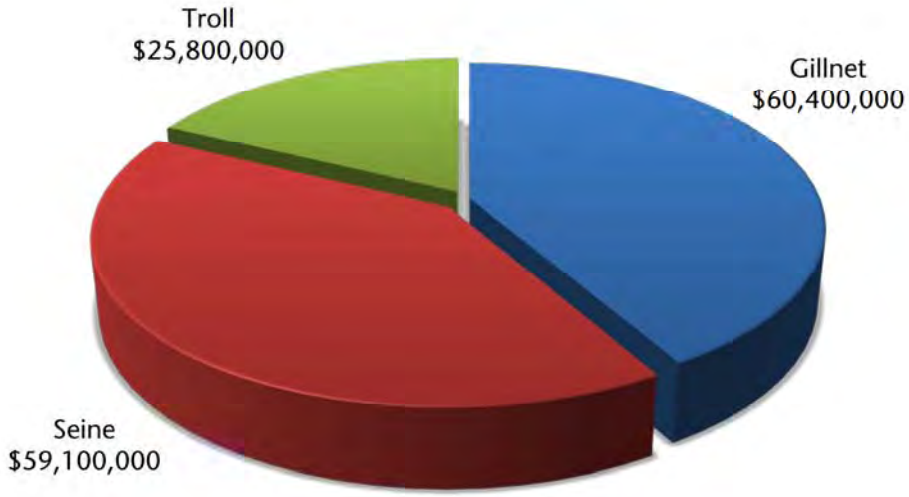


Source: NSRAA, DIPAC and SSRAA

Harvest Value by Gear Group

All three commercial gear groups – seiners, gillnetters, and trollers – reap benefits from the hatchery-produced salmon. From 2001 to 2008, the ex-vessel value of hatchery-produced fish totaled more than $64 million for the seine fleet (42 percent); more than $60 million for gillnetters (40 percent); and almost $26 million for trollers (17 percent).

Ex-vessel Value of NSRAA, DIPAC and SSRAA Salmon by Gear Group ,2001 - 2008

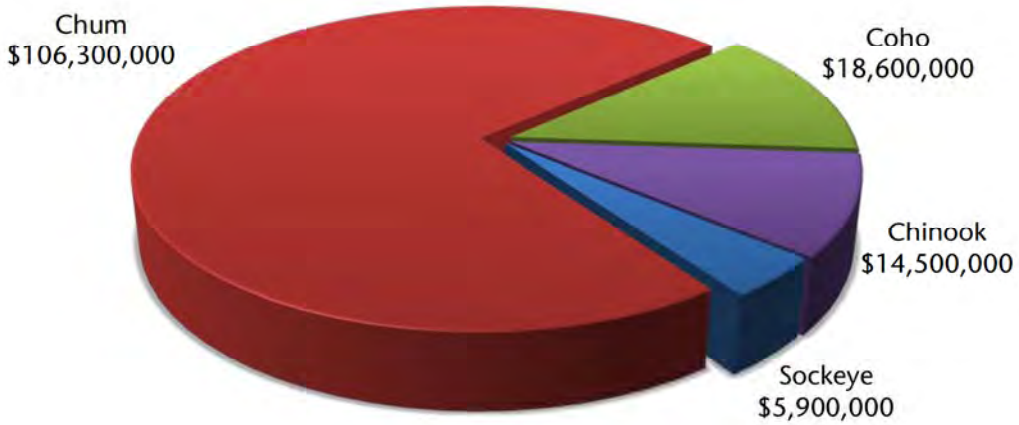


Source: NSRAA, DIPAC and SSRAA

Harvest Value by Species

Chum is the most important salmon species for Southeast hatcheries in terms of both volume and value. From 2001 to 2008, chum salmon accounted for 73 percent of the total ex-vessel value and 91 percent of the volume of the common property harvest of NSRAA, DIPAC and SSRAA fish. Coho accounted for 13 percent ($18.6 million), chinook at 10 percent ($14.5 million), and sockeye at 4 percent ($5.9 million).

Ex-vessel Value of NSRAA, DIPAC and SSRAA Salmon by Species, 2001 - 2008

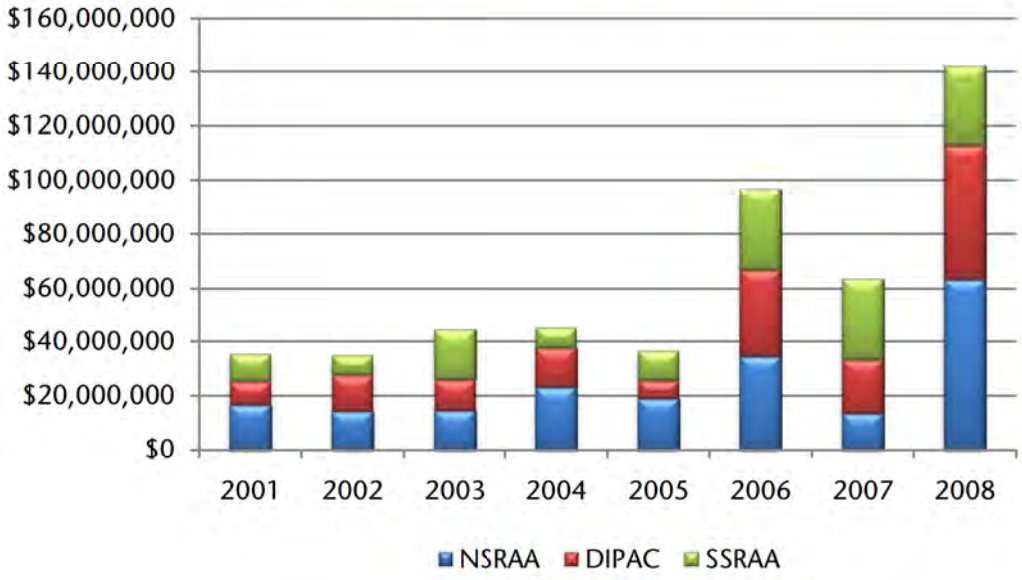


Source: NSRAA, DIPAC and SSRAA

Seafood Processing and First Wholesale Value

In addition to yielding economic benefits to commercial fishermen, NSRAA, DIPAC and SSRAA salmon generate substantial income to seafood processors as they process these fish in the Southeast region before shipping to markets in the U.S., Europe, Asia, and elsewhere. From 2001 to 2008, the salmon produced by the three major aquaculture associations resulted in nearly one-half billion dollars ($497 million) in first wholesale value of processed fish. First wholesale value is the amount received by processors for the initial sale of processed product outside their affiliate network. From 2001 to 2008, the average annual first wholesale value of hatchery-produced salmon was $24.7 million for NSRAA, $19.5 million for DIPAC, and $18.0 million for SSRAA. In 2008, first wholesale value of NSRAA, DIPAC and SSRAA salmon reached a record level $141 million.

First Wholesale Value of NSRAA, DIPAC and SSRAA Salmon in Southeast Alaska, 2001 - 2008



Source: NSRAA, DIPAC and SSRAA

Chum accounted for 83 percent of the total combined first wholesale value, followed by coho at 12 percent, chinook at 4 percent, and sockeye at 3 percent. Chum roe, or ikura, makes up 43 percent of the hatchery chum harvest value.

From 2001 to 2008, after accounting for ex-vessel payments to fishermen, processors realized $258 million in gross revenue[1]. The last three years of the study period yielded the highest gross revenue totals, with 2008 being the most lucrative year overall at $77 million. During the entire study period, NSRAA salmon resulted in $102 million in gross revenues, DIPAC salmon $84 million, and SSRAA salmon $72 million.

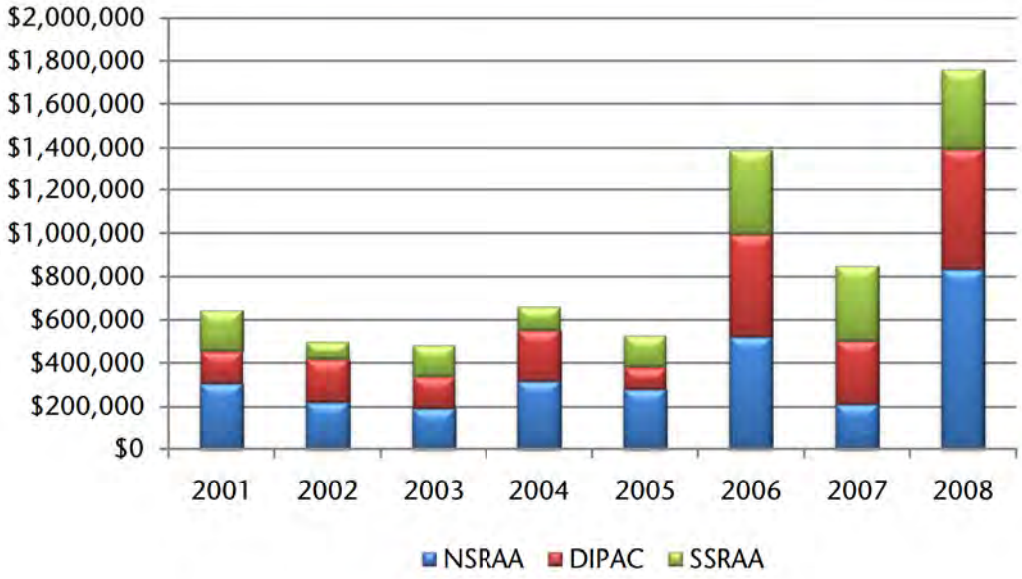
[1] Gross revenue is equal to the first wholesale value minus the ex-vessel value paid to fishermen for the raw fish.

Tax Revenue from NSRAA, DIPAC and SSRAA Salmon

From 2001 to 2008, the State of Alaska Fisheries Business Tax proceeds directly related to NSRAA, DIPAC and SSRAA salmon totaled $6.8 million. One-half of this tax ($3.4 million) is returned directly to the local governments of the communities in which the salmon are landed. The other one-half of the Fisheries Business Tax – $3.4 million – is retained by state government for general fund allocation. Fisheries business tax proceeds peaked in 2008 at $1.8 million.

NSRAA and SSRAA funding, which primarily relies on cost recovery efforts, is supplemented by a voluntary Salmon Enhancement Tax paid by the commercial salmon fleet of the region. This tax required a vote of the majority of the region's salmon permit holders. DIPAC does not receive this tax, as it is not a regional PNP. The commercial fleet paid $15.7 million in Salmon Enhancement Tax (the tax rate is 3 percent of harvesters' ex-vessel income from salmon in common property fisheries) during the study period. This investment returned $145 million in ex-vessel harvest value to the common property fishery, a return of $9.26 for every $1 of tax levied.

Fisheries Business Tax Proceeds from Hatchery-Produced Salmon, 2001-2008



Source: McDowell Group Estimates

Direct Impacts of Aquaculture Association Operations

Southeast Alaska's three largest aquaculture associations inject millions of dollars into the state and regional economies each year via payroll and payments to vendors for goods and services. In 2008, for instance, the associations provided nearly $21 million in payroll and expenditures on goods and services. Local businesses receive the majority of these expenditures; in 2008 the three hatcheries combine spent $8.4 million on goods and services in Southeast Alaska in addition to $4.6 million in payroll.

In 2008, the associations provided annual average employment of 115. While peak employment is in the summer, aquaculture association operations provided year around employment as well. DIPAC employed an average of 42 people per month, NSRAA, 36, and SSRAA, 37.

Charter, Sport, Personal Use, and Subsistence Fishery Contributions

NSRAA, DIPAC and SSRAA salmon add considerably to the charter, other sport, personal-use, and subsistence harvests in Southeast Alaska. Direct economic impacts include spending on guided fishing tours, boat rentals, fishing gear, food, lodging, and fuel. Some charter boat operators have stated hatchery salmon are a large part of their clients' catch and others said they would not be in business without these fish.

From 2001 to 2008, NSRAA, DIPAC and SSRAA contributed 383,000 chinook and coho salmon to the total Southeast Alaska sportfish harvest, an average annual contribution of 48,000 fish.

DIPAC salmon accounted for an average of 15 percent of the coho harvest and 24 percent of the chinook catch by Juneau-area anglers from 2001 to 2008. Similarly, NSRAA fish made up about 7 percent of the Juneau and Sitka sport harvests of coho and Chinook. SSRAA produced the largest amount of Chinook and coho for sport fisheries during the study period. From 2001 to 2008 SSRAA contributed 8,755 chinook and 23,803 coho to sport fisheries in southern Southeast Alaska.

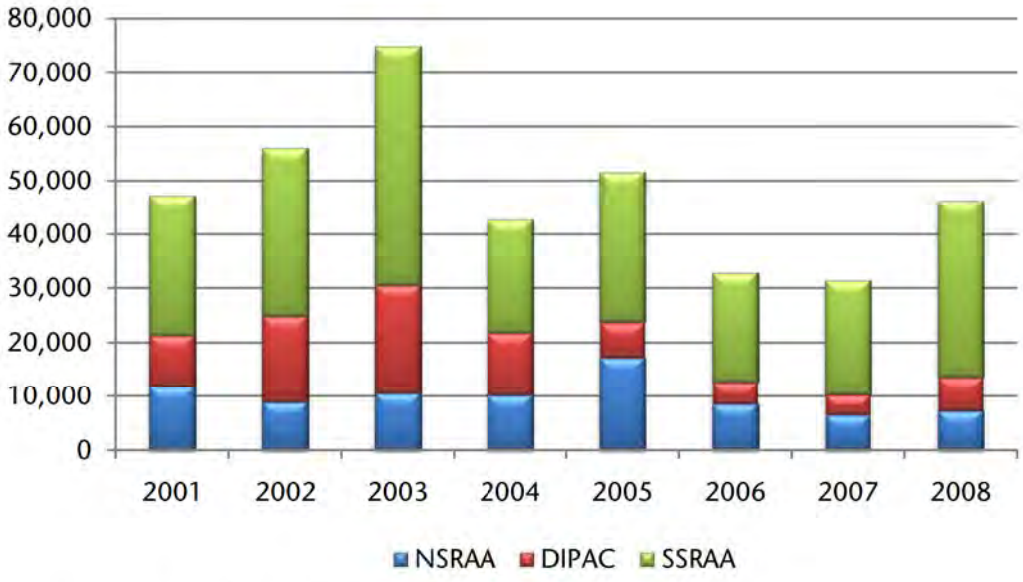
Contributions to subsistence are also important. For example, NSRAA has a policy of providing fish to anyone in need. In addition, NSRAA provides fish for cultural events and regularly give fish to smaller, more remote communities with subsistence traditions.

Assessing the full scope and impact of NSRAA, DIPAC and SSRAA salmon on the region's sport fishing industry is beyond the scope of this brief report. However, the available data and anecdotal evidence suggest hatchery operations are an important element. According to ADF&G about 630 professionally guided boats made at least one salmon fishing trip during 2008 in Southeast Alaska. All told, over 122,000 anglers participated in Southeast sport fisheries during 2008. Fees from the sale of sport fishing licenses help fund agencies that manage Alaska's fisheries for continued sustainability.

NSRAA, DIPAC and SSRAA contribute considerably to the region's fishing derbies. For example, chinook from NSRAA's Medvejie hatchery account for about one-third of the chinook entered into the Sitka Salmon Derby. DIPAC contributed an average of 11 percent of the chinook harvest and 12 percent of the coho harvest in

Juneau's Golden North Salmon Derby from 2001 to 2007. DIPAC's contribution was even greater previously, accounting for up to 30 percent of the overall derby catch, until the event dates were shifted in 2005.

Charter and Other Sport Harvest of Hatchery Salmon in Southeast Alaska, 2001 - 2008



Source: NSRAA, DIPAC and SSRAA