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USDA Investment Strategy in Support of Rural Communities in Southeast Alaska 2011-2013

On the Cover

Visitor Services, *top left: Cruise ships docked in downtown Juneau during the busy summer tourist season*

Ocean Products, *top right: Seiner-caught salmon, vital to the economy of Southeast Alaska.*

Forest Products, *bottom left: Stacked lumber at Viking Lumber Co. on Prince of Wales Island.*

Renewable Energy*, bottom right: Energy efficient boiler that heats the Southeast Alaska Discovery Center in Ketchikan.*

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Executive Summary

Most rural communities in Southeast Alaska are experiencing declining populations, fewer job opportunities, and increasing energy costs. USDA agencies (Farm Service Agency, Forest Service, Rural Development) and the U.S. Economic Development Administration (USEDA) are partnering to revitalize communities and restore public lands by supporting job creation in areas that offer growth potential: fisheries and mariculture, recreation and tourism, forest management, and renewable energy. The goals of this USDA Investment Strategy (Strategy) include:

- creating quality jobs and sustainable economic growth;
- promoting small business creation, expansion, and retention;
- improving access to capital; and
- promoting job training and educational opportunities.

Working with the Juneau Economic Development Council (JEDC), USDA agencies collaborated with over 120 leaders from local businesses and communities to identify initiatives in four areas—Ocean Products, Visitor Services, Forest Products, and Renewable Energy—that will create a regional competitive advantage, thereby raising the economic conditions for all of Southeast Alaskans[1]. This is the first time a broad-based, interagency, regional collaborative assessment focusing on economic clusters has been attempted in Southeast Alaska.

This interagency team recommends improving community and ecological health by funding economic initiatives that: cross agency boundaries; align with current actions by USDA agencies; have a high likelihood for success; and are readily achievable. The initiatives include:

- Ocean Products: Increase watershed restoration activities so as to increase wild salmon production; include the seafood industry in USDA programs; study the use of fish byproducts for renewable energy purposes; and support mariculture through zoning adjustments and financial assistance.

- Visitor Products: Create independent traveler opportunities by developing multi-community land and water trails; increase opportunities for guided access; and improve opportunities to provide input regarding Tongass National Forest access fees.

- Forest Products: Promote new opportunities from second growth forest while maintaining support to the existing industry; showcase the use of young growth wood in local structures; simplify the small timber sale process; improve the Tongass timber planning process; catalyze the use of wood waste for energy; and develop a detailed analysis on the volume of young growth available across all lands.

- Renewable Energy: Collaborate with the State of Alaska to develop a Southeast renewable energy plan; increase agency support to renewable energy development projects; convert agency administrative facilities from oil to renewable energy; increase use of the Biomass Crop Assistance Program (BCAP).

USDA has identified about $30 million of existing funding to support these initiatives. In order to grow these economic sectors, however, USDA recommends an additional $29 million investment over the next two years. Given the current challenging economic times and likely decreasing federal budgets, an "all-hands-all-lands approach" of leveraging resources across agencies will be essential. Combining grant and loan

[1] The full report can be found at www.jedc.org.

programs provided by Rural Development, Farm Service Agency, U.S. Economic Development Administration, and Forest Service State and Private Forestry with annual appropriations can increase access to capital to facilitate entrepreneurship and economic growth. In the past two years, over $40 million in guaranteed loans and grants have been provided to communities, businesses, and non-profits in Southeast Alaska. Of these funds, over $10 million was directly in support of initiatives similar to those identified by the economic cluster groups.

Table 1. **Summary of planned and recommended investments to improve economic opportunities for rural communities in Ocean Products, Visitor Products, Forest Products, and Renewable Energy.**

USDA Investments Oceans, Visitors, Forests, Energy R10 - Tongass	Investments Planned For FY12 & FY13	Recommended Additional Funding to Increase Growth FY12 & FY13	Total of Planned and Recommended Investments in FY12 & FY13
Oceans	6,478,000	5,650,000	12,128,000
Visitors	1,912,000	8,370,000	10,282,000
Forests	24,967,000	11,775,000	36,742,000
Energy	728,000	3,355,000[1]	4,083,000
Total	**$34,085,000**	**$29,150,000**	**$63,235,000**

1 – Does not include $20 million to convert federal facilities in Southeast Alaska from oil to biomass heat.

In addition to financial investments and leveraging resources, collaboration, community capacity, and interagency coordination will be important to the success of this Strategy. USDA will also continue to support the business cluster work groups, launch a grant-making program to improve community capacity, and maintain an emphasis on interagency leadership and coordination. USDA will provide financial support to the business cluster work groups for facilitation, which continue to meet and have shifted their focus to implementation of the initiatives. The community capacity grant program will give communities additional resources to gain technical assistance in writing business, energy, or tourism plans, or convene and plan watershed restoration meetings, for example. Finally, USDA agencies, USEDA, and other partners will continue to meet at least quarterly to leverage resources and programs.

USDA in Alaska sees this Strategy as an ongoing, dynamic effort built on strengthening relationships among agencies, partners, and with businesses; finding shared visions and solutions; and directing USDA resources in areas that have the greatest potential to create sustainable jobs and healthy communities. USDA expects to update this plan in two years or sooner, if needed.

Introduction

Recognizing the pressing social, economic, and environmental challenges facing forest-dependent rural communities in Southeast Alaska, in May 2010 Secretary of Agriculture Tom Vilsack directed the U.S. Forest Service (USFS), Rural Development (RD), and the Farm Service Agency (FSA) to work with the U.S. Economic Development Administration (USEDA) and regional partners to enhance economic opportunities while maintaining community and ecosystem health.

This Transition Framework for Economic Diversification was initiated to assist Southeast Alaska communities in diversifying their economies through renewed collaborative efforts among public and private entities. Initially, the Framework focused on challenges with harvesting of old growth timber on the Tongass. Upon closer examination, it became clear that broadening the focus to natural resource management in general would be necessary given the breadth of challenges. It also became clear that considerable attention to strengthening the economy was needed.

To implement the Framework, USDA and USEDA formed an Implementation Team and established a two-year timeline. The team adopted a collaborative approach with the goals of increasing employment and improving community and ecosystem health in four areas: renewable energy, forest management, fisheries and mariculture, and tourism and recreation. The team recognized early that a significant investment in strengthening and building collaboration and partnerships was essential to success.

In September 2010, the Forest Service contracted the Juneau Economic Development Council to complete an economic development asset map and report that outlined the human, financial, institutional, and natural assets of Southeast Alaska. The report identifies many of the assets and barriers to economic development in the region. Assets include the abundance of natural beauty and recreational opportunities, cultural opportunities, safety, and availability of high-speed internet. Barriers include high freight, electricity, and real estate costs, government regulations, lack of transportation and infrastructure, limited collaboration, and limited education and workforce readiness.

JEDC used the report and map to develop an economic action plan for job creation in Southeast Alaska organized around four important economic sectors for the regional economy: Ocean Products, Visitor Services, Forest Products, and Renewable Energy. Economic cluster working groups generated the basis of the plan. More than 100 leaders from state, private, non-governmental, and federal organizations and groups have participated in this collaborative effort to date.

In May 2011, JEDC summarized over 30 major action initiatives developed by the cluster working groups. The report is available at: http://jedc.org/seclusterinitiative.php. The three USDA agencies and USEDA then identified those action initiatives that agency resources could support in the next two years. In particular, initiatives were selected that:

- align with USDA agency programs;
- cross agency boundaries; and
- have a high likelihood for success (especially in the near-term), are readily achievable, and create the greatest benefit within the limited resources available.

This USDA Investment Strategy for Southeast Alaska (hereafter Strategy) summarizes the work that has already been accomplished in support of these initiatives, outlines what the agencies intend to do in the next two years, and what additional work can be done if additional resources were available.

Why does USDA need to be involved in job growth?

Most of the land in Southeast Alaska is publicly owned. The Forest Service manages the 17 million acres of the Tongass National Forest, nearly 80% of the land base. Approximately 70,000 people reside in 32 towns and villages in Southeast Alaska, many of which are accessible only by boat or plane. Residents rely heavily on natural resource-based industries. Currently the fishing, tourism, and mining industries support the largest number of jobs.

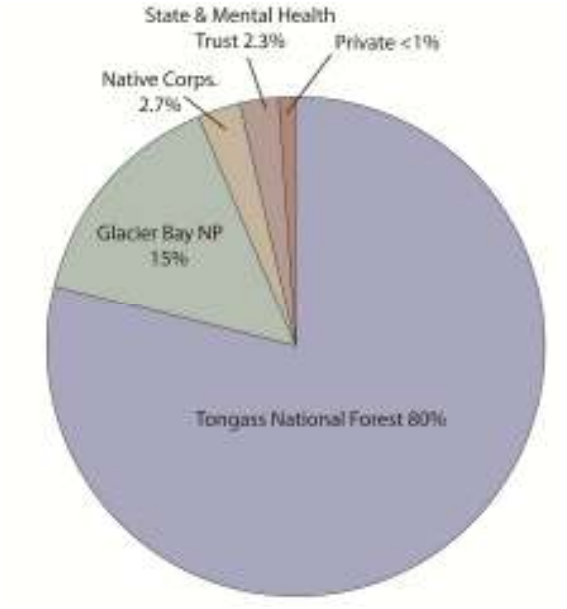


Figure 1. Landownership in Southeast Alaska

Today, communities in Southeast Alaska are facing rising energy costs, out-migration, and overall economic decline, not unlike rural areas in other parts of the U.S. Declines can be seen in economic indicators such as population, income, and youth as a proportion of population, all of which are indicators of community health.

Historically, the timber industry provided the backbone to stable economies. At its peak, jobs in the timber industry were comparable to the fishing industry. Today, timber jobs are at the lowest level in the last 50 years. With an ongoing decline in timber harvest, and renewed national interest in roadless area and old growth conservation, communities now face unprecedented economic challenges.

Research has shown that the region's population is aging more quickly than the rest of Alaska and the nation. From 2000 to 2009, the number of people between the ages of 55 to 69 increased by 60 percent, while every age group below age 49 decreased during the same time period. To reverse the downward trend in population, particularly with youth, local communities must have healthy economies, available housing, a reasonable cost of living, and job opportunities.

The decline in population is linked to the decline of the timber industry, manufacturing industries, fishing industry, and reduction in state and federal jobs. High fuel prices and increased costs of living have led many who live in smaller communities to migrate out. Young people are moving away and schools are closing. For some communities, the loss of even one family with children can mean that the local school enrollment falls below the minimum number required by the state for the school to remain open.

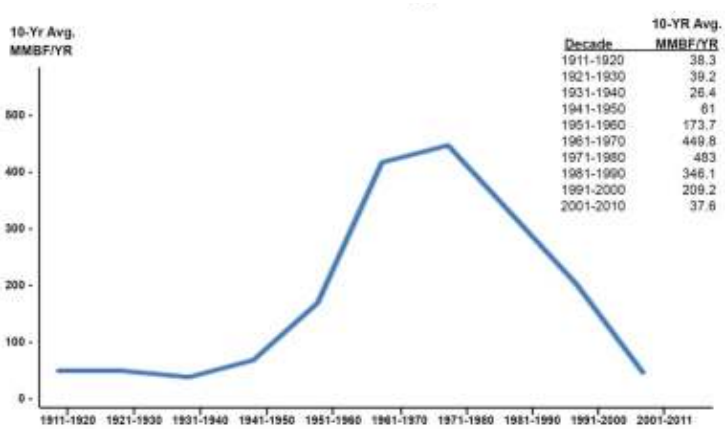


Figure 2. 100 Years of Timber Harvest from the Tongass National Forest

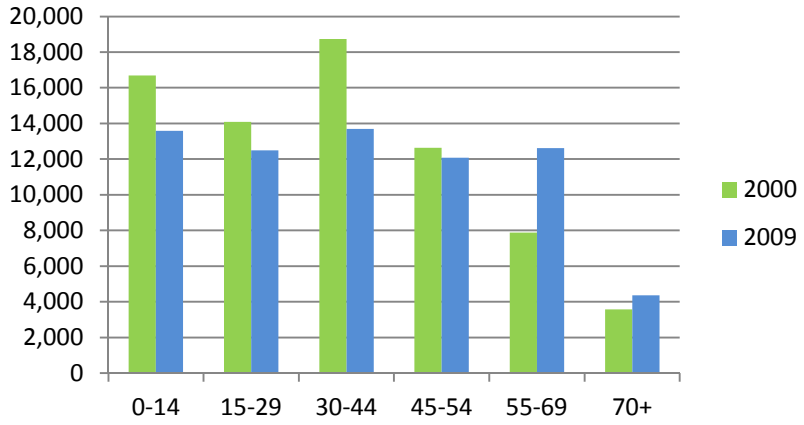


Figure 3. Changes in Population Based on Age

In spite of these overall trends, the region is rich in natural and cultural resources with healthy populations of salmon, healthy forests, and abundant wildlife populations. Animals thrive in Southeast Alaska that are rare elsewhere, such as brown bears, mountain goats, wolverines, bald eagles, black oystercatchers and trumpeter swans. Local community and Native connections to the region are strong and enduring. The vibrant people and communities create the foundation for a strong economy.

What is USDA and USEDA's role?

Creating jobs, growing the economy, and supporting healthy communities require an "all-hands-all-lands" approach in which USDA and USEDA are important partners. By increasing collaboration across agencies, we can leverage resources, support entrepreneurs, and facilitate people working together to create healthy communities and a healthy environment.

USDA and USEDA have a track record of supporting economic growth and healthy communities in Alaska by working with key business leaders, state, tribal, and local governments and communities. Individually, each of these four agencies has established programs and authorities that will help alleviate economic challenges in Southeast Alaska. By coordinating and implementing the variety of programs within this plan, we hope to decrease duplication and improve outcomes.

Revitalizing and maintaining community sustainability requires attention to the interrelation and interdependency of the region's economy, ecology, and culture. Now, more than ever, a collective focus is needed to improve the health of the 32 communities in Southeast Alaska. USDA agencies and USEDA are committed to providing the resources, leadership, and support necessary to support making this happen.

This Strategy marks an important milestone for as federal and state governments work with the people, industries, and communities of Southeast Alaska to support job creation and improve rural community health. Given this is the first interagency plan of its kind, periodic review and adjustments will be necessary.

Agency Programs

The agencies of the USDA and USEDA already have programs and authorities in place that allow them to respond to those "readily achievable" action initiatives defined by the cluster working groups. The Strategy and initiatives are also well aligned with Goal 1 of USDA's Strategic Plan for 2010-2015, which states, "The Department will provide on-the-ground support (financial, technical and planning assistance) for local multi-county, community-driven strategic plans." Below is a list of agencies involved in the Strategy for Southeast Alaska and their respective roles, programs, and authorities.

The **U.S. Forest Service** has a broad multiple-use management mission to meet the diverse needs of people. For example, providing wood fiber, water, minerals, and a place to hunt, fish, and enjoy wilderness are all within the mission. Through its State and Private Forestry branch, the Forest Service provides technical and financial assistance to state and private forest landowners. "The Principal Laws Relating to Forest Service State and Private Forestry Programs"[2] include:

- The Cooperative Forestry Assistance Act of 1978, as amended through 2008
- Economic Action and Rural Development Program authorities
- Forest Products Conservation and Recycling Program authorities
- Watershed Restoration and Enhancement (Wyden Amendment)
- Biomass Commercial Utilization Grant authorities
- Tribal Watershed Forestry Assistance authorities.

The scientists of the Pacific Northwest Research Station (PNW) develop and deliver knowledge and technology through decades of research which has encompassed climate change, forest health, fish and wildlife habitat, imperiled species, and the socio-economic importance of forests to people from every walk of life. The Sitka Wood Utilization Center, a sub-unit of PNW, provides local specialized expertise.

USDA Rural Development works in partnership with the private sector and community-based organizations on many fronts. In general, they provide loan guarantees, direct loans, and grants across a wide range of programs for community and economic development.

- The Business Program funds projects that create or preserve quality jobs and/or promote a clean rural environment.

- The Cooperative Program promotes an understanding and use of the cooperative form of business as a viable organizational option for marketing and distributing agricultural products.

- The Single Family Housing Programs and Multi-Family Housing Programs provide homeownership opportunities to low- and moderate-income rural Americans, the elderly, and persons with disabilities through several loan, grant, and loan guarantee programs. This is important in Southeast Alaska where the lack of affordable housing contributes to the decline in population. The funds may also be used to buy and improve land and to provide necessary facilities such as water and waste disposal systems.

- Community Programs provide loans and grants and loan guarantees for water and environmental projects such as water systems, waste systems, solid waste, and storm drainage facilities. Community Facility loans, loan guarantees, and grants also fund hospitals, fire protection, and safety, as well as many other community-based needs and initiatives.

[2] The full document can be found under "Southeast Alaska Economic Diversification Transition Framework" at http:/www.fs.usda.gov/r10.

- The Electric Programs provide leadership and capital to upgrade, expand, maintain, and replace rural electric infrastructure.

- Telecommunications Loans and Grants finance voice telephone service. The Broadband Access Loan program provides loans for funding the costs of construction, improvement, and acquisition of facilities to provide broadband service to eligible communities.

- Water and Environmental Programs provides loans, grants and loan guarantees for drinking water, sanitary sewer, solid waste and storm drainage facilities in rural areas and cities and towns of 10,000 or less.

The **Farm Service Agency** provides farmers with a strong safety net, and provides credit to agricultural producers who are unable to receive private, commercial credit, with a special emphasis on providing loans to beginning, minority and women farmers and ranchers. While Southeast Alaska does not produce a lot of agricultural crops, FSA programs benefit entrepreneurs interesting in pursuing mariculture opportunities.

FSA administers the Biomass Crop Assistance Program[3] (BCAP) which provides financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish, produce, and deliver biomass feedstocks. This program could help kick start the biomass industry in Southeast by investing additional funds to support development of a pellet manufacturing facility. Matching payments may be available for the delivery of eligible material to qualified biomass conversion facilities by eligible material owners. Qualified biomass conversion facilities produce heat, power, bio-based products, or advanced biofuels from biomass feedstocks.

The mission of the **U.S. Economic Development Administration** is to lead the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy. USEDA is guided by the basic principle that distressed communities must be empowered to develop and implement their own economic development and revitalization strategies. USEDA assistance is available to rural and urban areas of the Nation experiencing high unemployment, low income, or other severe economic distress. They accomplish this by:

- Promoting business policies that help businesses and entrepreneurs and their communities grow and succeed.

- Promoting the Administration's National Export Initiative as well as attracting Foreign Direct Investment in the U.S.

- Focusing on research and development that moves quickly from the lab to the marketplace.

[3] http://www.fsa.usda.gov/FSA/webapp?area=home&subject=ener&topic=bcap&utm_source=spotlight&utm_medium=click&utm_content=rotation2&utm_campaign=bcapeducation

Agency Investments in Support of Economic Growth

The Strategy highlights actions and programs that will: accomplish selected regional business cluster initiatives identified in the May 2011 JEDC report; improve community capacity and infrastructure; and leverage multiple agency programs and resources. The interagency leadership team recommends investment in the following three areas that cut across all economic sectors:

1. **Collaborative Working Groups—**The Forest Service will continue to support regional business sector working groups. The existing four groups (Ocean Products, Visitor Products, Forest Products, and Renewable Energy) are just beginning to operate with a high degree of enthusiasm. Continued facilitation and staff support is needed to help these groups be successful, and to potentially expand support to new clusters (estimated cost between $100,000 to $200,000/yr).

2. **Community Capacity—**This fall, USFS, RD, and private partners will launch a community level grant program similar to a Community Capacity and Land Stewardship program in Oregon and Washington. This small grant program provides critical community capacity seed money in such areas as supporting entrepreneurs to write business plans, helping communities hire facilitators for community planning, recreation and tourism planning or energy planning, and investments in community watershed stewardship groups ($100,000 – $200,000/yr.).

3. **Interagency Leadership—**The interagency leadership team has proven a valuable means to ensure federal, state, and private resources are leveraged as effectively as possible to facilitate economic investments. USDA and USEDA will continue to partner in regional and local collaborative efforts to promote a stronger economy, jobs, and healthy communities. While all these agencies do this work to varying degrees, maintaining an emphasis on interagency leadership will help Southeast Alaska communities thrive.

In addition to these three overarching strategies, initiatives selected by the USDA/USEDA Implementation team (those that are ripe for action), are listed below under the following economic sectors: Ocean Products, Visitor Services, Forest Products, and Renewable Energy. Each initiative includes background on the issue, the opportunity for action, and next steps. Many initiatives also include financial investment tables, which capture much of the agency funding in these industries over the past two years (FY10&11), the expected funding assuming continued budgets at approximately the current level (FY12&13), and recommendations for additional financial investment to accelerate growth in that sector.

This set of initiatives are an important starting point and are subject to change as collaborative groups invest more effort into them. As the business sector work groups continue to meet and develop new ideas, USDA partners plan to periodically update these action items.

Ocean Products

The ocean products industry is the largest private sector wage payer and second largest employer in Southeast Alaska. Fishing is not only an important economic driver for rural communities, but Southeast Alaskans are deeply connected to the ocean and seafood as a way of life. The Ocean Products Cluster Working Group identified 11 action initiatives to increase jobs and support healthy communities. The Implementation Team selected four initiatives that USDA can contribute to in the next two years.

INITIATIVE 1—Increase wild salmon production through habitat restoration.

Background: Many important salmon streams are in a degraded condition across the Tongass National Forest. Restoring degraded salmon streams will create immediate jobs in restoration, such as heavy equipment operation, and is expected to increase salmon productivity. An increase in salmon productivity would increase the opportunity for commercial, sport, and subsistence harvest as well as additional jobs in the fishing industry. In the past two years, including American Recovery and Reinvestment Act (ARRA) funding, the Forest Service has invested over $10 million in watershed restoration to improve degraded salmon habitat in the Tongass. Typically, the Tongass receives $1.5 million/year for these efforts. Over $100 million is needed to address the remaining watershed restoration work. At the current funding rate, it will take over 50 years to address the major problems affecting wild salmon production on the Tongass.

Watershed restoration project adds wood to stream to create fish habitat.

Action: Increase investments in watershed restoration to improve ecosystem and community health in Southeast Alaska. The Tongass National Forest proposes to triple the annual funding for watershed restoration to $4.6 million.

Lead agency: Forest Service

Table 2. **Summary of financial investments in watershed restoration across the Tongass National Forest that support Ocean Products Initiative 1. Investments are categorized into two year periods, and include past, projected and future investments needed to grow the sector.**

Tongass NF Investments in Increasing Wild Salmon Production through Watershed Restoration	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[4]	Recommended Funding to Increase Growth in FY12&FY13
Restoration of Priority Watersheds: Craig, Thorne Bay, Ketchikan, Wrangell, Sitka, Hoonah, Petersburg	TNC, USFS, SCS, TU, ADF&G	Whole watershed approach focused on salmon	$1,992,900	$1,225,000	$2,800,000
Fish-pass structure maintenance and enhancements at Thorne Bay, Admiralty NM, Yakutat, Hyder, Sitka, Petersburg, Craig	USFS, SCS	Older salmon passage structures deferred maintenance and reconstruction	$1,689,000	$700,000	$1,300,000
"Red" pipe removal and/or replacements, road maintenance, and storage Wrangell, Sitkoh River, Revilla, Kake, POW	USFS	Road and culvert deferred maintenance affecting water quality and salmon passage	$5,658,000	$678,000	$500,000
Riparian thinning and instream restoration at Staney Creek, Zarembo, Twelvemile, Sitkoh River, Saginaw	USFS, RAC, TNC, NFF, SCS, TU, State	Restoration of priority stream reaches to repair "hot spots"	$737,400	$625,000	$300,000
Salmon stock recolonization and enhancement: Ketchikan, Sitka, Wrangell	USFS	Projects to reestablish or strengthen salmon runs in restored watersheds	$540,000	$400,000	$150,000
Research to Evaluate Restoration Effectiveness - Implement the NetMap toolbox for the Tongass National Forest	USFS Research	To target stream reaches where restoration is appropriate and effective	$97,000	0	$250,000
Research to Evaluate Restoration Effectiveness - Conduct a vulnerability assessment of climate change impacts on freshwater spawning and rearing habitat	USFS Research	Assess impacts of climate change on salmon as relates to restoration	0	0	$75,000
Research to Evaluate Restoration Effectiveness - Develop monitoring indicators and protocol to assess the effectiveness of stream restoration	USFS Research	Required to implementing monitoring	0	0	$275,000
TOTAL			**$10,617,300**	**$3,628,000**	**$5,650,000**

USFS = Forest Service, TNC = The Nature Conservancy, SCS = Sitka Conservation Society, RAC = Resource Advisory Council, TU = Trout Unlimited, NFF = National Forest Foundation, State = State of Alaska, ADF&G = Alaska Department of Fish & Game.

[4] Investments planned with annual appropriations assuming budgets at similar levels.

INITIATIVE 2—Include the seafood industry in USDA programs.

Background: USDA has several programs designed to promote agriculture development, but the seafood industry often does not qualify for the economic assistance either because it is excluded or because of regulatory roadblocks. The Ocean Products cluster identified mariculture as a significant source of employment and economic opportunity in Southeast Alaska. Access to capital to make investments in this industry is critical to success and would allow this industry to get off the ground much more quickly.

Ocean products sector has the largest payroll in Southeast Alaska.

Action: Identify and promote ways to include mariculture development among the traditional USDA agriculture programs.

Lead agency: Farm Service Agency

INITIATIVE 3—Study the conversion of Southeast Alaska fish byproduct to biogas and fertilizer through anaerobic digestion.

Background: Commercial fishing provides millions in economic activity and thousands of jobs in Southeast Alaska. It also creates significant amounts of fish waste that is often dumped into the ocean, creating environmental problems near communities. Processing the currently underutilized resources could create economic opportunities and jobs in the region.

Action: Rural Development will consider funding projects that would convert fish waste to energy through their Business Loan Guarantee Program.

Lead agency: Rural Development

INITIATIVE 4—Strengthen the region-wide mariculture industry through zoning and support to entrepreneurs.

Background: Studies estimate that the mariculture industry could provide hundreds of jobs and $20-50 million of economic activity in Southeast Alaska. Mariculture could provide important jobs for small, struggling rural communities, but industry growth is dependent on federal program support to local entrepreneurs as well as acceptable areas for farm sites. To date, FSA has lent approximately $450,000 to oyster farmers in the region.

Action: Improve collaboration among state and federal agencies, and the public, to increase loans to the mariculture industry. Identify acceptable areas for mariculture development through public planning and agency coordination.

Lead agency: Farm Service Agency

Table 3. **Summary of financial investments in mariculture across Southeast Alaska that support Ocean Products Initiative 4. Investments are categorized into two year periods, and include past, projected and future investments needed to grow the industry.**

USDA Investments in Support of Mariculture in Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[5]	Recommended Funding to Increase Growth in FY12&FY13
Loans to oyster farmers	FSA	Mariculture Entrepreneurship	$450,000	*	*
Community facilities to support mariculture industry; Geoduck nursery and mariculture technical assistance Ketchikan, Kake, Southeast Alaska	RD Enterprise Grant, USEDA	Mariculture Entrepreneurship	$2,099,956	$500,000	*
Development of oyster-towers best practices manual	RD Enterprise Grant	Mariculture Entrepreneurship	$29,500	*	*
Dock renovations, seaport revitalization, Petersburg, Kake, Saxman	USEDA	Seaport Community Infrastructure	$4,628,800	$2,000,000	*
TOTAL			**$7,208,256**	**$2,500,000**	*

FSA = Farm Service Agency, RD = Rural Development, USEDA = Economic Development Administration

* Until FSA, RD, & DOC receive loan applications, it will be difficult to anticipate needed funds.

Restoration of streams on the Tongass National Forest boosts salmon populations.

[5] Investments planned with annual appropriations assuming budgets at similar levels.

ADDITIONAL OPPORTUNITIES

Traditionally, USEDA and RD have provided infrastructure support to the ocean products industry. Over $7 million in financing to build docks, vessels, and housing has been provided in the past two years. Applicants have indicated the need for about $2 million over the next two years. This amount could greatly increase as growth opportunities develop.

Table 4. **Summary of additional opportunities for investment in the ocean products industry in Southeast Alaska. Investments are categorized into two year periods, and include past, projected and future investments needed to grow the industry.**

USDA Investments in Support of Ocean Products Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[6]	Recommended Funding to Increase Growth in FY12&FY13
New fishing vessel construction, Petersburg	RD loan guarantee	Fishing Vessel Entrepreneurship	$1,100,000	*	*
Total			**$1,100,000**	*	*

RD = Rural Development

* Until FSA, RD, & USEDA receive grant or loan applications, it will be difficult to anticipate needed funds.

[6] Investments planned with annual appropriations assuming budgets at similar levels.

Visitor Products

The visitor industry is the largest private sector employer (5,689 jobs in 2009) in Southeast, accounting for 15% of all regional employment, and 10% of all regional wages. Tourism has been the fastest growing industry in Southeast Alaska for the last decade.

The Visitor Products Cluster Working Group identified five action initiatives to increase jobs and support healthy communities. The USDA/USEDA implementation team selected three of these initiatives to focus on in the next two years.

INITIATIVE 1—Develop multi-purpose, multi-community land and water trails and support facilities.

Background: Southeast Alaska is a world class recreation and tourism destination. Juneau and Sitka have greatly expanded their community trail systems through partnerships with Sitka Trail Works and Juneau Trail Mix. These trail networks have become very popular with the locals and tourists by allowing visitors to enjoy both the outdoors and the amenities available in local communities. This approach could be expanded through the region creating a new niche for Southeast visitors.

Action: Increase independent travelers to Southeast Alaska through improved public awareness about community trail systems; expanded infrastructure development, particularly trail and cabin infrastructure improvements to provide a broad range of accessible visitor experiences; and increased collaboration with SEAtrails, a regional non-profit focused on supporting community trails. The Tongass National Forest has requested a significant increase in funding for multi-community trail projects and young growth cabin developments.

Lead Agency: Forest Service

New concrete stairs connect two trails and improve access at the Mendenhall Glacier Visitor Center in Juneau.

Table 5. **Summary of financial investments in infrastructure across Southeast Alaska that support Visitor Products Initiative 1. Investments are categorized into two-year periods, and include past, projected and future investments needed to grow the industry.**

Infrastructure Investments in Support of Visitor Products in Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[7]	Recommended Funding to Increase Growth in FY12&FY13
Multi-community trails Projects	USFS, Sitka Trail Works, Juneau Trail Mix, State, Multiple Community Partners	Increase independent travelers & improve community trails	$9,126,200	$514,600	$4,500,000
Construct young growth cabins and shelters associated with community trail systems	USFS, Sitka Trail Works, Juneau Trail Mix, Prince of Wales, University of Alaska, Multiple Community Partners	Increase number of independent travelers by providing hut to hut trails connected to communities	$350,000	$150,000	$600,000
Young growth cabin groups in community campgrounds	USFS, Sitka Trail Works, Juneau Trail Mix, Ketchikan, Multiple Community Partners	Increase number of independent travelers; road accessible mini-cabins in existing campgrounds	0	0	$450,000
Research to enhance development of multi-community trails and infrastructure to promote independent traveler industry	USFS Research, Partners	Analyze characteristics and features of successful multi-community linked recreation systems	0	0	$125,000
Cabins: survey design, construct, replace, maintain at Admiralty National Monument, Hoonah, Ketchikan, Sitka, Wrangell, Juneau	USFS, Friends of Tongass Cabins	Deferred Maintenance and Reconstruction	$2,017,100	$786,800	*See young growth cabins under #1
Total			**$11,493,300**	**$1,452,400**	**$5,675,000**

USFS = Forest Service

INITIATIVE 2—Increase guided access to public land.

Background: The demand for guided recreation tours exceeds available permits on the Tongass National Forest. Increasing guided access to public land will promote economic opportunity and job growth, while maintaining a quality outdoors experience for visitors.

Action: Improve coordination and communication between the outfitter and guide industry and the USFS to increase access. The USFS will hold both pre- and post-season meetings to identify opportunities for additional use, potentially by adjusting schedules among operators; use post-season meetings to evaluate season and consider adjustments; and evaluate ways to improve decision-maker flexibility in allocations through NEPA documents. The Tongass National Forest has requested $150,000 to improve decision-making flexibility in commercial permitting.

[7] Investments planned with annual appropriations assuming budgets at similar levels.

Lead Agency: Forest Service

***Table 6*. Summary of financial investments to increase guided access to public lands through improved permitting, supporting Visitor Products Initiative 2. Investments are categorized into two-year periods, and include past, projected and future investments needed to grow the industry.**

Investments to Increase Guided Access on the Tongass National Forest	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[8]	Recommended Funding to Increase Growth in FY12&FY13
Evaluate ways to improve decision-maker flexibility in allocating commercial use in NEPA decisions documents	USFS, Research, Partners	Increase guided public access to the Tongass	0	0	$150,000

USFS = Forest Service

A new elevated walkway at Mendenhall Glacier will improve visitor services for the 400,000 visitors per year.

[8] Investments planned with annual appropriations assuming budgets at similar levels.

INITIATIVE 3—Strengthen accountability for Tongass access fees.

Background: The Tongass National Forest collects over $2 million per year in recreation user fees, which are used to operate and maintain the facilities where the fees were collected. They are also used to administer commercial outfitter and guide permits and to operate and maintain facilities used by these groups. The fees are currently allocated to projects annually by a fee board of Tongass employees. Public understanding of how these fees are spent and accounted for is limited.

Action: To strengthen accountability for how access fees are used, the Tongass National Forest will involve representatives of the outfitter and guide industry, cabin users, and others in the fee allocations process as well as develop better ways to inform the public about how fees are used.

Lead Agency: Forest Service

ADDITIONAL OPPORTUNITIES

In addition to the above priorities, USDA and other agencies have several existing grant and loan programs that can support visitor products industries. For example:

- The Farm Service Agency has a new Voluntary Public Access and Habitat Incentive Program (VPA-HIP)[9], the primary objective of which is to encourage owners and operators of privately-held farm, ranch, and forest land to voluntarily make that land available for access by the public for wildlife-dependent recreation, including hunting or fishing, under programs implemented by state or tribal governments. VPA-HIP is a competitive grants program authorized under Section 1240R of the Food Security Act of 1985, as amended, and is only available for states and tribal governments. Up to $50 million is available through fiscal year 2012. FSA will work with tribal government and the states to encourage participation in this program.

Improving and investing in infrastructure essential to the visitor products industry will help maintain and potentially grow this economic sector. The Forest Service has identified over $2 million in additional funding initiatives in FY12-13 in infrastructure and community initiatives. For example:

- The Tongass National Forest may be able to increase its visitor use, but the funding for the necessary research to manage this growth while sustaining and protecting ecosystems, riparian areas, and wildlife habitat is inadequate. Additional funding could allow increased capacity and, therefore, industry growth.

- The Mendenhall Glacier Visitor Center in Juneau, the Discovery Visitor Center in Ketchikan and the many bear viewing wildlife areas on the Tongass are a major part of many visitors' itineraries when they visit Southeast Alaska. The Forest Service will invest in deferred maintenance and safety upgrades at these facilities, which will improve the quality of experience for visitors.

[9] http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf_20100708_consv_en_vpa_hip.html

***Table 7*. Summary of additional financial investments in infrastructure, maintenance, and research to support the visitor products industry across Southeast Alaska. Investments are categorized into two-year periods, and include past, projected and future investments needed to grow the industry.**

Other Investments in Support of Visitor Products in Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[10]	Recommended Funding to Increase Growth in FY12&FY13
Sustainable Recreation & Tourism Community Initiatives	USFS, City, State, Tribal, Tourism Partners	Community collaborative partnerships to support development of recreation and tourism programs and facilities	$147,900	$200,000	$225,000
Research to evaluate effectiveness of the community collaborative partnerships	USFS Research, Collaborative groups in Sitka, Wrangell, Yakutat, Juneau, Hoonah	Improve community collaborative recreation and tourism partnerships	0	0	$150,000
Visitor Center repairs and upgrades at Mendenhall Glacier Visitor Center in Juneau and Southeast Alaska Discovery Center in Ketchikan	USFS	Deferred maintenance	$2,958,400	$175,000	$800,000
Wildlife Viewing Area Maintenance - Pack Cr, Anan, Dog Salmon, Fish Cr and Margaret Cr Bear Viewing Areas	USFS, Alaska Dept. Fish & Game	Deferred maintenance and public safety improvements	$193,000	$85,000	$1,370,000
TOTAL			**$3,299,300**	**$460,000**	**$2,545,000**

USFS = Forest Service

Anan Creek Bear Viewing Platform.

[10] Investments planned with annual appropriations assuming budgets at similar levels.

While the visitor and ocean products industries are primary economic drivers in Southeast Alaska, the forest products industry remains economically and culturally significant. The Forest Products Cluster Working Group identified nine action initiatives to improve the economic viability of rural communities through investments in the forest products industry. The USDA implementation team selected five of these for initial focus.

INITIATIVE 1—Use young growth wood for cabin and recreational structures.

Starrigavan Creek Cabin made from young growth timber thinned to improve salmon habitat near Sitka. The cabin is heavily used by visitors.

Background: As part of the Transition Framework, the Tongass National Forest has committed to transitioning into young growth timber harvest as quickly as possible. Creating local markets and incentives for young growth timber will be necessary to facilitate this transition. Currently, the Forest Service, Rural Development, the City of Sitka and partners are working on a model example of utilizing local wood in the Sitka 3 to 5 School.

Action: Promote and facilitate the use of young growth timber in Southeast Alaska by demonstrating the product's value through investments in recreation projects; grading the lumber (allowing homes built with young growth to qualify for bank financing); and providing research information to support the utility of young growth wood. To achieve this goal, the Tongass National Forest committed to:

- Working with the industry and District Rangers on Prince of Wales Island to identify a young-growth cabin demonstration project that utilizes processed material and to prioritize funding for the milling and construction.
- Performing a mill study on young growth milling.
- Requesting an additional $1 million dollars in funding to construct young growth cabins in high visibility campgrounds (see Visitor Services actions).
- Working with the State of Alaska to make certified lumber grading personnel available in Southeast Alaska, expanding potential markets for value-added products.
- Making the Ketchikan Wood Technology Center's young growth structural analysis data available to the Initiative's Team in partnership with USFS research (PNW).

Lead Agency: Forest Service

Table 8. **Summary of financial investments to promote the use of young growth forest products in Southeast Alaska, supporting Forest Products Initiative 1. Investments are categorized into two year periods, and include past, projected and future investments needed to grow the industry.**

Investments to Promote Young Growth Forest Products in Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[11]	Recommended Funding to Increase Growth in FY12&FY13
Construct pre-school from second growth wood - Sitka	RD, USFS, Private Donations, Community Partners	Demonstration of use of second growth in large commercial facility	Donated staff and community partnership group	$1,100,000	0
Complete analysis and publish mechanical properties of young-growth data set	USFS Research, Contractor	Testing was completed prior to closure of Ketchikan Wood Technology Center (contract with lead researcher to complete)	0	0	$50,000
Young growth cabin demonstration projects	USFS, University of Alaska, Alaska Cooperative Extension, Friends of Tongass Cabins	Demonstration of use of Young Growth Timber and implement training program with University	$320,000	$150,000	$150,000
Construct traditional Alaska Native smoke houses	Tribes, USFS	Provide Smoke Houses to Tribes and Stimulate Interest in Alaska Value Added Products	$15,000	$15,000	$75,000
TOTAL			**$335,000**	**$1,265,000**	**$275,000**

USFS = Forest Service, RD = Rural Development

INITIATIVE 2—Simplify small timber sale process to allow small mills on Prince of Wales Island to operate more efficiently, economically, and with more consistent timber supply.

Background: Prince of Wales Island is home to over a dozen small timber mills, many of which are struggling to operate as efficiently and economically as possible. Challenges include a complicated and often cumbersome process to bid on small sales, and a perceived lack of a fair and level playing field between export and domestic processing bidders on timber sales.

Action: Provide small mill operators a more efficient, economical and stable wood supply. The working group identified seven specific steps (i.e., simplifying the small sale process to make it less cumbersome and creating a sort yard) that will help achieve this goal. If challenges with the small sale program are improved on Prince of Wales, the results could be utilized across the Tongass National Forest, similar to the Micro Sales Program expansion beyond Prince of Wales. The Tongass National Forest committed to meeting with small mill owners to further refine their needs, and to coordinate with the Alaska Regional Office to improve the program.

Lead Agency: Forest Service

[11] Investments planned with annual appropriations assuming budgets at similar levels.

INITIATIVE 3—Improve Tongass timber planning processes to provide more consistent supply

Background: The working group identified several key challenges with the Tongass timber sale program, including delivery of timber sales, special use permit processes, and the agency's ability to accept partner funds. The group recommended 10 ten steps to improve timber supply to local mills (i.e., tracking spreadsheets and accountability for product delivery), all of which are internal to the Forest Service.

Action: Provide a more predictable and consistent supply of timber (old or young growth) so the forest products industry can make appropriate investments to maintain and create jobs. The Tongass timber staff has committed to each action item to address product delivery. The staff will establish a tracking mechanism for review by the Forest Leadership Team so that product delivery issues can be identified and corrective action taken.

Lead Agency: Forest Service

INITIATIVE 4—Where feasible, substitute woody biomass for diesel to meet energy needs of Southeast Alaska.

Background: Many rural communities in Southeast Alaska are faced with increasingly expensive energy. Reducing energy costs by substituting woody biomass for diesel could both help rural communities and improve ecosystem health, particularly if the source of the wood energy is the byproduct of restoration treatments. Sealaska Corporation in Juneau recently converted to wood energy and has demonstrated significant cost savings. The Forest Service is also exploring conversion of public buildings, proposing over $20 million in investment. Challenges include ensuring a wood supply, demand, technical assistance to entrepreneurs, and financing.

Action: To catalyze the use of woody biomass in Southeast Alaska, the Forest Service and Rural Development are partnering on the following:

- Rural Development will work closely with the Goose Creek Biofuels Cooperative on Prince of Wales Island to assist in applying for and securing financing through grants and loans. The Cooperative has written a business plan for developing a local pellet production facility.

- The Thorne Bay Ranger District will work on a potential stewardship agreement to make waste wood from old landing sites available to an entrepreneur.

- The Tongass National Forest will approach Southeast Conference about sponsoring the development of a biomass energy plan for Southeast Alaska, as well as work with USDA counterparts to leverage federal funding for implementation of such a plan.

- State and Private Forestry will provide technical assistance to local entrepreneurs as needed.

Table 9. **Summary of financial investments that support Forest Products Initiative 4, catalyzing the use of woody biomass in Southeast Alaska. Investments are categorized into two year periods, and include past, projected and future investments needed to grow the industry.**

USDA Investments in Support of Woody Biomass Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[12]	Recommended Funding to Increase Growth in FY12&FY13
Biomass development planning and coordination	USFS	Fund position and jump start Forest Product Lab Wood Energy Grants Program and consultant funding to provide technical assistance	$605,000	$326,000	0
JEDC wood products development service and Alaska Wood Energy Development Task Group	RD, JEDC, USFS (S&PF, TNF, Research)	Grants, cooperative agreements, joint venture agreements, contracts for services	$280,000	$276,000	0
Construct pellet production plant on Prince of Wales Island	RD, State AEA, USFS	Utilize wood waste and reduce reliance on oil. Grants, loans; 10-year biomass contract; private investment(s)	0	0	$6,500,000 [13]
Complete a wood energy					
Total			**$885,000**	**$602,000**	**$6,500,000**

USFS = Forest Service, RD = Rural Development, S&PF = State and Private Forestry, JEDC = Juneau Economic Development Council, AEA = Alaska Energy Authority, FSA = Farm Service Agency

INITIATIVE 5—Conduct a timber base analysis to determine the volume of young growth for sustaining and strengthening the forest industry in Southeast Alaska.

Background: The ability to shift the Tongass timber sale program to a program predominately focused on young growth requires a detailed and accurate understanding of the volume of young growth throughout the region. This young growth analysis would broaden existing research being conducted by the Tongass National Forest to include all young growth stands in Southeast Alaska to support the total industry, regardless of ownership.

Action: Develop an accurate analysis of young growth availability, which will provide the local forest products industry a more predictable program of work to make investments. The analysis will include harvest scheduling and growth and yield modeling to determine levels of wood products available from a variety of management approaches.

Lead Agency: Forest Service

[12] Investments planned with annual appropriations assuming budgets at similar levels.
[13] See Appendix B for details of Pellet Production Plant.

Table 10. **Summary of financial investments in young growth research, supporting Forest Products Initiative 5. Investments are categorized into two year periods, and include past, projected and future investments needed to expand the research.**

USDA Investments in Support of Young Growth Research in Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[14]	Recommended Funding to Increase Growth in FY12&FY13
All lands young-growth scenario analysis for in Southeast Alaska	USFS Research, Partners	Provides needed data on young growth industry potential in SE	$25,000	$50,000	$250,000

ADDITIONAL OPPORTUNITIES

Continued investment in old growth timber supply at the current levels is needed during this transition period. Increased funding to support second growth timber harvest is needed.

Pellets made in Alaska from native species.

[14] Investments planned with annual appropriations assuming budgets at similar levels.

Table 11. **Summary of additional financial investments in the forest products industry. Investments are categorized into two year periods, and include past, projected and future investments needed to maintain the industry and increase young growth supply.**

USDA Investments in Support of Forest Products Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[15]	Recommended Funding to Increase Growth in FY12&FY13
Timber supply to maintain existing industry: Wrangell Island EIS; Big Thorne EIS (Luck Lake/Eagle); Tonka EIS; Saddle Lakes EIS; Zarembo EIS; Thomas Bay EIS; Naukati EIS	USFS	Maintains current industry of 200 jobs, existing mills, etc. Additional funds needed to identify outyear supply	$19,900,000	$20,750,000	$5,000,000
Young growth timber supply: Kosciusko EA; Heceta EA; Tuxekan EA; Dargon Point CE; Winter Harbor 2 EA; Shrimp Bay EIS; Thomas Bay EIS; Vank Island EA	USFS	Integrated thinning projects to improve wildlife habitat	0	$500,000	$3,500,000
Stewardship pilot projects: Central Kupreanof; Big Thorne EIS (Ratz); Peril Strait	USFS	Integrated projects to accomplish multiple resource objectives. Additional funding needed to implement service contracts	$2,500,000	$1,800,000	$2,000,000
Alaska young growth marketing research	USFS Research	Determine consumer reaction to value-added Alaska young growth wood	0	0	$150,000
Alaska young growth volume tables for biomass, traditional, & specialty products	USFS Research	Support to industry to better estimate young growth product potential	0	0	$50,000
Product grade recovery studies	USFS Research	Gain understanding of value added products recoverable from young-growth material of various ages and sizes	0	0	$450,000
Young growth harvest schedule plan; YG out into the future using the FPS Model combined with the latest YG inventory data for each district would provide the information needed to schedule out YG projects	USFS, Research	Provides ranger districts specific information about young growth stands that may be scheduled for harvest using FPS model	0	0	$100,000
Total			**$22,400,000**	**$23,050,000**	**$11,250,000**

[15] Investments planned with annual appropriations assuming budgets at similar levels.

Renewable Energy

High energy costs are a large deterrent to economic growth in the communities of Southeast Alaska. The Renewable Energy Cluster Working Group identified one action initiative that is likely to receive funding in the next two years.

INITIATIVE 1—Biomass Energy Demand Development

Background: FSA administers the **Biomass Crop Assistance Program**[16] (BCAP), which provides financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish, produce, and deliver biomass feedstocks. Matching payments may be available for the delivery of eligible material to qualified biomass conversion facilities by eligible material owners. Qualified biomass conversion facilities produce heat, power, bio-based products, or advanced biofuels from biomass feedstocks.

Action: Encouraging utilization of the BCAP program to help kick start the biomass industry in Southeast by investing additional funds that could support development of a pellet manufacturing facility.

Lead Agency: Rural Development

Wood chip boiler.

[16] http://www.fsa.usda.gov/FSA/webapp?area=home&subject=ener&topic=bcap&utm_source=spotlight&utm_medium=click&utm_content=rotation2&utm_campaign=bcapeducation

Table 12. **Summary of financial investments in renewable energy. Investments are categorized into two-year periods, and include past, projected and future investments needed to grow the industry.**

USDA Investments in Support of Renewable Energy Southeast Alaska	Participants	Type of Investment	Investments Made FY10&FY11	Investments Planned FY12&FY13[17]	Recommended Funding to Increase Growth in FY12&FY13
Authorization for Swan-Tyee Intertie and investigative permits for 5 hydro projects; Pre-licensing documents and filed detailed comments on 6 FERC hydro projects; ongoing review of 13 FERC projects; ongoing work with Tenakee Springs and Little Port Walter hydro projects (non-FERC); NEPA and special use authorization for Whitman lake; finalize post-licensing plans; finalize post-licensing documents and plans for Blue Lake hydro; Monitoring and inspection of Whitman and Blue Lake hydro construction	USFS	Renewable Hydropower	$184,000	$183,000	$260,000
Ongoing review, permitting for Neka, Bell Island geothermal projects and Tenakee Inlet study.	USFS	Geothermal	0	$25,000	$25,000
Established and filled Energy Coordinator position.	USFS	Renewable Energy	$310,000	$320,000	0
Partnering/assisting diesel-dependent community with a small hydro project that is exempt from FERC licensing—perhaps Elfin Cove (permits, NEPA, FERC exemption). Also partnering/assisting diesel-dependent community to identify a feasible energy project.	USFS,RD	USFS lead on NEPA; USDA assists commun-ities with grants/ loan ($275,000 per community for planning)	0	0	$550,000
Convert 6 USFS Administrative Offices from Oil to Biomass	USFS	Creates demand for wood waste, reduces heating cost	$1,100,000	0	$2,450,000
Biomass Heating Conversion from Oil through Grants and Loans	RD, FSA, USFS	Create demand for 10,000 tons per year of pellets and replace 1,000,000 gallons per year of fuel oil	$650,000	$200,000	$20,000,000
Assessment of Tongass Plan to evaluate energy development barriers, including potential modifications to Forest Plan; complete after SE IRP report	USFS	Energy Planning	0	0	$70,000
Total			**$2,244,000**	**$728,000**	**$23,355,000**

USFS = Forest Service, RD = Rural Development, FSA = Farm Service Agency

[17] Investments planned with annual appropriations assuming budgets at similar levels.

How do we measure success?

Given the prevalence of public land in Southeast Alaska, improving rural community health in the region requires the deliberate linking of natural resource management agencies (i.e., USFS, State of Alaska), government service providers (RD, FSA, and others), communities, and local economic development networks. The asset mapping project has helped to create this link, and involved the public and business leaders in identifying opportunities that further the social and economic well-being of communities in Southeast Alaska. The economic cluster working groups identified numerous action initiatives that have the potential to increase prosperity, create jobs, and expand the visitor, ocean, and forest products industries. Suggestions included upgrades in infrastructure, improvements in fish and wildlife habitat, and construction of new facilities to produce and use renewable energy and biofuels. These projects and investments all have the potential to preserve the way and quality of life in rural Alaska while protecting the environment, creating higher skill and higher wage jobs, and raising income levels.

In spite of the benefits of the cluster groups and collaboration to date, the impacts of this investment strategy with respect to regional prosperity will take time to realize, and will likely be difficult to attribute to any one cause. Additionally, measures of success will be different depending on whether they are tied to a specific action initiative, or to the overall effort to improve ecological and community health in the region. Measures of success are also likely to vary by local community interests and needs. That being said, potential measures of success could include:

- Community groups develop plans of facilitating job creation and retention, and business expansion and development.
- Community groups secure additional resources/investments through Rural Development, NRCS, FSA and other public and private entities.
- Increased partnership across business sectors, government and communities.
- Increased capacity of rural entrepreneurs to access financial capital and technical assistance.
- Economic cluster groups are meeting on a regular basis. Cluster working groups have refined action plans and are moving forward with support of one or more projects.
- Community initiatives are linked and build on each other, lessons transferred, within and across communities.
- Creation of new jobs–full-time, part-time, seasonal.
- Increases in Southeast Alaska wages, income, population, and businesses.

Continued work with the cluster working groups will help to identify more opportunities, and develop collective visions for success. Additionally, the implementation team has created a work group that will identify more specific metrics of success, which will be used to monitor progress.

What are important next steps?

This Strategy reflects a new direction among USDA agencies in Southeast Alaska. This is the first time that these agencies have taken the results of a cluster work group process and begun to align USDA programs and priorities in support of the business community. It is, after all, the private sector and its entrepreneurial spirit that will create jobs and a vibrant economy in Southeast Alaska.

This document is the first attempt to identify resources to support the initiatives of the cluster groups. The cluster groups continue to meet and create new ideas and approaches to implement these initiatives. Likewise, USDA programs and funding will change. Thus, it is important to view this document as a snapshot of this moment in time and to expect to revisit and revise on a regular basis.
Collaboration among federal, state, and local governments, tribes, non-governmental organizations, and key businesses are essential to success. This is particularly true in Southeast Alaska where most of the land and resources are managed by the federal government. For example, mariculture development may require permits from the state for activities below mean high tide and permits from the Forest Service for activities above mean high tide. Obtaining such permits can be an onerous process, particularly if agencies are not working together.

Perhaps one of the most important next steps is recognition of the need to "connect the dots," linking communities, businesses, resource management agencies, and service providers to facilitate community sustainability, job creation, and rural wealth creation. Perhaps through this effort unexpected connections will emerge that will result in new possibilities and opportunities. In light of the current overall global economic conditions, this may be our best path to a brighter future in Southeast Alaska.

Important next steps include:

- Strengthening the relationships between agencies and organizations that control access to resources.
- Continuing interagency funding in support of business cluster work groups.
- Supporting entrepreneurs and communities to build capacity to implement initiatives through grants.
- Investigating ways to elevate and sustain agency support of cluster initiatives.
- Conducting an annual review of accomplishments, successes, and failures.
- Updating the USDA investment strategy on an annual basis.
- Telling the story, particularly as successes emerge.

Appendix A: Tongass Transition – RD Projects Funded in Southeast Alaska 2009-2011

Compiled November 18, 2011

Community	Project/Item Description	Recipient	Office/Lender	Amount	FY
COMMUNITY FACILITIES					
Ketchikan	Building for Tribal Offices	Ketchikan Indian Community	Palmer	200,000	2009
Metlakatla	EZEC 2009	Metlakatla Indian Community	Palmer	124,963	2009
Yakutat	Community Center	Yakutat-Tlingit Tribe	Palmer	250,000	2010
				$574,963	
EDUCATIONAL FACILITIES					
Ketchikan	Technical Education Center	Ketchikan Indian Community	Palmer	2,750,000	2009
Petersburg	Library	City of Petersburg	Palmer	200,000	2010
Sitka	Purchase Childcare Center	Sheldon Jackson Child Care Cent	Palmer	500,000	2010
Sitka	Playground Equipment	Sheldon Jackson Child Care	SE	17,287	2011
Wrangell	Library Automation Equipment	City of Wrangell	Palmer	67,000	2010
				$3,534,287	
ELECTRIC AND TELECOM UTILITY					
Hoonah	Fuel-efficient deisel generator	Inside Passage Electric Coop	National	735,000	2009
various	SCADA System	Inside Passage Electric Coop	National	178,190	2009
Yakutat	Power System Upgrade	Alaska Energy Authority	Nat/DenaliComm	3,150,000	2010
Yakutat	Yakutat power plant replace, new dist	Yakutat Power Inc & AEA	National	1,400,000	2010
various	technical assistance	Central Council Tlingit & Haida	GFR National	153,112	2010
				$5,616,302	
GENERAL BUSINESS					
Angoon	Technical Assistance	Tlingit and Haidia	State Office	230,053	2009
Haines	Revolving Loan Fund	Chilkoot Indian Association	State Office	99,000	2009
Juneau	Debt Restruct-Multiuse Real Est		Alaska Pacific Bank	1,634,000	2009
Juneau	Business Aquist-Media		One Georgia Bank	1,111,111	2010
Juneau	Debt Restruct-Multiuse Real Est		Alaska Pacific Bank	1,161,500	2010
Juneau	Real Estate Purch-Coml Prop		Alaska Pacific Bank	570,000	2010
Ketchikan	Revolving Loan Fund	Ketchikan Gateway Borough	State Office	99,000	2010
Ketchikan	Technical Assistance	Ketchikan Gateway Borough	State Office	99,000	2010

Appendix A: Tongass Transition – RD Projects Funded in Southeast Alaska 2009-2011

Compiled November 18, 2011

Community	Project/Item Description	Recipient	Office/Lender	Amount	FY
various	Small Business Loan Forums	Juneau Economic Dev Council	State Office	39,600	2009
various	Small Business Consulting	Juneau Economic Dev Council	State Office	35,070	2009
				$5,078,334	
HEALTH CARE and SAFETY					
Ketchikan	Group Home for Disabled Adults	Opportunity Inc.	Palmer	401,095	2009
Sitka	Treatment Facility	Sitka Counseling and Prevention	Sitka	1,256,000	2010
Wrangell	Hospital Replacement	City of Wrangell Medical Center	Palmer	19,500,000	2010
Wrangell	Critical Access Hospital	City of Wrangell Medical Center	Palmer	5,200,000	2011
Wrangell	Hospital Room Equipment	City of Wrangell Medical Center	Palmer	500,000	2009
Wrangell	Hospital Replacement	City of Wrangell Medical Center	Palmer	100,000	2010
various	Code Blue	Southeast Region EMS Council	Palmer	306,749	2010
Ketchikan	Driveway Improvement	North Tongass Volunteer FD	Sitka	18,000	2010
Yakutat	EMS/ Fire Equipment Facility	City of Yakutat	Palmer	300,000	2009
				$27,581,844	
HOUSING					
various	Single Family Housing Loans (502)	Individual Homeowners		22,490,564	
various	Single Family Housing Repair Loan	Individual Homeowners	Sitka	23,451	2009
various	rental subsidies		Palmer	3,152,726	2009
various	Housing Preservation Grant	Metlakatla Indian Community	Palmer	153,606	2009
		464 housing units		**$25,820,347**	
OCEAN PRODUCTS					
Kake	Tech Assistance in Aquaculture	Alaska Shellfish Growers Assn	State Office	29,500	2010
Kake	Geoduck/Aquaculture	Rural Com. Assist. Corp.	State Office	99,956	2010
Ketchikan	New Fishing Vessel-Coml Fishing		Alaska Pacific Bank	1,426,750	2009
Ketchikan	Technical Assistance	OceansAlaska, Inc.	State Office	99,000	2011
Petersburg	Debt Restructure- Coml Fishing	FV Redemption, LLC	Alaska Pacific Bank	1,100,000	2010
Petersburg	Generator Upgrade	AK Sustainable Wild Seafood	State Office	20,000	2010
Wrangell	Vessel		Alasska PacificBank	350,000	2011
				$3,125,206	

Appendix A: Tongass Transition – RD Projects Funded in Southeast Alaska 2009-2011

Compiled November 18, 2011

Community	Project/Item Description	Recipient	Office/Lender	Amount	FY
RENEWABLE ENERGY					
Hoonah	Feasibility Study Hydro Project	Alaska Power and Telephone	State Office	50,000	2009
Hoonah	reduce energy Angoon,Hoonah,Kake	Tlingit/Haida Regional Housing	National	1,000,000	2011
Juneau	Biomass Energy System	Alaska Brewing Company	State Office	448,366	2011
various	Woody Biomass Tech. Assistance	Juneau Economic Dev Council	State Office	99,837	2010
				$1,598,203	
VISITOR PRODUCTS					
Coffman Cove	Ferry	North End Ferry Authority	Palmer	2,996,200	2011
Juneau	Business Acquisition- Inn/B&B		Alaska Pacific Bank	1,350,000	2009
Ketchikan	Working Capital Tourism		Wells Fargo Bank, N.A.	300,000	2010
Sitka	Debt Restructure-Tourism		Borrego Springs Bank	1,840,000	2010
				$6,486,200	
WATER AND SEWER					
Hoonah	Water Transmission Lines	City of Hoonah	Palmer	1,408,000	2011
Hoonah	Water Transmission Lines	City of Hoonah	Palmer	981,000	2011
Kake	master plan	City of Kake	Anchorage	105,300	2010
Kasaan	WTP/WST	ANTHC	Anchorage	3,393,750	2011
Kasaan	design- WTP/WST/mains (2 obligations)	City of Kasaan	Anchorage	442,125	2009
Ketchikan	Tongass water improv.	Ketchikan Gateway Borough	Anchorage	1,071,750	2009
Saxman	Water	City of Saxman	Anchorage	2,298,562	2010
Saxman	WTP	ANTHC	Anchorage	303,938	2011
Saxman	design - wtp	City of Saxman	Anchorage	360,000	2009
Thorne Bay	planning - sewer infiltration	City of Thorne Bay	Anchorage	37,500	2009
various	Tech Assistance and Training	SEARHC	Anchorage	162,400	2011
				$10,564,325	
TOTAL FY09-11				**$89,980,011**	

Appendix B. Parameters of Sustainable Pellet Manufacturing Plant in Southeast Alaska

By Daniel Parrent, State & Private Forestry

For this discussion—the viability of as sustainable pellet manufacturing plant in Southeast Alaska, it is assumed that:

1. The desired outcome is the installation and operation of a sustainable (i.e., profitable) pellet manufacturing plant(s) in Southeast Alaska.

2. The average green wood moisture content, including sawmill residuals, will be approximately 50%, and that one ton of green feedstock will produce approximately 1,000 pounds of pellets. (NOTE: an additional quantity of wood (20 to 30 percent) will be required as fuel for a feedstock dryer.)

SCALE

What is a sustainable pellet manufacturing plant? Some contend that, at a minimum, a pellet plant would have to produce 25 to 30 thousand tons of pellets annually to be viable. Under certain circumstances, that may be true. However, circumstances in Southeast Alaska are not necessarily the same as those found in the Lower 48. Given Alaska's higher manufacturing, utility, labor and transportation costs, it is unlikely that an Alaska pellet manufacturer would be able to compete with Continental U.S. and Canadian producers in North American, European or Asian markets. The home for Alaska-made pellets is Alaska.

A viable pellet manufacturing operation in Southeast Alaska would have to produce a minimum of 10,000 tons per year (using sawmill residuals as a primary source of furnish) to break-even or be minimally profitable. Operating one-shift 50 weeks per year would mean producing 5 tons per hour.

In terms of fuel oil displacement, 10,000 tons of pellets would be roughly equivalent to about 1 million gallons of fuel oil. The current, non-residential demand for pellets is about 300 tons per year (Sealaska Corp., Juneau office building).

DEVELOPING DEMAND

A number of preliminary facility assessments have already been conducted. In addition, some gross estimates of non-residential fuel consumption have been compiled. A preliminary estimate, which is NOT very inclusive, exceeds 3 million gallons, half of which is the Coast Guard Station in Kodiak. However, total heating oil consumption in Juneau alone (all users: residential, institutional, industrial, etc) is roughly 11 million gallons annually. More information is presented in the table below.

If all the businesses listed in the table were to convert to pellet fuel, regional demand for pellets would rise to over 33 thousand tons per year. This would be enough to support a small pellet facility. Alternatively, if one quarter of residential consumers of heating oil in Juneau were to convert to pellet fuel, the supply from a small pellet plant would meet demand.

Potential for biomass heating systems at large energy-using facilities in Southeast Alaska

Facility ID	Community	Fuel oil consumption (gal/yr)
Hames PE Center	Sitka	51,000
US Coast Guard (Air Station Sitka)	Sitka	140,000
SEARHC (hospital only)	Sitka	131,100
SEARHC (non-hospital)	Sitka	33,300
Sitka High School	Sitka	65,700
Blatchley Middle School	Sitka	40,150
Keet Gooshi Heen Elem. School	Sitka	27,000
Baranof Elementary School	Sitka	27,600
Pacific High School	Sitka	4,300
Sitka Airport	Sitka	20,400
Sitka Animal Shelter	Sitka	3,300
Centennial Hall	Sitka	8,700
Sitka Fire Hall	Sitka	9,200
Sitka Public Library	Sitka	4,000
Sitka Public Services Center	Sitka	8,300
Sitka Community Hospital	Sitka	68,000
Waste Water Treatment Plant	Sitka	13,000
Sawmill Cove Admin Bldg	Sitka	9,000
Mt Edgecombe High School	Sitka	142,300
University of Alaska SE, Sitka	Sitka	10,500
Haines Schools and city buildings	Haines	60,000
Klawock School	Klawock	14,000
Coffman Cove municipal building (if built)	Coffman Cove	6,200
USFS Discovery & Visitors Center	Ketchikan	20,000
Klukwan Heritage Center (if built)	Klukwan	3,000
Coffman Cove School	Coffman Cove	10,000
Kake Community Center	Kake	10,250
Kake School	Kake	20,000
Hoonah School/pool/gym	Hoonah	50,000
US Coast Guard (Ketchikan base)	Ketchikan	130,000
US Coast Guard (Kodiak)	Kodiak	1,500,000
Willoughby District heating (if built)	Juneau	660,000
	TOTAL	**3,300,300**

Appendix C. Additional Rural Development Investments

Access to affordable housing is directly related to economic development, particularly in rural communities. Affordable housing continues to be of high concern for many communities in the region. Rural Development's housing programs fit a certain income category of household income, for example "moderate," "low," and "very low" income coupled with household size. Rural Development can subsidize direct loans at interest rates as low as 1%, based on income/family size calculations. In Sitka, for example, entry level teachers, and other midlevel professionals qualify for the direct loan and loan guarantee program for Single Family Housing. By providing rental assistance to qualifying families, this program helps individuals and families remain in adequate housing.

Two-Year Estimate of Program Investment

Business Programs – 2 year projected investment		**$14,248,913**
Business and Industry Loan Guarantees	$13,648,164	
Grants to facilitate Business Development	$ 600,749	
Housing Programs – 2 year projected investment		**$12,307,820**
Single Family Guaranteed Loans	$ 6,848,834	
Single Family Direct Loans (Low)	$ 1,114,624	
Single Family Direct Loans (Very Low)	$ 2,615,204	
Home Improvement Loans	$ 18,088	
Home Improvement Grants	$ 7,650	
Multi-Family Housing Rental Assistance	$ 1,703,420	
Community Programs – 2 year projected investment		**$11,113,652**
Community Facilities Direct Loans	$ 7,140,000	
Community Facilities Guaranteed Loans	$ 68,000	
Community Facilities Grants	$ 1,088,052	
Water/Environmental Loans/Grants	$ 2,817,600	
Rural Utilities Service	?	
Total Projected Investment - next 2 Years		**$37,670,385**

Appendix D. Energy Projects that have Received Initial or Additional Funding in the Capital Budget

By Barbara A. Stanley, Energy Coordinator, Alaska Region, USDA Forest Service

Admiralty National Monument

- Thayer Lake Hydro: Kootznoowoo received $1,060,500 for permitting and final design from the Alaska Renewable Energy Fund.

Juneau Ranger District

- Snettisham Transmission Line Avalanche Mitigation: AEL&P received $2.0 million for design and construction from the Alaska Renewable Energy Fund.
- Connelly Lake Hydro: AP&T received $468,000 for reconn/feasibility from the Alaska Renewable Energy Fund. (not NFS lands)
- Schubee Lake Hydro: AP&T received $80,000 for reconn/feasibility from the Alaska Renewable Energy Fund.
- Excursion Inlet Hydro: Haines Borough received $93,593 for reconn/feasibility. Funded through Alaska Renewable Energy Fund.

Hoonah Ranger District

- Elfin Cove Hydro: Community of Elfin Cove Utility Commission received $347,000 for permitting/final design. No paperwork has been submitted to FERC; may qualify for FERC exemption. Funded through Alaska Renewable Energy Fund.
- Pelican Hydro Upgrade: City of Pelican received $1,896,836 for construction. Funded through Alaska Renewable Energy Fund. . (not NFS lands)
-
- Sitka Ranger District
- Indian River Hydro: City of Tenakee Springs Electric Department received $203,000 for permitting/final design. (Not NFS lands but will affect USFS fishpass.) Funded through Alaska Renewable Energy Fund.
- Reconnaissance Study of Tenakee Inlet Geothermal Resources: IPEC received $589,200 for reconn/feasibility.
- Blue Lake Hydro: City & Borough of Sitka received an appropriation of $28.5 million for construction.

Ketchikan-Misty Fiords Ranger District

- Metlakatla-Ketchikan Intertie: Metlakatla Indian Community received $1.18 million for permitting/design/construction. Not expected to impact NFS lands. Funded through Alaska Renewable Energy Fund.
- Whitman Lake Hydro: City of Ketchikan received an appropriation of $8.25 million for construction and also received $700,000 for construction from the Alaska Renewable Energy Fund.
-

Craig Ranger District

- Biomass Fuel Dryer: City of Craig received $350,000 for construction. Funded through Alaska Renewable Energy Fund.
- Reynolds Creek Hydro Transmission: Alaska Power Company received $2.0 million for construction. Not expected to impact NFS lands. Funded through Alaska Renewable Energy Fund.

Appendix E:
OceansAlaska Mariculture Research, Training & Development Facility

Mission
The OceansAlaska Mariculture Facility will facilitate the emergence of a mariculture industry by providing respected research, development, demonstration and training. Alaska can have a strong and sustainable shellfish mariculture industry that creates vibrant coastal communities.

Potential for Shellfish Mariculture in Alaska
Shellfish Mariculture in Southeast Alaska has the potential to provide direct and indirect jobs, providing a sustainable industry and taking advantage of Alaska's clean waters and miles of coastline. All other successful shellfish mariculture areas in the world have been led by research and development activities that provide the innovation and incentive to create investment and private sector jobs. Alaska shellfish mariculture has the potential to create a strong, healthy shellfish industry that will generate 200-300 new economically and environmentally sustainable year-round jobs and expand to a $50 million a year industry in 20 years by overcoming barriers to development.

For instance, Yakutat has plans to create 36 oyster farmers in the next few years- all of which need the training and expertise that OceansAlaska can provide. The dive fisheries in Southeast Alaska went from a nascent industry to an $8-9 million industry employing more than 200 divers in the past 10-12 years. Hundreds of cannery workers, fuel, transport, grocery and other interrelated industries have benefited, keeping jobs in Southeast Alaska through the winter time. Over 70% of the expenditures of small shellfish farms are spent within 20 – 30 miles of the farm site. There is untapped potential to expand these businesses and provide year-round jobs in struggling coastal communities.

Plagued by a decline in employment and followed by a declining population, all but one Southeast community has lost population in the last 10 years. The Alaska Native villages have been hit especially hard. Populations have declined as much as 50% in the last 15 years as residents move to larger towns in search of paying employment. Mariculture (of oysters, geoducks, mussels, seaweeds, etc.) is a realistically accessible solution to this economic decline. There is increasing worldwide demand for the products, especially from Asia, and all long-term projections for demand is strong- the U.S. market for shellfish alone estimated to increase from 11 to 14.3 billion pounds by 2020. More interest and participation is needed in Southeast Alaska to make this industry an important part of the regional economy.

All Southeast Alaska communities are located on the water, and most of the people in the smaller communities are already reliant on the ocean for much of their sustenance. They are boat users, fishermen, construction workers, and entrepreneurs who already possess many of the skills needed to grow shellfish or other marine products. This is perhaps particularly important in the many villages which are predominantly made up of Alaska Natives. Much effort will be required to inform our residents of the opportunities at their very doorstep, and to train them to use their skills and the local environment to their benefit. There are several ways that OceansAlaska will grow this industry- including providing a stable seed supply, identifying species suitable for local grow out, researching and teaching best-practice methods of grow out, and training new entrants in farm planning, permitting, biological processes, and entry programs. Ongoing outreach, training and mentorship are essential; most people in the region unaware of the opportunities or unsure how to begin a mariculture business. Only then will sustainable jobs be created- jobs that are dependent on Alaskan resources that few places in the world possess- clean and nutritious ocean water and an entrepreneurial mentality.

Organization
OceansAlaska is a 501c3 non-profit with nine (9) Board of Directors (See http://www.oceansalaska.org/oa2/pages/staff_board_contacts.html for details), all located in Ketchikan, Alaska. The Mariculture

Advisory Council is a 15-member body made up of shellfish growers and harvesters, researchers, educators, native corporations, and industry representatives throughout Alaska. David Mitchel, General Manager, Tom Henderson, Mariculture Director, and Susan Round, Accounts Manager, are staff for OceansAlaska.

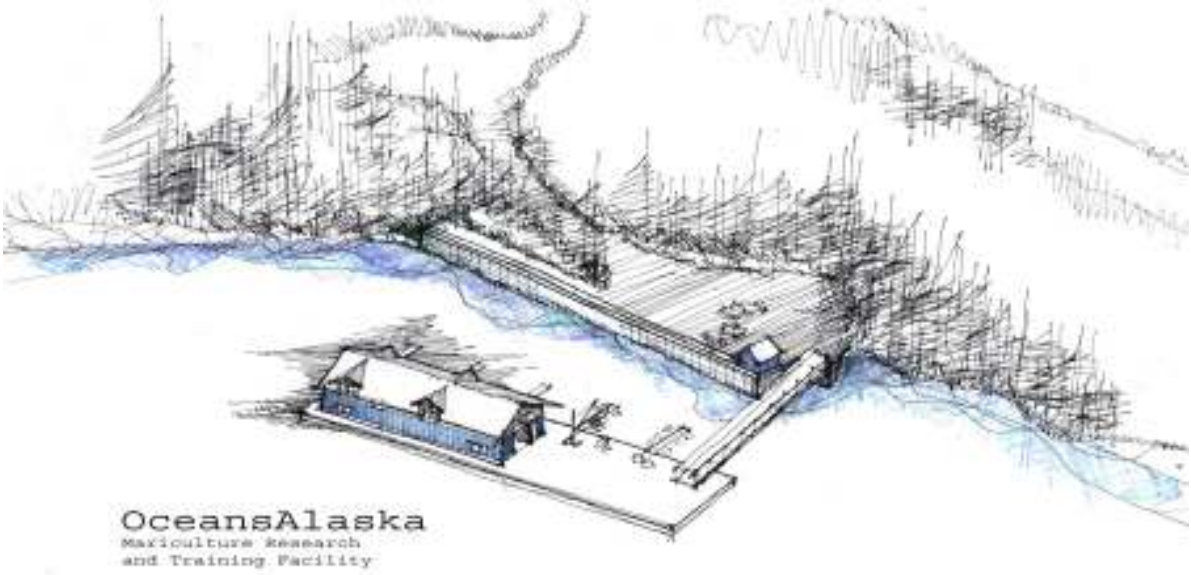
Facility Description

The State of Alaska provided OceansAlaska, through the Ketchikan Gateway Borough, with approximately 28 acres of uplands and tidelands and 24 acres of subtidal. The access road and site pad have been developed, utilities are completed, and permitting is complete. Two contractors, BAM and Western Dock & Bridge, were awarded contracts totaling more than $2.8 million to complete the site work, utilities, ramp, dock and building. Construction is to be completed by August, 2011.

The Mariculture Research, Training & Development Facility will be a 120' x 40' concrete float with a 70'x24' building on the float, accessible by an aluminum ramp. The building has metal siding and roofing, with the interior fiberglass reinforced panels and sealed fixtures, and surface mounted plumbing and wiring for flexibility of use. The space is equipped with power, salt water, potable water, and plumbing fixtures. The building will contain a setting facility, algae tanks, wet lab, processing area, sorting facilities, dry lab, hoist, office, mariculture library, training room, and grow-out space.

Access road and site pad- prior to completion, May 2010

Sketch of completed facility



Strategic Direction

There are critical industry needs that OceansAlaska can play a role in overcoming:

1) **Research and Development:** OceansAlaska will develop and disseminate scientific and technical information of value to the public, shellfish farmers and public officials.

2) **Education and Training:** Provide quality education, training and outreach to existing owners, entrepreneurs and employees involved, or wishing to be involved, in the industry.

3) **Demonstration:** Build operational facilities for growing, harvesting and processing shellfish.

4) **Technology Transfer/Best Practices:** Provide a platform to test various methods for growth and harvest of shellfish and other applicable mariculture species.

Initial Projects and Programs

OceansAlaska will begin operations with multiple initiatives aimed at directly expanding the output of geoduck and oysters.

- **Shellfish Setting Facility**: Inconsistent and poor seed supply has been a major barrier in the development of mariculture in Alaska, and this will alleviate those concerns by producing a consistent supply of oyster and geoduck seed from the larval stage to a size suitable for nurseries. Sealaska and other major buyers of seed have agreed to commit to buying from OceansAlaska to guarantee seed supply for their operations.

- **Geoduck Nursery:** Working in cooperation with industry, a geoduck nursery grow-out facility will produce the geoducks the needed size for planting on farm sites. Seward's Aluutiq Hatchery will transfer the seed from the larval stage to the setting facility and then to the nursery to enable the clams to reach a plantable size in a cost-effective system.

- **Mariculture Research:** The OceansAlaska Mariculture Director will research the best systems and techniques of rearing for local conditions. Sea Cucumbers, scallops, mussels, seaweed, kelp, as well as oyster and geoduck research will be initiated at OceansAlaska.

- **Oyster Nursery & Entry Program:** Following the successful model of getting beginning oyster farmers into the business, an oyster FLUPSY and Farmer Access Program will allow trainees to grow their spat while going through training, financing and permitting process.

- **Outreach &Training:** Interest must be generated within the Southeast communities to increase participation in mariculture. The OceansAlaska Mariculture Director will provide ongoing assistance to new entrants throughout Alaska. Classroom training in basic marine biology, business operation, onsite mariculture training with supervision and mentoring. Working in conjunction with the University of Alaska system and the shellfish industry, OceansAlaska will provide hands-on training and demonstration of oyster farming, as well as classroom education to provide comprehensive biological understanding of oyster farming.

- **Operational Training:** OceansAlaska will provide resources and assistance in business planning, site selection, raft construction, and assistance in permitting and other barriers to entry for beginning farmers. USDA FSA loans, possible State of Alaska mariculture loans, and other business loan application assistance will be provided.

- **Resource Hub:** OceansAlaska will collect and disseminate information from other mariculture organizations, research institutes, universities, and industry. For example, the Alaska Sea Grant Marine Advisory Program's Aquaculture Specialist and Canada's Center for Shellfish Research have vast research and project information available for dissemination to interested farmers. Potential entrants will be able to learn everything they need to know at OceansAlaska, as well as have on-line access.

These projects and programs will begin in the first year of operation at the OceansAlaska facility. The Mariculture Advisory Council will use a priority-setting process to determine further research, development and training projects that OceansAlaska will conduct. **Industry involvement** in all aspects of project development is critical to the success of OceansAlaska, and ensuring funding of projects will directly affect commercial mariculture and benefit coastal Alaska.

OceansAlaska recently hired Tom Henderson as the Mariculture Director for the facility. Tom brings a wealth of experience as an oyster farmer in Southeast Alaska, salmon hatchery manager, trainer for oyster farming apprentices, and participant in Mariculture research and development experiments. Tom has over 15 years of experience with shellfish mariculture and a lifetime of aquaculture and farming experience, and can provide direct assistance and in-depth understanding of farming operations to existing, new or prospective farmers. Assistance in designing and building grow-out rafts, FLUPSYs, and other equipment necessary for operations can be provided through training. OceansAlaska can also provide business insight and best practices for species care, transportation and processing issues, lease site selection, regulatory hurdles, and business practices. This training will be instrumental in allowing people to expand or begin new successful businesses. All OceansAlaska operations will be managed by Tom, and he has already begun training and outreach as a pilot project in Yakutat and Angoon in collaboration with Sealaska.

Funding

The facility is necessary to begin nursery, research, training and development initiatives. State of Alaska funding and land, Economic Development Administration funds, Housing and Urban Development funds and local grants have all contributed to the project. A recent State of Alaska grant will help fund the essential beginning equipment needs, but operational costs remain a priority, as does a heat exchanger that would save on long-term utility costs. Public investment in OceansAlaska and the mariculture industry is essential to its success, and a critically important approach to promote economic development in coastal Alaska.

Equipment
Electrical costs are projected to increase in Ketchikan and the facility expected to use a substantial amount of energy heating water for the setting facility and nursery operations. A Marine Heat Exchanger is being researched and scoped by engineers to see its viability in dramatically reducing the heating costs. It is projected to cost $75,000 and will save OceansAlaska in long-term utility costs. OceansAlaska sits on the ocean, fittingly, and is an ideal location and use for this technology.

Annual Operations Budget
These projected costs include a fully operation oyster entry program, and up to 25 trainees requiring travel, supplies, and use of the facility.

Wages	**Total**
Mariculture Director	$57,600
General Manager	$66,000
Bookkeeper/ Accts	$7,500
Internship	$7,500
Compensation/Benefits	$20,976
Subtotal Wages	$159,576
Other Expenses	
Outreach &Dissemination	$4,800
Research Supplies	$10,800
Utilities	$29,000
Maintenence & Repair	$18,000
Travel & Conf.	$48,000
Dues & Subscriptions	$1,080
Office Equip. &Supplies	$1,800
Permits, Licenses	$10,011
Insurance, Legal	$33,600
Misc.	$15,709
Subtotal other expenses	$172,800
Total Expenses	$332,376

The Ketchikan Gateway Borough has expressed interest in promoting and supporting economic development through OceansAlaska. Geoduck growers, Southeast Alaska Regional Dive Fisheries (SARDFA), and other industry groups have expressed interest in paying for projects to be conducted at the facility. Sealaska, trainees and other users will pay a fee for services provided and help operational costs in first years, with the long-term goal for the operations to be sustained by private investment in the facility. Other public sources of funding will be pursued until private industry can sustain operational costs and for programs and research projects, estimated to be at 100% in 5-7 years.

Government Support

We have a great opportunity to create a strong, viable locally based industry in coastal communities in Alaska through the development of a shellfish industry. It will be driven by individual's investing capital and time on the farm. What is the public policy that will attract individuals to make this investment?

Investment in research, training, and development that can foster entrepreneurial activity is a critical role the government can provide. It can also overcome one major barrier to entry in a new industry but creating loan programs and making money available to those individuals willing to take a risk in a new industry.

One prevailing factor is the common property ownership of the land, water and animals by the State of Alaska or the Federal government. In Alaska the private sector cannot begin to invest or create viable shellfish industry without permission of the government. This level of common property ownership and control of the water and land creates a different type of hurdle and business risk. There are many activities and policies that can be adopted by the government that reduce the risk or improve the chances for a private individual farm to succeed. Expediting the permitting process, making small parcels of land available for mariculture farmers in remote locations, fully funding the permitting agencies, and providing programs and processes that make it easier for new entrants to navigate the government are examples of policies that can lead to increased economic growth in Alaska.

How to move into a new economic base in Southeast Alaska and through- out rural Alaska is a major challenge with most of the land base owned by the Federal Government. Any activity has to pass through the Federal legal process that involves all of the stakeholders, including those who do not live in Alaska. It takes participation of the owners of the land and water. Without understanding and support from the Federal, State and third party interest it is nearly impossible for small businesses and enterprises to operate in Alaska.

Conclusion

There is little doubt that Alaska has more potential undeveloped sites for shellfish mariculture than the rest of the United States combined, providing the opportunity for siting hundreds of shellfish farms. Removal of constraints and proper public investment and assistance can cause a snowball effect of new farmers into the industry. The U.S. market for shellfish alone is estimated to increase from 11 to 14.3 billion pounds by 2020, as the overall worldwide demand for seafood grows steadily. The estimated shellfish industry in Alaska could grow to $50M with a sustained and coordinated research, training and development effort. With superior water quality, marketable product, and steady prices, mariculture can provide sustainable jobs into the future.

Industry has identified the facility's operations as a main constraint in advancing shellfish Mariculture as outlined in the OceansAlaska report Tipping the Balance, and the community of Ketchikan has put the project as a top overall priority (#6), and critical for economic development. OceansAlaska is focused on removing the constraints to mariculture development in Alaska. The Mariculture Research, Training and Development Facility signifies a critical step in providing mariculture jobs for coastal Alaskan communities.

Endorsements (*Provided upon Request)*

Memorandums of Understanding

- Ketchikan Gateway Borough
- University of Alaska Southeast
- Sealaska Corporation, Central Council of Tlinget & Haida Indian Tribes of Alaska, Shaan Seet, Inc., Organized Village of Kake, Yak-Tat Kwaan.
- Ketchikan Indian Community
- Shellfish Growers Co-op

Resolutions

- Southeast Conference
- Ketchikan Chamber of Commerce
- Ketchikan Gateway Borough
- Ketchikan Visitors Bureau

Letters of Support

- Ketchikan Gateway Borough
- City of Ketchikan
- Greater Ketchikan Chamber of Commerce
- Southeast Conference
- Alaska Department of Fish & Game
- Sea Grant Marine Advisory Board

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