Southeast Alaska Action Initiatives for Key Economic Clusters

Phase 2 of the Southeast Alaska Cluster Initiative

Prepared for:

The USDA Forest Service

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Prepared by

JEDC Juneau Economic Development Council

In Cooperation with

Southeast Conference, Sheinberg Associates, Alaska Map Co., Ted Lyman, & Brian Kelsey

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Executive Summary

Southeast Alaska is rugged and remote, and its communities are mostly located along a thin sliver of coast, sandwiched between mountains and the sea and isolated from each other. The small size and remoteness of the communities combined with the landscape, limit the options for transportation, electric energy generation and transmission, and other basic infrastructures and services needed for economic development. In addition, Southeast Alaska is unique in the extent of land ownership in the hands of the Federal government, which owns 95% of the land base (80% is the Tongass National Forest). The lack of private lands and lands available for development impedes the ability of the region to nurture the private sector. Further, all federal laws, regulations and rules affecting the Tongass have a direct or indirect impact on the economic well-being of the population of the region.

This report, *Southeast Alaska Action Initiatives for Key Economic Clusters*, is an economic development plan for Southeast Alaska that puts a focus on actions to strengthen select industry sectors in the region. The Juneau Economic Development Council (JEDC) chose a Cluster Working Group (CWG) approach to regional economic development because it brings together a private sector industry cluster with federal, state and local agencies, university faculty, trade association representatives and other stakeholders committed to addressing industry needs, concerns and opportunities on a partnership basis. An industry cluster is a set of businesses in the same or related field that are located near one another. These businesses compete with but also complement one another. Together, they rely on regional knowledge and the regional labor market and draw productive advantage from their mutual proximity. Through intensive facilitation -- meeting support and ongoing follow-up, sharing of work and feedback among CWG members, frequent small-group or task-oriented meetings -- JEDC helped each CWG develop a set of industry specific action initiatives based on shared economic vision.

For this work, JEDC partnered with Southeast Conference, Sheinberg Associates, Alaska Map Company, and consultants Brian Kelsey and Ted Lyman, a team that brought regional, national and world-renowned expertise to the project.

Between January and May 2011, JEDC assembled and facilitated the work of four Cluster Working Groups in three established and one emerging industry sectors:

- Southeast Alaska Ocean Products
- Southeast Alaska Forest Products
- Southeast Alaska Visitor Products
- Southeast Alaska Renewable Energy Seed Cluster

Each CWG was comprised of a mix of private businesses, public agencies and others active in the sector; over 130 individuals attended one or more meetings. The working group process was designed to facilitate communication and problem-solving to collaboratively remove barriers and make connections that will

allow growth in jobs and businesses in the specific areas that those in the CWG believe hold the most promise. Each CWG convened up to four times to develop and reach consensus on action initiatives. Between meetings there were many teleconferences and subcommittee meetings to prepare a detailed action plan for each initiative.

Each CWG began by broadly identifying opportunities and challenges specific to their industry and then moved to focus on to a number of possible initiatives. At subsequent meetings, each Cluster Working Group determined the readiness of each initiative for action. A total of 33 action initiatives were developed, most of which enjoyed consensus by all participants; ten by the Oceans Products CWG, five by the Visitor Products CWG, nine by the Forest Products CWG, and nine by the Renewable Energy CWG.

The Action Initiatives developed by CWG participants will, when implemented, remove obstacles and take advantage of opportunities to create more jobs in the respective industry clusters. The list of CWG participants, CWG-identified opportunities, key obstacles and challenges faced by those engaged in the industry, and the title of each Action Initiative are summarized at the end of this Executive Summary.

Common Themes

Each industry Cluster Working Group worked independently, yet several common themes emerged throughout the action initiatives identified. These themes are tied to the need in the region to develop five key economic foundation areas that are vital to the success of all regional industry clusters. The following are examples of Cluster Working Groups developed initiatives in the areas of:

- An educated and productive workforce
    - Marine Industry Technology program
    - Recreation management program integrated with UAS degree programs
    - Renewable Energy education for residents, business and students
- Access to Capital
    - Marketing
        - Promote Southeast to the rest of the nation as a test bed for Renewable Energy projects
        - Increase awareness about building with Alaska Wood
        - SeaTrails promotion – regionally and nationally
    - Funding for entrepreneurial projects
- Regulatory Climate
    - Protection and restoration
    - Permitting process
- Research and Development
    - Renewable Energy
    - Fisheries
- Infrastructure
    - Investment in renewable energy

Collaboration for Success

USDA agencies have an important role in implementing many of the initiatives. Those where USDA agency assistance is needed are noted with a **. Further, collaborative work will be needed among many parties to accomplish the action initiatives. In the body of this report each initiative is described in detail including:

- The team that is committed to working on the initiative
- Motivation and objectives
- The sequence of steps that must be accomplished to make the initiative happen
- Who must be involved to complete each step
- A schedule and funding requirements (if known)
- Outcomes which have been identified as a measure of success

These Action Initiatives reflect priorities and steps needed to strengthen industry, commerce and businesses of Southeast Alaska, which in turn makes communities stronger and more sustainable. Accomplishing these Action Initiatives and tapping this potential will not be easy, and requires commitment, time and energy among private businesses; the federal Forest Service, Rural Development and other USDA agencies; by National Ocean and Atmospheric Administration, Economic Development Administration and other federal agencies; most departments of the State of Alaska as well as policy leadership from the Governor's Office; Sealaska Corporation and Southeast's Native Village Corporations; municipal and tribal governments; the University of Alaska; trade organizations and others.

Implementing the Action Initiatives will occur in stages. The specific roles for some of the major entities in making success happen are described below.

1. Private Sector

Businesses and industry have to take the lead (including for-profit Native Corporations) to make things happen. No one knows better than those actively engaged in making a living in the industry what the obstacles and opportunities are and what is needed to make things work efficiently and create more success. Each Action Initiative lists a project champion, almost always a private sector business representative, and a team that drove development of the initiative on behalf of the full work group. The champion and team need to continue to take a leadership role to push implementation on these initiatives. Other business owners and leaders should join the effort. In order for these efforts to be successful, it is important to note that some groups/teams will need continued administrative and logistical support.

2. USDA[1] and other Federal Agencies

[1] USDA agencies include the following: Agricultural Marketing Service, Agricultural Research Service, Animal and Plant Health Inspection Service, Center for Nutrition Policy and Promotion, Economic Research Service,

Because so much of the land and fishery resources in Southeast Alaska are managed by the federal government, commitment and active involvement by federal agencies – especially by the USDA Forest Service and by NOAA – is critical. Not much can happen in Southeast Alaska without the support of the land and resource owner, which is in sharp contrast with the situation in other states where most business and industry takes place on privately owned land. Depending on the initiative, federal agency programmatic, policy or funding support and change or alignment is needed - each initiative itemizes the specific type of support needed on a step by step basis.

3. State of Alaska

The State of Alaska is a critical partner for implementing initiatives and has several roles to play. Like the federal government, the State owns and manages a significant portion of the land and resources in Southeast Alaska and thus its support and partnership is critical for business success. The State must also continue the key role it plays in stimulating investment and development through a variety of low-interest loans, grants, tax credits, and other funding mechanisms it offers, and in its management of resources such as fishing, land and tidelands.

4. Federal and State Government

Each federal and state agency has its own set of regulations and requirements and often each operates in a "silo" unaware of other agency requirements. Cross-agency and program collaboration to look collectively at actions that support or challenge business growth, including the idea of a "one stop permit shop," is desired by many.

5. University of Alaska

The University of Alaska must help provide research, product testing and product development, technical development, and work force training. Given Southeast Alaska's rich ocean and forest resources, the presence of multiple University of Alaska campuses and programs, and the large federal NOAA and Forest Service Laboratories, the area could support world class research and development in the areas of marine life, ocean conditions, forestry, climate change, fisheries and seafood. Several initiatives identify specific partnership opportunities with the University that will strengthen both industry and the University. In addition, the diversity of recreational opportunities on land, sea and ice lend themselves to developing a world-class outdoor recreation management program at UAS in partnership with the Visitor Products industry.

6. Others

Additional partners whose participation is needed for success are trade associations, non-profits, local and tribal governments. Specific roles are identified in each initiative.

Farm Service Agency, Food and Nutrition Service, Food Safety and Inspection Service, Foreign Agricultural Service, Forest Service, Grain Inspection, Packers and Stockyards Administration, National Agricultural Library, National Agricultural Statistics Service, National Institute of Food and Agriculture, Natural Resources Conservation Service, Risk Management Agency, and Rural Development.

Southeast Alaska Ocean Products Cluster

WHO PARTICIPATED*?

Anthony Lindoff, Ha'ani/Sealaksa
Bart Watson, Armstrong-Keta, Inc.
Bruce Wallace, Seiner, UFA, Silver Bay, ASMI
Casey Campbell, Wells Fargo
Casey Havens, Yak Tat Kwaan
Chris Knight, United Southeast Alaska Gillnetter's Assn
Deborah Hayden, Grow Ketchikan
Don Martin, Forest Service
Doug Ward, Alaska Ship & Drydock
Galen Tromble, National Marine Fisheries Service
Garry White, Sitka Economic Development Assn
Geron Bruce, Alaska Department of Fish and Game
Heather Hardcastle, Trout Unlimited
Ian Fisk, Primo Prawns
Jev Shelton, fisherman
Jim Seeland, University of Alaska Southeast
John Sund, self
Jon Martin, USFS
Julianne Curry, Petersburg Vessel Owner Assn
Julie Decker, UFA: National Seafood Marketing Coalition
Kathy Hansen, Southeast Alaska Fishermen's Alliance
Keith Criddle, University of Alaksa Fairbanks
Kris Norosz, Icicle Seafoods
Len Peterson, Taku River Reds
Mike Forbush, Ocean Beauty
Mike Goldstein, Alaska Coastal Rainforest Center
Mike Round, Oceans Alaska & SSRAA
Patricia Phillips, Pacific Fishing Inc.
Phil Doherty, SARDFA (Dive Fisheries Assn)
Randy Lantiegne, Icicle Seafoods
Ray Ralonde, Sea Grant Marine Advisory Program
Ray Riutta, Alaska Seafood Marketing Institute
Rick Focht, DIPAC
Ron Medel, Forest Service
Russell Dick, Ha'ani/Sealaksa
Shannon Stevens, Alaska Airlines
Shelly Wright, Southeast Conference
Steve Reifenstuhl, NSRAA
Steve Stromme, Elfin Cove
Tim Blust, Armstrong-Keta, Inc.
Tom Gemmell, fisherman

Attended one or more meetings

WHY?

Opportunities

- Largest Southeast Alaska private sector wage payer - 2009 wages: $199 million
- Largest Southeast Alaska employer - 2009 avg. monthly seafood employees: 2,398
- SE AK's rich clean waters are astounding resource.
- SE AK knows the ocean; industry compatible with lifestyle.
- Ocean products industry is resilient, businesses are diversified.
- Boat and gear repair & manufacturing is a complementary.
- SE AK Branding and Marketing: Tell the Fishing Story!
- Mariculture could be a $20-$50 million/year industry.
- More salmon = more opportunity, support hatcheries.
- Young, trainable, local workforce available.
- Given the ocean resources here, University & agencies, should have world class research occurring.
- Great access to Lower 48 customers.
- Consistent utilization of fish by-products/waste.
- Streamline export permitting process.
- Invest in Southeast Alaska renewable energy.

Challenges

- Access to water and to the resource is primary; without this nothing else is possible.
- Industry success depends on maintaining sustainable fisheries, conservation, and habitat restoration.
- Markets are global and competition is fierce.
- Lack of access to capital is a primary concern.
- Cost of fuel, power, freight, transportation of product to markets, and labor are high.
- More local government support needed.
- Tell Southeast Alaska regional story better.
- Workforce availability, development, & education concerns.
- Federal and state regulations are an obstacle.
- Sea otter management plan is needed for SE AK.

WHAT?
10 ACTION INITIATIVES

1. Develop a Sea Otter Management Program in Southeast Alaska
2. Establish Marine Industry Technology and Workforce Improvement Consortium
3. Ensure Southeast's Fishing Future: Targeted Education and Training in the Acquisition and Financing of Fishing Permits, Quota and Fishery Businesses
4. Increase Wild Salmon Production Through Habitat Restoration
5. Include the Seafood Industry in USDA Programs (Regulatory Review)
6. Enhance Salmon Production
7. Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion
8. Further Develop Renewable Energy
9. Protect Long Term Assured Assess to Fishery Resources for Both Current and Developing Fisheries
10. Develop Region-Wide Mariculture Zoning Initiative

Southeast Alaska Forest Products Cluster

WHO PARTICIPATED*?

Allen Brackley, Research Forester, USFS
Andrew Thoms, Sitka Conservation Society
Bill Thomason, Wood Cuts
Bob Deering, USCG - Civil Engineering Unit
Bruce Abel, Don Abel Building Supplies
Bryce Dahlstrom, Viking Lumber Company
Carol Rushmore, City and Borough of Wrangell
Carolyn Thomason, Wood Cuts
Chris Maisch, Alaska DNR
Clarence Clark, Alaska DNR
Dan Parrent, USFS
Dave Harris, USFS
Ernie Eads, Thuja Plicata Lumber Co
George Woodbury, Alaska Forest Assn
Greg Erickson, Erickson Economics/SEACC
Jackie Durette, Durette Construction
John Sisk, The Nature Conservancy
Jon Martin, USFS
Karen Petersen, UAF Cooperative Ext. Service
Keith Flanders, Prince of Wales mill operator
Keith Rush, The Nature Conservancy
Kent Nicholson, USFS
Larry Jackson, Tongass Forest Enterprises
Lindsey Ketchel, SEACC
Marie Messing, USDA Forest Service
Merrill Sanford, Southeast Conference Board
Michael Kampnich, The Nature Conservancy
Mike Goldstein, Alaska Coastal Rainforest Center, UAS
Owen Graham, Alaska Forest Assn
Paul Slenkamp, Trust Land Office
Richard Stubbe, Alaska Wood Products
Shelly Wright, Southeast Conference
Wade Zammit, Sealaska Timber Corporation
Wes Tyler, Icy Strait Lumber

WHY?

Opportunities

- Define USFS transition objectives. How soon can this be achieved and under what conditions? What projects and initiatives are needed to 'plug the gap' before young growth volume can sustain industry?
- Round log export has high return on invested capital. This allows profit that supports other types of commercial wood product activity and the basic industry infrastructure.
- Markets: China, Korea, Canada, Washington. China has growing supply constraints in face of fast growing demands.
- Brand and market Tongass high value wood to increase product price.
- Prince of Wales has a cluster of small, entrepreneurial mills. Take advantage of the road system here.
- Use wood waste and byproducts for bio-mass boilers. If enough demand in Southeast Alaska a pellet plant could be feasible.
- Mountain beetle infestation in Canada may lead to lumber supply shortages.
- Initiate new efforts in product design, market identification, and R&D.
- Increase in-region processing of forest products to capture more value locally.

Challenges

- Lack of a stable, predictable supply of timber is major obstacle to industry investment and success
- Industry now currently greatly diminished and in survival mode.
- Second growth wood is commodity priced, but need 10-20 times amount of capital investment.
- Round log export market is highly dependent on 50% exemption that allows export to maximize price, rather than all domestic sales.
- Southeast's timber Infrastructure is aging.
- Size and economies of scale issues challenge processing and value-added opportunity success.
- Cost of oil increases freight and production costs.
- Some USFS timber sale design and contractual processes are obstacles to industry.
- Low morale at USFS due to lawsuits, changing policy, shrinking budgets, and lost expertise.

WHAT? 9 ACTION INITIATIVES

1. Use Young Growth Wood for Cabin and Recreational Structures on Prince of Wales Island.
2. Simplify Small Timber Sale Process to Allow Small Mills on Prince of Wales Island to Operate More Efficiently, Economically, and with More Supply Certainty.
3. Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries.
4. Continuously Improve Select USFS Processes.
5. Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations.
6. Substitute Biomass for Diesel to Meet Energy Needs of Southeast Alaska

The initiatives which did not have the full consensus of the Cluster Working Group are:

7. Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska.
8. Create a 1.5 Million Acre State Forest (from Tongass lands) to be Managed by State of Alaska
9. Restore a Viable Timber Industry in Southeast Alaska

**Attended one or more meetings*

Southeast Alaska Visitor Products Cluster

WHO PARTICIPATED*?

Bill Hagevig, HAP Alaska-Yukon
Bob Janes, Gastineau Guiding
Brent Fischer, City and Borough of Juneau
Carol Rushmore, City and Borough of Wrangell
Derek Duncan, Goldbelt Corporation
Drew Green, Cruise Line Agencies of Alaska
Erica Simpson, Alaska Canopy Adventures
Ernestine Hayes, UAS, School of Arts and Sciences
Forest Wagner, UAS, Outdoor Studies
Greg Brown, Weather Permitting Alaska
Jodi Wise, Huna Totem Corporation
Johan Dybdahl, Icy Strait Point
John McConnochie, Cycle Alaska
Jon Martin, USFS
Kathy DiLorenzo, UAS, School of Professional & Technical Studies
Kelli Dindinger, Alaska Travel Adventures, Inc
Larry Gaffaney, Huna Totem Corporation
Linda Kadrlik, Adventures Afloat
Linda Kruger, USFS PNW Research Station
Lorene Palmer, Juneau VCB/ SATC
Louis Juergens, Alaska Galore Tours
Marc Matsil, City and Borough of Juneau
Marsha Sousa, University of Alaska Southeast
Marti Marshall, USFS, Juneau District Ranger
Melanie Lesh, Gustavus City Council
Michael Goldstein, AK Coastal Rainforest Center, UAS
Michael Neussl, Alaska DOT&PF
Odin Brudie, Alaska DCCED
Rick Wolk, UAS, School of Management
S. Kirby Day, III, Princess Cruises
Sean Smith, Glacier Gardens
Sharon Gaiptman, Gaiptman Communications
Steve Krause, UAS
Tim McDonnell, TEMSCO
Tory Korn, Alaska Rainforest Sanctuary/Alaska Canopy Adventures

Attended one or more meetings

WHY?

Opportunities

- There are many ideas to increase the numbers of independent/multi-day visitors
- Many authentic local assets to build visitor experiences around
- We can develop connections and links between region's trails
- Bring broadband/high speed internet to rural communities so they can connect with markets and showcase tourism opportunities
- Develop a UAS visitor industry management/training program or degree with government and private sector internships
- Implement Juneau's Tourism Best Management Practices model on a state and federal level

Challenges

- Government should offer more assistance rather than be an impediment.
- Region's business climate is lacking: we look for others to blame and solve our problems, not enough teamwork and cooperation within region, Southeast Alaska culture is risk averse, we don't have an entrepreneurial spirit, etc.
- Local workforce constraints (both number and skill sets)
- Lack of affordable housing is obstacle to hiring from outside region.
- Need opportunities to keep workforce employed during off season so they don't leave.
- Independent visitor sector not good at using web/ social media to provide destination information
- Insufficient funding to develop infrastructure, e.g., trails, huts, roads
- High cost of energy makes it hard to be profitable
- Need better conflict resolution between competing forest user groups
- Rising fees create rising prices for visitor experiences
- Excessive regulation creates barriers to entry into business
- Insufficient funding for marketing collateral
- Cost of oil increases freight and production costs.
- Some USFS timber sale design and contractual processes are obstacles to industry.
- Low morale at USFS due to lawsuits, changing policy, shrinking budgets, and lost expertise.

WHAT?
5 ACTION INITIATIVES

1. Develop Multi-Purpose, Multi-Community Land and Water Trails and Support Facilities
2. Increase Guided Access to Land
3. Promote Multi-Community and Regional Visitor Packages
4. Strengthen Accountability for Tongass Access Fees
5. Integrate Tourism Course with UAS Existing Degree Program

JEDC Juneau Economic Development Council

Southeast Alaska Renewable Energy Seed Cluster

WHO PARTICIPATED*?

Barbara Stanley, USFS
Bart Watson, Armstrong-Keta, Inc
Ben Haight, Haight & Associates
Bill Leighty, The Leighty Foundation/Alaska Applied Sciences, Inc
Bob Deering, US Coast Guard
Brandon Smith, Alaska Brewing
Brian Hirsch, National Renewable Energy Laboratory
Bryan Ferrell, AELP
Dan Lesh, SEACC
Duff Mitchell, Juneau Hydropower, Inc.
Heather Hardcastle, Fisherman's Daughter Biofuels
Jackie Stewart, Business Works
John Hickey, US Coast Guard
John Sandor, self
Jon Martin, USFS
Kirk Hardcastle, Alaska Center for Energy and Power
Larry Miles, Wind Turbine Company
Lew Madden, Mat-Su owners representative
Nathan Soboleff, Ha'ani/Sealaska Corporpation
Paul Southland, Alaska Canada Energy Coalition
Peter Naoroz, Kootznoowoo Corporation
Rob Holman, Self
Robert Venables, Southeast Conference
Ross Good, Elcon Corp
Zach Wilkinson, JEDC SpringBoard

*_Attended one or more meetings_

WHY?

Motivation, Opportunities and Challenges

- We are looking ahead to the next economy of Southeast Alaska. While renewable energy is not one of the region's driving engines, we see fertile conditions for a renewable energy industry other than large-scale hydro in Southeast Alaska for the future.
- We need the courage and conviction to take advantage of Southeast's obvious and abundant Renewable Energy resources- tidal, wave, wind, geothermal, solar, ocean thermal, osmotic, biomass - Southeast Alaska can become a model, a leading industry outside of this region.
- Currently importing Renewable Energy expertise and equipment from outside Southeast Alaska.
- If we improve the economic foundation of region, can we build up this industry?
- Do we have the starting point for a more robust energy industry?
- Is there potential for developing renewable energy firms in Southeast Alaska that could export their skills and expertise beyond the region?
- What conditions would foster increased industry development?
- Multitudes of assets critical to an emerging industry are here: willing workforce, community support, existing Infrastructure, zoned "Industrial" sites, deep water ports near many communities, heavy equipment from former industries, communities in dire need of a better economy, high unemployment in region, and demographics for skilled labor.

WHAT? 9 DRAFT ACTION INITIATIVES

1. Propose Net Metering Legislation
2. Develop Revolving Loan Fund for Renewable Energy**
3. Market Southeast Alaska Nationally as a Test Bed for Renewable Energy Projects
4. Market-driven Renewable Energy Economic Modeling for Southeast Alaska, including Multiple Transmission and Energy Storage Strategies
5. Explore Opportunities to Connect the Southeast Alaska Intertie to North American Grid
6. Biomass Energy Demand Development**
7. Determine Best practices for Renewable Energy Industry in Southeast Alaska**
8. Review Regulatory Process to Expedite Project Permitting Process
9. Renewable Energy Education for SE Alaska Residents, Students and Businesses

JEDC Juneau Economic Development Council

Introduction

In October 2010, the U.S. Department of Agriculture (USDA) Forest Service awarded a contract to the Juneau Economic Development Council (JEDC) to complete an Economic Development Asset Map and a Strategic Plan for Southeast Alaska that would focus on actions to strengthen select industry sectors in the region. Known as the Southeast Cluster Initiative, the project called for two deliverables that are intended to help strengthen Southeast Alaska's regional economy:

1. A Southeast Alaska Asset Map identifying the human, financial, institutional, and natural assets of Southeast Alaska.
2. A cluster-based economic development plan for promoting regional growth in certain key industries.

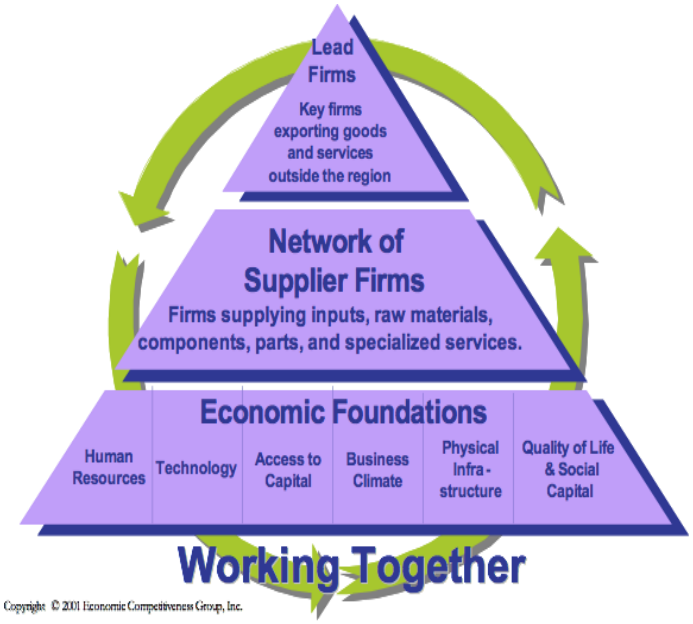
For this work, the Juneau Economic Development Council (JEDC) partnered with Southeast Conference, Sheinberg Associates, Alaska Map Company, and consultants Brian Kelsey and Ted Lyman, a team that brought regional, national and world-renowned expertise to the project.

In December 2010, the JEDC partnership delivered the Southeast Alaska Asset Map as Phase I of the Southeast Alaska Cluster Initiative. The asset map included a dynamic database and a report that compiles tangible and intangible regional assets including: employment and demographics, education and workforce readiness, physical infrastructure, private industry, natural resources, the regional business climate, and financial metrics. This report, entitled "Southeast Alaska Economic Asset Map," can be found on the JEDC website at http://jedc.org/assetmapping-seakregionalassetmap.php.

For Phase II, JEDC chose a Cluster Working Group (CWG) approach to regional economic development because it brings together a private sector industry cluster with federal, state and local agencies, University faculty, trade association representatives and other stakeholders committed to commonly addressing industry needs, concerns and opportunities on a partnership basis. An industry cluster is a set of businesses in the same or related field that are located near one another. These businesses compete with one another but also complement one another. They share a reliance on regional knowledge and on the regional labor market and draw productive advantage from their mutual proximity. They are linked by their buyer-supplier relationships and by their shared reliance on the six foundations of the Southeast Alaska economy (or indeed, any economy): human resources, technology, access to capital, business climate, physical infrastructure, and quality of life and social capital.

The cluster working group approach brings each industry cluster together, and through intensive facilitation -- meeting support and ongoing follow-up, sharing of work and feedback among CWG members, frequent small-group or task-oriented meetings -- each CWG develops a set of industry specific action initiatives based on their shared economic vision.

The cluster concept is illustrated below:



Human Resources—The availability of an educated and productive workforce.

Technology—The quality of research and development and other systems for capturing innovations and transferring them to the commercial marketplace.

Access to Capital—Access by small and large firms to both debt financing and equity financing, such as venture capital, so businesses can start and expand.

Business Climate—A supportive environment with clear and effective tax and regulatory policies. Political decisions and the work of public agencies largely define the region's business climate. The business environment should be constantly shaped to meet the needs of society and enterprise.

Physical Infrastructure—Well-developed, cost-effective and efficient roads, marine ways, ports, and airports that meet the transit and transportation needs of both workers and business. Sewer, water, trash, communications, and electricity infrastructure that meets community needs.

Quality of Life and Social Capital—A region's quality of life—from vibrant communities to safety to natural beauty and recreation opportunities—is a primary competitive advantage that helps attract new businesses and talent. Many of the things that make up quality of life are intangible. Social capital refers to a community's culture and ability to solve problems. Strong social capital is found where there is mutual trust and community-based problem solving programs.

The team's Asset Map work identified 12 regional clusters of economic activity, each with a unique combination of employment concentration and industry growth that together represent 74% of all private sector jobs in Southeast Alaska:

Star clusters (higher than average employment concentration in the region, in growing markets)

- Arts and Entertainment
- Social Assistance
- Forestry and Logging
- Real Estate

Opportunity Clusters (lower employment concentration than average, but in growing markets)

- Advanced Business Services

- Health Care
- Construction

Mature Clusters (higher employment than average, but in slower growing markets)

- Fishing and Seafood Processing
- Mining
- Ship and Boat Building
- Transportation and Tourism

Challenge Clusters (low employment concentration and in slow growth markets)

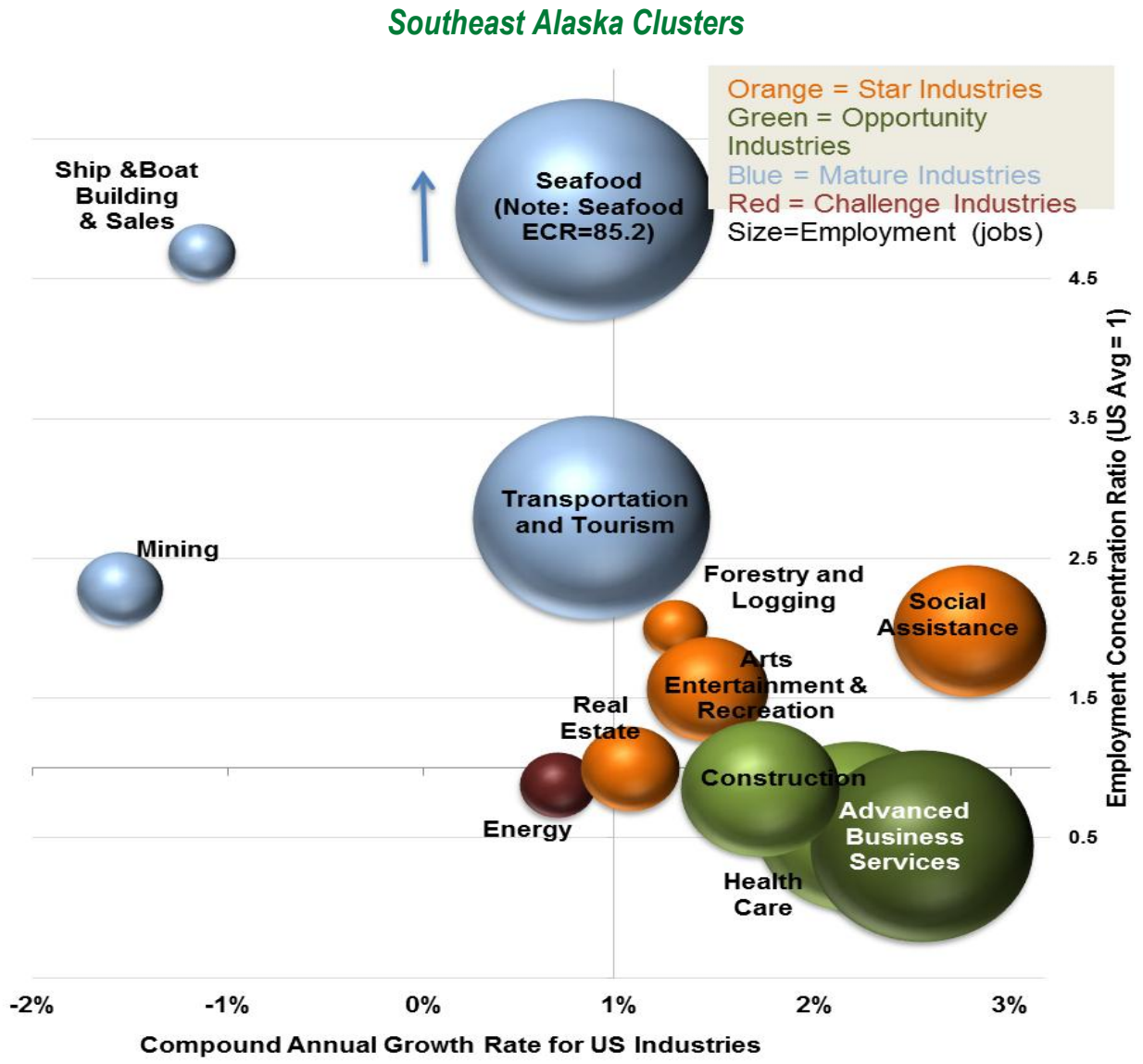
- Energy

Southeast Alaska Annual Private Sector Employment: Select Clusters

Cluster/ Industry Name	NAICS Industry Code	Annual Average Monthly Employ-ment 2003	Annual Average Monthly Employ-ment 2009	SE Businesses 2009	SE Wages 2009	Avg. SE wage 2009	Eco-nomic Concen-tration Ratio	US Compound Annual Growth Rate 2009-2019
Star clusters (higher than average employment concentration in the region, in growing markets)								
Arts, Entertainment, and Recreation	71	653	849	102	$16,392,498	$19,310	1.6	1.4%
Social Assistance	624	1,155	1,344	85	$34,797,825	$25,896	2.0	2.8%
Forestry and Logging		510	238	32	$11,759,446	$49,375	2.0	1.3%
Real Estate and Rental and Leasing	53	419	553	93	420,967,669	$37,933	1.0	1.1%
Opportunity Clusters (lower employment concentration than average, but in growing markets)								
Advanced Business Services		2,582	2,856	442	$120,487,309	$42,195	0.4	1.4%
Health Care		2,080	2,232	134	$103,951,255	$46,570	0.6	2.2%
Construction	1012	1,748	1,436	304	$87,105,638	$60,648	0.9	1.7%
Mature Clusters (higher employment than average, but in slower growing markets)								
Seafood		3,680	3,845	2,396	$199,896,080	$51,989	85.2	0.4%
Mining	21	291	413	14	$37,980,160	$91,962	2.3	-1.6%
Boating/Ship Building		140	254	24	$12,090,194	$47,662	4.7	-1.1%
Transportation and Tourism		3,175	3,225	312	$109,505,610	$33,953	2.8	0.9%
Challenge Clusters (low employment concentration and in slow growth markets)								
Energy		338	329	38	$11,447,202	$34,768	0.9	0.7%

Sources: Alaska Department of Labor, U.S. Bureau of Labor Statistics, JEDC Analysis

In order to understand the relative contribution of each cluster to the regional economy, the chart on the next page presents the compound annual growth rate for U.S. industries along the horizontal axis. Growth rates range from a high of 2.8% for social assistance, to a negative rate of growth of -1.6% for mining. Economic Concentration Ratio (a.k.a Location Quotient) is measured on the vertical axis. Here seafood takes top position with a concentration of 85.2. This means that per capita, there is 85.2 times more seafood employment in Southeast Alaska than the US as a whole. Advanced Business Services is the most under-represented in employment in the region with a concentration of only 0.4, meaning that per capita, far fewer people are employed in this cluster than national averages. The chart also shows relative employment in each cluster by the size of the individual "bubbles." The industry with the greatest average monthly employment is seafood.



Sources: Alaska Department of Labor, U.S. Bureau of Labor Statistics, JEDC Analysis

In the previous "bubble chart," the size of each bubble symbolizes the size of the cluster in terms of employment. Bubbles above the horizontal line at 1.0 are clusters in which our region has a higher concentration of jobs than the U.S. average. Those below the line are clusters that are currently below the U.S. average. Bubbles to the right of the vertical line are clusters that are expected to grow faster than the national average between 2011 and 2018. Those to the left are expected or grow more slowly or decline during those years.

Southeast Alaska Cluster Working Group Facilitation and Action Initiative Development

Cluster Working Groups are facilitated public sector and private industry collaborations designed to facilitate communication and problem-solving among businessmen and women and other key stakeholders in order to remove barriers and make connections that will allow growth in jobs and businesses in the specific areas that those in the Cluster Working Groups believe hold the most promise. Between January and May 2011, JEDC assembled private industry and other sector leaders to create Cluster Working Groups for the following three established and one emerging industry sectors identified in Phase I:

- Southeast Alaska Ocean Products
- Southeast Alaska Forest Products
- Southeast Alaska Visitor Products
- Southeast Alaska Renewable Energy Seed Cluster

Over 130 individuals participated in the CWG effort. Each CWG was comprised of a mix of private businesses, public agencies and others active in the sector. During a series of up to four meetings, Cluster Working Group participants identified key Action Initiatives that would remove obstacles and take advantage of opportunities to create more jobs in their industry. JEDC prepared meeting agendas, facilitated dialogue, provided meeting summaries, and assisted with other in-between meeting work.

Each CWG began by broadly identifying opportunities and challenges specific to their industry and then moved to focus on to a number of possible initiatives. At subsequent meetings, each Cluster Working Group determined the readiness of each initiative for action. A total of 33 action initiatives were developed, most of which enjoyed consensus by all participants; ten by the Oceans Products CWG, five by the Visitor Products CWG, nine by the Forest Products CWG, and nine by the Renewable Energy CWG.

In the body of this report each initiative is described in detail including:

- The team that is committed to working on the initiative
- Motivation and objectives
- The sequence of steps that must be accomplished to make the initiative happen
- Who must be involved to complete each step
- A schedule and funding requirements (if known)

- Outcomes which have been identified as a measure of success

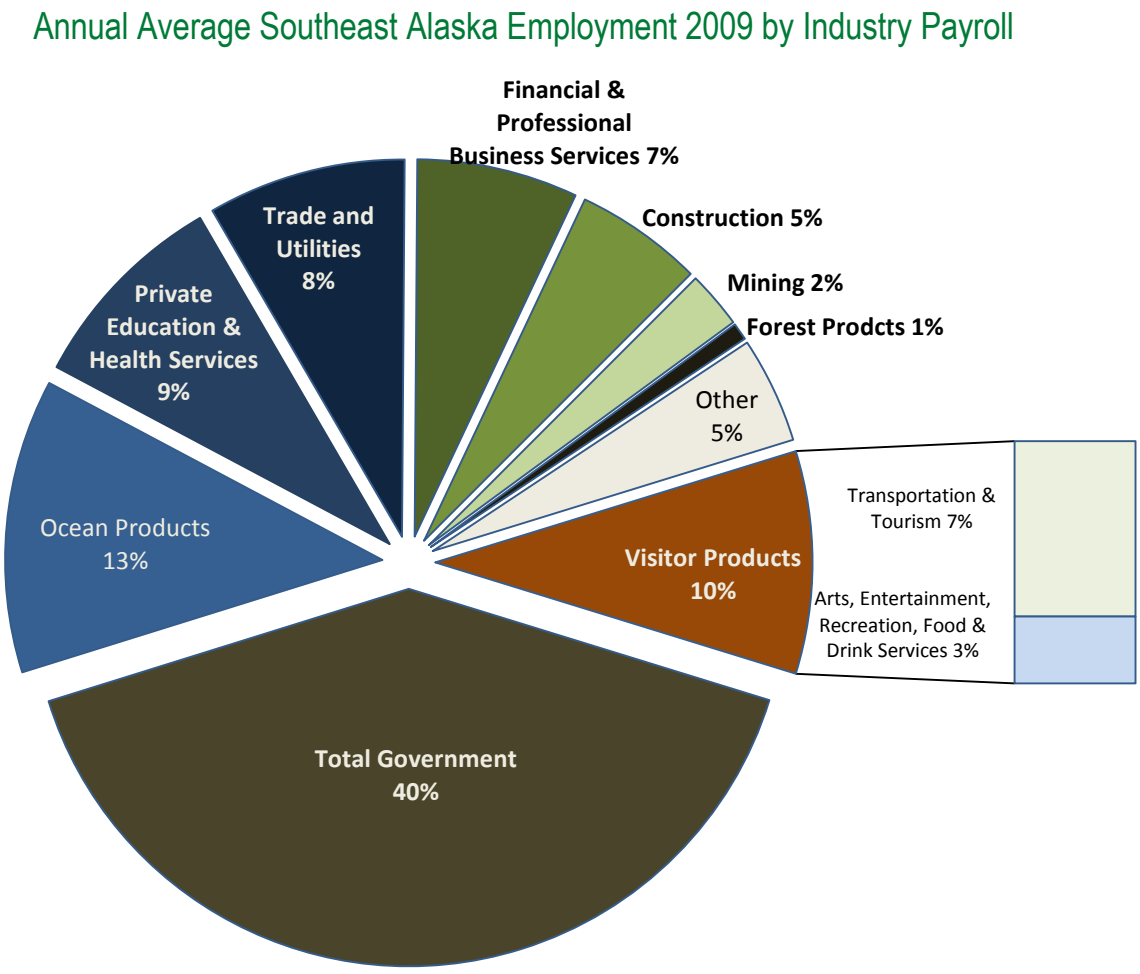
The Action Initiatives can be used as a roadmap for strengthening each industry and can guide the USDA Forest Service, Rural Development, the State, and other agencies in efforts to promote economic development for Southeast Alaska. JEDC hopes that with the further support of USDA Forest Service and other partners, the Cluster Working Group approach may continue after this contract ends and become part of the economic infrastructure of the region.

Overview of the Southeast Alaska Economy

The region of Southeast Alaska stretches from Yakutat in the north to Metlakatla in the South. Southeast is a maritime region comprised of 34 communities with a population greater than one. The region covers a 500-mile long stretch, with islands making up 40 percent of the region's total land area.

Southeast Alaska is often referred to as having two economies: Juneau (with 44% of the regional population) and the rest of Southeast Alaska; however the region as a whole shares economic dependence on several key industry clusters.

Employment by Industry Sector



In 2009, the annual average employment in Southeast Alaska was 38,542, including the seafood sector. Annual average employment between 2000 and 2010 was basically flat: There was a regional net gain of just 100 jobs in the last decade. The slight gain in employment, despite a population decline, is likely due to

the high ratios of nonresident workers in Southeast Alaska. Regionally, non-Southeast Alaska residents held 39 percent of all jobs in 2008 (excluding commercial fishing).

The following table, along with the preceding pie chart, shows the distribution of employment in the region between industries.

Total Southeast Alaska Employment, 2009

	Annual average Employment 2009	% of SE Employees	Total Payroll x 1000	Avg. Annual Wage
Private Sector	25,246	66%	$946,456	$37,489
Seafood Industry (Ocean Products)	3,845	10%	$199,896	$51,989
Mining	431	1%	$38,823	$90,111
Forestry, Logging, Wood Manufacturing (Forest Products)	238	1%	$11,759	$49,375
Transportation and Accommodation (Visitor Products)	3,225	8%	$109,506	$33,953
Construction	1,436	4%	$87,106	$60,659
Manufacturing (non fish/wood)	479	1%	$20,665	$43,134
Trade and Utilities	5,044	13%	$134,912	$26,746
Information	561	1%	$23,819	$42,458
Financial Activities	1,319	3%	$56,812	$43,072
Professional Business Services	1,325	3%	$52,784	$39,837
Education & Health Services	3,666	10%	$140,560	$38,342
Arts, Entertainment, Recreation, Food & Drink Services (Visitor Products)	2,464	6%	$41,957	$17,025
Other Services	1,212	3%	$27,857	$22,984
Total Government	13,296	34%	$642,082	$48,291
Federal Government	1,745	5%	$120,846	$69,253
State Government	5,483	14%	$268,867	$49,036
Local Government	6,068	16%	$252,370	$41,590
Total Employment	38,542	100%	$1,588,538	$41,216

Note: Local government includes tribal government.

Source: Alaska Department of Labor and Workforce Development, Research & Analysis

Seafood Industry

The seafood industry is the largest private sector employer in Southeast Alaska in terms of wages, accounting for 13% of all regional wages, and 10% of all employment.[2] In 2009, more than 10,000 people participated in the Southeast Alaska commercial fishery industry, including 4,674 Southeast residents (as crew or fishermen). In 2008 Southeast residents participating in the commercial fishing industry earned $1.49 million. In 2009, 178.7 million pounds of seafood were processed in Southeast by shore-based processors, with a wholesale value of $374.3 million.

Travel Industry

If the visitor products industry is defined to incorporate both the categories of transportation and accommodation and arts, entertainment, recreation, food & drink services, it would be the largest private sector regional employer in term of employees, accounting for 15% of all regional employment, and 10% of all regional wages.

The number of cruise ship visitors to the region doubled between 1997 and 2007, when more than a million passengers visited the region. However, in response to the global recession tourism has declined in recent years. The number of cruise passengers visiting the region has decreased by 15% over the past two years, but is expected to decrease again in 2012.

Government

Despite the strength of the private sector industries previously discussed, the economy of the Southeast Alaska region is highly dependent on government employment and spending. State, federal and local government comprise 35% of the region's jobs and 40% of regional wages. (To compare, 15% of jobs nationally are with the government.) Unfortunately, State and Federal government employment is declining. Between 2003 and 2009, the region lost 219 federal jobs and 199 state jobs. Government investment in regional infrastructure has also slowed. Expected Federal budget cuts will likely impact Federal Government employment, and a decline in Federal earmark spending will also impact both State and local government programs in the region.

Timber Industry

While the regional economy had its roots in resource extraction, currently timber accounts for only one percent of jobs and wages in the region. The decline of the timber industry has been well documented. At one time there were 12 large sawmills operating in Southeast Alaska. Today there are none, and only one mid-sized mill remains. In 1990, there were 3,450 direct sawmill and logging jobs in the region; however, by 2009 only 214 sawmill and logging jobs remained in Southeast.

[2] Due to different rules regarding wage and labor data, fisheries statistics are often excluded from the overall picture of wages and jobs distribution. The chart above includes wages earned by Southeast Alaska fishermen and crew based on JEDC analysis.

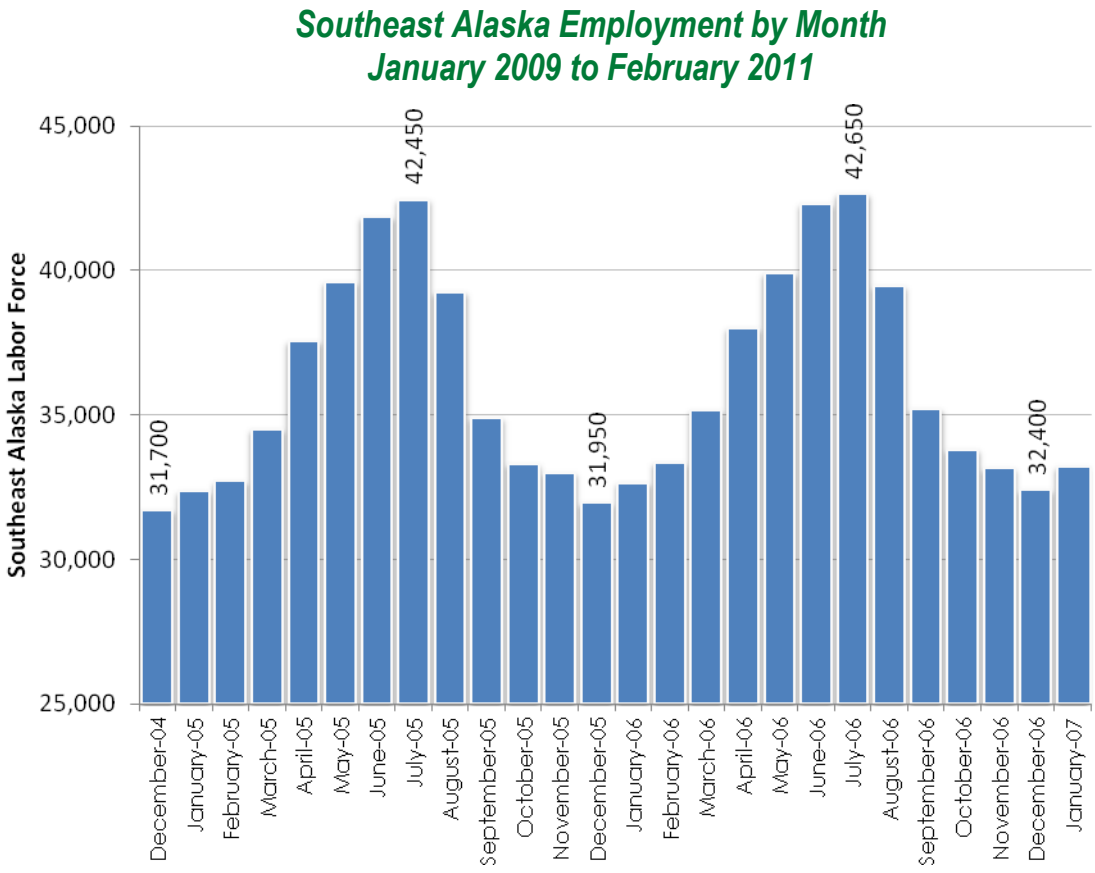
Mining Industry

Mining accounts for one percent of regional jobs, and two percent of regional wages. Mining jobs pay the best wages of any regional sector. In 2009, the average annual regional mining wage was $90,111, or 1.4 times the average private sector wage.

With the 2010 opening of the Kensington Gold Mine in Juneau and the skyrocketing price of gold and silver, the Southeast mining industry has been booming. In 2009, there were 413 mining jobs in Southeast Alaska. With the opening of the Kensington Gold Mine in Juneau in 2010, the region's mines are expected to have 600 employees and a payroll of more than $50 million annually by the end of 2011.

Seasonal Employment

Another hallmark of the regional economy is its seasonality, depicted in the chart below. According to the Alaska Department of Labor, the difference in the workforce between the peak month of employment in Southeast Alaska—August—and the month with the lowest employment levels—January—is nearly 11,000. Because the commercial fishing industry is not captured in these numbers, the actual discrepancy is much higher.



Business Climate Survey Results: Clusters Barriers and Benefits Analysis

We thought it would be beneficial to look at the regional benefits and barriers through the eyes of the Visitor Products, Ocean Products, and Forestry Products industries. In terms of overall findings, Southeast Alaska business leaders were more likely to ascribe a barrier rating to freight and real estate costs, while quality of life attributes, such as access to recreation, cultural opportunities and safety, were seen as being the biggest benefit to businesses in the region.

The cross-tab analysis of each of the three clusters, Visitor Products, Ocean Products, and Forestry Products, identified freight costs as the top barrier to their business operations, and recreation and cultural opportunities as the biggest assets. In terms of the top four barriers, each cluster group also identified federal regulations as obstacles to business operations.

Southeast Tourism, Fishing, Forestry: Top Barriers

Tourism	Net Barrier	Fisheries	Net Barrier	Forestry	Net Barrier
1.Freight costs	78%	**1. Freight costs**	94%	**1. Freight costs**	100%
2.The cost of electricity	61%	2. State regulations	89%	2. Suppliers in Southeast Alaska for your business	100%
3.The cost of real estate	61%	**3. Federal regulations**	72%	3. The cost of electricity	88%
4.Federal regulations	59%	4. Level of taxation	61%	**4. Federal regulations**	88%

Southeast Tourism, Fishing, Forestry: Top Benefits

Tourism	Net Benefit	Fisheries	Net Benefit	Forestry	Net Benefit
1. Recreational opportunities	80%	• **Recreational opportunities**	61%	**1. Recreational opportunities**	50%
2. Cultural opportunities	58%	• **Cultural opportunities**	50%	**2. Cultural opportunities**	50%
3. Safety	55%	• Availability of high-speed internet in your area	44%	3. Southeast Alaska's marine transportation	38%
4. Availability of high-speed internet in your area	53%	• Southeast Alaska's air transportation	39%	4. Job-readiness of entry-level workforce	38%

Cluster Working Group Process

The cluster working group process encompassed a series of three or four facilitated large group meetings for each industry cluster, each an assemblage of leaders representing the cluster being addressed. The invitation list was developed through collaboration with industry experts, the Forest Service and regional and local economic development entities. Each large group meeting had two facilitators and two support staff from JEDC. The meetings lasted approximately 5 hours each.

Meeting 1—Introduction to the Southeast Alaska Cluster Development Initiative and review of the findings and conclusions of the Asset Mapping Analysis. An identification of opportunities for industry development, critical issues that are impeding the growth of the cluster and a priority ranking of critical issues concluded the meeting. The core question asked of each group was "How can we strengthen your industry in our region."

Meeting 2—Discussion of the critical issues and formulation of possible action Initiatives, interventions in the status quo in the form of new partnerships, institutional reform, new or revised public policies, or other steps that could be taken. The objective was to identify specific interventions that would take advantage of opportunities or overcome obstacles to a more competitive regional economy. "Champions" were identified to take ownership of each of these action initiatives and, with a small working group, tasked to prepare a detailed plan of action. Small working groups met between meeting 2 and 3 through conference call.

Meeting 3 and Meeting 4 (if needed)—Group discussion and refinement of each action initiative was presented in a format that detailed:

- The team that is committed to working on the initiative
- Motivation and objectives
- The sequence of steps that must be accomplished to make the initiative happen
- Who must be involved to complete each step
- A schedule and funding requirements (if known)
- Listing how it will be known when success has been achieved

Specific problems were identified and recommendations were made to strengthen each initiative. Readiness to launch decisions were made and the group empowered the "champions" to take the lead to move from discussion to direct action. For Forest Products, group discussion and refinement were not finished and a fourth CWG meeting was needed.

Seed Cluster Development— For Renewable Energy, which does not have an established industry presence in the region, a first meeting of private sector entrepreneurs, public sector agencies, economic development organizations and consultants was convened to gage interest in participating in the formal

Cluster Working Group process. This meeting led to formation of a steering committee to prepare for subsequent CWG meetings. At the conclusion of a second group meeting, action initiatives were chosen for developing into actions plans in preparation for a third meeting. JEDC has committed to providing one more facilitated large group meeting for the Renewable Energy Seed Cluster Working Group.

The meeting schedule for the Cluster Working Groups is presented below:

Meeting Schedule for Southeast Alaska Cluster Working Groups

Date	Forest Products	Ocean Products	Visitor Products	Renewable Energy
February	CWG #1 Location: Juneau	Informational Teleconference	Informational Teleconference	
	CWG Teleconference	CWG #1 Location: Juneau		
		CWG Teleconference		
March	CWG #2 Location: Juneau	CWG #2 Location: Juneau	CWG #1 Location: Juneau	CWG #1 Location: Juneau
	Presentation in Thorne Bay, POW		CWG Teleconference	Steering Committee Location: Juneau
			CWG #2 Location: Juneau	
April	CWG #3 Location: Ketchikan and Teleconference	CWG #3 Location: Juneau	CWG #3 Location: Juneau	Steering Committee Location: Juneau
				Steering Committee Location: Juneau
May	CWG #4 Location: Craig, POW			CWG #2 Location: Juneau

In the following sections we will more closely examine three industry clusters (Ocean Products, Visitor Products, and Forest Products), and one emerging seed cluster (Renewable Energy). Each section will contain a regional economic summary of the cluster, as well as an overview of the cluster process and a discussion of the Action Initiatives developed by each CWG.

Southeast Alaska Ocean Products

The seafood industry is the largest private sector employer in Southeast Alaska in terms of wages, accounting for 13% of all regional wages, and 10% of all employment. However, the significance of the seafood sector to the region can sometimes get overlooked because measuring employment and wages in the Southeast Alaska seafood industry is difficult, as it is not included in Alaska Department of Labor wage and salary data.[3]

[3] To work around this, JEDC analyzed the number of those who participated in the seafood sector, and developed an "annual average" employment number for those fishermen and crew involved in the regional fisheries, using data obtained from ADOL, CFEC and ADF&G. According to this analysis, the annual average monthly employment in the seafood sector for 2009 was 2,396 (those involved in the commercial fishing industry were only counted for the months that they participated in the industry). To obtain fisheries wage data, JEDC used US Census Borough Non-employer Statistics. Non-employer Statistics originate from tax return information of the Internal Revenue Service. According to these statistics, Southeast residents captured an additional $149.1 million in wages over the ADOL reported fisheries wages. Of course the methodology is also slightly different. The non-employer statistics capture the income of Southeast Alaska residents only regardless of where they fished (worked). DOL wages and labor statistics report wages earned by residents and nonresidents working in Southeast Alaska.

Southeast Alaska Ocean Products Cluster

Cluster/Industry Name	NAICS Industry Code	Annual Average Monthly Employment 2003	Annual Average Monthly Employment 2009	SE Businesses 2009	SE Wages 2009	Avg. SE wage 2009
Seafood		3,680	3,845	2,396	$199,896,080	$51,989
Animal aquaculture	1125	136	131	16	$4,827,371	$36,968
Seafood product preparation and packaging	3117	1,413	1,390	44	$43,763,787	$31,487
Fish and seafood merchant wholesalers	424460	52	43	20	$2,246,922	$52,052
Fishing	na	2,079	2,281	2,316	$149,058,000	$65,338

Commercial Fishing

Fishing has long been a key element of the Southeast Alaska economy. In 2009, nearly 293 million pounds of seafood were taken from Southeast waters. Southeast Alaska has several dozen fisheries conducted by a fleet of mostly small boats. Salmon remains the bedrock for Southeast's small boat fleet. In 2009, the five salmon species represented more than three quarters (77 percent) of the region's catch in terms of volume. Southeast also has a diverse array of high-value, low-volume fisheries. For example, sablefish and halibut made up 6.5 percent of the total volume caught in 2009, yet accounted for 39 percent of the total catch value.

Commercial fisheries In Southeast Alaska include:

- **Salmon:** hatchery terminal areas (primarily chums and pink, but other too), seine (primarily pinks, but some chum and sockeyes), hand and power troll fisheries (primarily kings and cohos, some chum), driftnet/gillnet (primarily sockeye, with some chum and pinks), and some setnet (primarily cohos). In addition salmon subsistence and personal use is regulated.
- **Shellfish:** sea cucumber, tanner crab, shrimp pot, geoduck, dungeness crab, sea urchin, golden (brown) king crab, red/blue king crab, and shrimp trawl. A personal use king crab fishery is also regulated by ADF&G.
- **Herring:** herring bait, herring test, herring sac roe, and herring eggs on kelp.
- **Groundfish:** halibut, groundfish, rockfish, lingcod, and sablefish.

Seafood Processing, Mariculture, Sports Fishing and Subsistence

In Southeast Alaska there are approximately 60 seafood processing facilities; they are found from Yakutat south to Craig and range in size from grocery stores that process fish for their customers to large processing facilities that employ hundreds of workers and provide lodging and meals.

There are currently 10 productive mariculture farms located in clusters in Yakutat, Kake and Naukati Bay that produce primarily oysters and clams. In addition, thousands of visitors come to Southeast Alaska each year to enjoy the world class sport fishing, and they contribute to the economy by supporting local businesses. Fish also comprise 60 percent of subsistence foods taken each year in the state, which has been fundamental to Alaskan culture for thousands of years.

Ocean Products Cluster Strategy Development Process

In February, March and April of 2011, the Juneau Economic Development Council convened a 42 member Ocean Products Cluster Working Group with representation from private industry, including private sector firms headquartered outside the region, firms headquartered in the region, local fishermen; federal, state and local government agency representatives; tribal corporation representatives; university faculty; and local economic development entities. A full roster of the Working Group membership is below:

Southeast Alaska Ocean Products Cluster Working Group Members*

Name	Affiliation	Position
Shannon Stevens	Alaska Airlines	Cargo Sales Manager (Seafoods/Perishables)
Mike Goldstein	Alaska Coastal Rainforest Center	Executive Director
Geron Bruce	Alaska Department of Fish and Game	Assistant Director of Commercial Fisheries
Ray Riutta	Alaska Seafood Marketing Institute	Executive Director
Doug Ward	Alaska Ship & Drydock	Director of Shipyard Development
Bart Watson	Armstrong-Keta, Inc.	Business Manager
Tim Blust	Armstrong-Keta, Inc.	Business Manager
Rick Focht	DIPAC	Director of Operations
Steve Stromme	Elfin Cove	
Ron Medel	Forest Service	Tongass Fisheries Program Manager
Don Martin	Forest Service	
Deborah Hayden	Grow Ketchikan	Economic Development Manager
Anthony Lindoff	Ha'ani/Sealaksa	leading Sealaska oyster mariculture initiative
Russell Dick	Ha'ani/Sealaksa	President
Randy Lantiegne	Icicle Seafoods	Southeast Fleet Manager
Kris Norosz	Icicle Seafoods	
Galen Tromble	National Marine Fisheries Service	Chief, Alaska Region Sustainable Fisheries
Steve Reifenstuhl	Northern Southeast Regional Aquaculture	General Manager
Mike Forbush	Ocean Beauty	

Attended one or more meetings

Name	Affiliation	Position
Mike Round	Oceans Alaska SSRAA	Assistant general manager
Patricia Phillips	Pacific Fishing Inc.	Fisherman
Julianne Curry	Petersburg Vessel Owner Assoc.	fisherman
Ian Fisk	Primo Prawns	Fisherman
Jev Shelton	Sablefish	Fisherman
Phil Doherty	SARDFA (Dive Fisheries Assoc)	
Ray Ralonde	Sea Grant Marine Advisory Program	Aquaculture Specialist
Bruce Wallace	Seiner, UFA, Silver Bay, ASMI	
Tom Gemmell	Self	
Keith Criddle	SFOS UAF	Fisheries Division Director
Garry White	Sitka Economic Development	Executive Director
Kathy Hansen	Southeast Alaska Fishermen's Alliance	Fisherman
Shelly Wright	Southeast Conference	Executive Director
Len Peterson	Taku River Reds	Founder
Heather Hardcastle	Trout Unlimited	Fisherman
Julie Decker	UFA: National Seafood Marketing Coalition	
Chris Knight	United Southeast Alaska Gillnetter's Association	Executive Director
Jim Seeland	University of AK Southeast	Assistant Professor of Fisheries Technology
Casey Campbell	Wells Fargo	Business Relationship Manager
Casey Havens	Yak Tat Kwaan	President/CEO
John Sund		mariculture advocate
Jon Martin	USDA Forest Service	Tongass Transition Framework Coordinator

Over the course of three facilitated meetings and numerous between meeting teleconferences, this diverse group worked collaboratively to identify areas where opportunity for job creation and industry development may exist within this broad sector. In addition, the group identified opportunities for collaboration and partnership to overcome current constraints that stand in the way of business growth. The group developed ten initiatives that addressed themes emerging from the Cluster discussions.

Southeast Alaska Ocean Products Industry Opportunities and Challenges

The cluster working group was asked to develop a list of the opportunities and challenges offered by the Southeast Alaska seafood industry. The group developed the following list:

Opportunities

Southeast Alaska's rich, clean waters are an astounding resource

- Size of the resource (raw materials, marine products, water-estuary-stream system) is huge.
- We have high quality products from pristine waters and a vibrant ecosystem.

- We have the ability to provide the freshest products.
- We need to maintain what we've got; are all products at maximum sustained yield right now?
- We must all pay attention to environmental quality to ensure Southeast Alaska ocean products are natural, healthy, and sustainable.

Southeast Alaskan residents know the ocean; this industry is compatible with our lifestyle

- The nature of the ocean products industry is compatible with our lifestyle because this represents who we are and have always been as a people.
- The seasonal nature of ocean products is compatible with the Alaskan lifestyle which places a premium on recreation and subsistence.
- Southeast Alaska is 'small'; we all know each other and this facilitates communication among us.
- We have great connections, weather, and sense of community.

The ocean products industry is resilient

- The salmon industry was severely challenged twice; once 40 years ago and then again in the 1980's. We've rebuilt and come back due to ingenuity and our capacity to work together and tackle problems when chips are down.
- Industry has a history of successfully problem-solving in partnership with government.
- People and decision-makers have opportunities to communicate and collaborate on solutions.
- We hope there can be increased collaboration between industry members (i.e.; small and large processors).

There are opportunities to add value - for both salmon and other ocean products

- This needs more attention, research, and product development.
- We need to develop value-added products, including products that utilize secondary processing.
- What opportunities can shore-side processors create to add value? We need increased innovation in this area. How can we add value to locally produced products? The target is high quality value added products produced in-state.
- One opportunity for increased value-added processing in the region is rather than block freezing and shipping raw product to China for processing, doing this here.

Underutilized species present tremendous opportunity

- These opportunities are spread throughout rural Southeast Alaskan communities.
- Some of the opportunity areas are geoducks, kelps and other seaweeds, oysters, clams, sea cucumbers, glacial silt-cosmetics, dogfish, red king crab etc.

- Additional product development should consider volume, diversity, species, and value-added opportunity.

Certain types of repair and manufacturing jobs are complementary to the ocean products industry in Southeast Alaska

- Shipbuilding and ship repair in Southeast Alaska complement the ocean products industry.
- Manufacturing fishing, processing and harvesting infrastructure and equipment in Southeast would also make sense (for example mariculture farmers buy tumblers from Tasmania now).

Southeast Alaska Branding and Marketing

- Tell the Story - Wild Alaska branding; the Alaska name is our biggest asset. We can do a much better job of attracting attention and recognition to our region, of enhancing the understanding about the incredible productivity here.
- Southeast Alaska's seafood story can attract money and higher prices. Use chain-of-custody marketing to both educate consumer and increase the product value.
- Assist the USFS in managing the Tongass as a "seafood forest."
- More marketing (and research) money needed to explain and use Southeast Alaska's regional story.

Mariculture development and growth

- Mariculture could be a $20-$50 million/year industry.
- Enhancing salmon production (hatcheries), and production of ocean products

Availability of a young, trainable, local workforce

- Given the ocean resources here, the presence of University of Alaska campuses, and the large federal NOAA laboratory, we should have world class research occurring regarding ocean conditions, climate change, fisheries and seafood.
- The University system in Southeast Alaska should be a lead University for seafood research, marketing, product development and testing, and food sciences.
- Why don't we have a food sciences program here?

There is great access to Lower 48 customers from Southeast Alaska;

- transportation to these markets is less expensive from Southeast Alaska than from other parts of Alaska. Some note that they pass transportation costs on directly to customers. It would be good to have lower cost shipping options.

Better and consistent utilization of fish waste is an opportunity area

- May become a business necessity as regulations change. If fish production increases fish waste, volumes increase. This is another opportunity.
- Some processors in Southeast now have meal and oil plants and are getting value out of these waste streams.
- It is not known what scale of operation is economic or if these smaller plants can take others' waste profitably.
- The goal is full utilization of all catch (waste, all fish body parts).
- Opportunities are fertilizer for food security, bone meal, bio gas, bio diesel and more.
- The seasonality of the product is a challenge as is the fact that the volume comes in big slugs.

A sea otter management plan is needed for Southeast Alaska.

- Populations here are healthy, copious and beginning to impinge on commercial and subsistence harvest of several seafood products including Dungeness crab, sea cucumber, geoduck and shrimp.
- Streamline the export permitting process.
- As an example, one CWG member said it takes 3-4 months to get permission to export a sea otter hide, and the recipient must physically be in the US to receive it.

There are abundant renewable energy resources in Southeast Alaska.

- Investment should yield lower costs in small communities in Southeast, dependent on diesel fuel.
- Reducing energy costs benefits the ocean products industries, which are largely fueled by diesel power now.

Challenges

Access to water and to the resource is primary; without this nothing else is possible.

- We must increase access of rural Alaskans to wild stock.
- Support increased hatchery production (supply) allows the salmon industry to maintain high productivity.
- Access to supply is a big issue for new fisheries, both wild and cultured. There is a catch-22 where regulators don't know enough about the bio-mass to allow its utilization at levels needed to sustain business, but without research and studying the effect of utilization on the bio-mass nothing can be learned.
- ADF&G is lacking staff support for underutilized species.
- How can there be more reliable and steady access to the underutilized species bio-mass for new ideas and products? There must be a more cooperative relationship with regulators; a

collaborative team approach between government and industry is needed to both improve access and allow for wise utilization of ocean resources.

Maintaining sustainable fisheries, conservation, and restoration of habitat sustain the ocean resources industry.

- It is important to understand and stay abreast of the national perspective and requirements for sustaining ocean resources biologically and economically.

The markets are global and competition is fierce.

- Global markets determine prices and currency fluctuations affect competitiveness.
- Global food markets are often different than national markets.
- Alaska was strong on fishery research in the past, but funding decline has cost the state some regional research capacity. This limits the ability of local industry participants to enter emerging global markets.

Access to capital immediately follows access to the resource as a primary concern

- In particular, access to patient, long term capital that understands seafood and risk is needed.
- Portions of the industry are highly seasonal and only operate 2-3 months a year; investors (and regulators) need to understand this.
- Taxes can be a burden.
- Better access to capital is also needed to enable purchase that would bring limited entry permits and quota share now owned by non-Alaskans back to Southeast Alaska.
- A need for more funding for product development was cited, as was the need to fund workforce development for re-emerging sectors.
- Because the resource is owned by the state and federal governments, state and federal loan and grant programs are appropriate.
- Local governments could assist more particularly with infrastructure investment.

Cost concerns

- High costs for fuel, power, freight, transportation of product to markets, and labor are a concern.
- Rising fuel costs were cited by more than one as the largest cost concern.

More local government support is needed.

- Local governments could be more of an ally.
- Local governments need to realize the industry is providing employment and revenue in the community.

- More support for business is needed, for example some relief on property taxes as large processors only operate 60 days a year, etc.

We need to tell the Southeast Alaska regional story better in marketing and education

- We need to tell the story of our region and raise its profile as one that has built upon and stabilized by the seafood industry.
- Market the unique attributes of Southeast Alaska Seafood to help increase its value: from pristine waters, wild and sustainable.
- We are ocean people here in Southeast Alaska, fishery harvest has been an intrinsic part of our lifestyle and our families for generations.
- Many Alaskan politicians don't understand the direct and indirect employment and revenue that commercial fishing and the seafood industry provides, nor the challenges it needs assistance overcoming.

Workforce availability, development, and education were mentioned several times as obstacles.

- This affects different parts of ocean product industries from seasonal processing plant workers to year-round farmers.
- How do we attract workers to our smaller Southeast Alaskan communities? We need to do a better job of marketing the lifestyle, assets and advantages living in Southeast Alaska's rural community living.
- Workforce training specific to ocean products existing and emerging industries is needed.

Both federal and state regulations are an obstacle, a big challenge

- Moving through permitting process is daunting and costly.
- De-regulation would induce private investment.
- There needs to be an alignment of regulations with necessary or desired results, there is significant room for improvement.
- Work is needed to achieve and maintain a simple, flexible regulatory environment.

The regulatory environment is especially a challenge and obstacle to emerging industries and opportunities.

- ADF&G needs to find ways to allow some access to new ocean products while the research on the resource is under investigation. A better industry-public partnership is needed; it has to be a team approach.
- A dual regulatory system is needed: The needs and interest of large private seafood industry players drive the regulatory process, which creates conflicts and hardships for smaller emerging businesses and opportunities.

- We have to work with the state and federal agencies because they manage the resource, but the regulatory environment and attitude needs to be how can we facilitate, rather than how can we obstruct.
- Challenges to developing a mariculture industry are lack of access to water and leases; regulatory oversight/dual tracking; capital/startup costs are very high; and need to attract both private sector investors and individual farmers.

Ocean products businesses are diversified and as such rely upon a diversity of products. Ocean products businesses are also integrated, but could be more so. For example, the idea of creating a better hub and spoke system for catching, processing, and adding value to Southeast Alaska ocean products was mentioned. What would this look like; could this create more revenue and jobs for the region; if so how and with what investments? One idea was having cold storage/freezer capacity in Juneau, Sitka and other areas, then shipping blocks of frozen raw product or waste to these areas for thawing and processing later in the year to provide year-round processing and value-added jobs. The ocean products industry includes underutilized cultured products, underutilized wild products, full utilization of fish waste and parts, more value added opportunities, and enhanced production (which supports all of the above).

Ocean Products Action Initiatives

The following pages present the ten action initiatives supported with full consensus by the Working Group for inclusion in the regional strategic plan, based on their assessment of a positive contribution toward growing and promoting the Ocean Products Cluster. Each initiative identifies a champion, or co-champions, who have committed to coordinating further work to complete the planning and carry forward the implementation in late summer or early fall.

The initiatives with full consensus by the Cluster Working Group at this time are:

1. Develop a Sea Otter Management Program in Southeast Alaska
2. Establish a Marine Industry Technology and Workforce Improvement Consortium
3. Ensure Southeast's Fishing Future: Targeted Education and Training in the Acquisition and Financing of Fishing Permits, Quota and Fishery Businesses
4. Increase Wild Salmon Production Through Habitat Restoration
5. Include the Seafood Industry In USDA Programs (Regulatory Review)
6. Enhance Salmon Production
7. Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion
8. Further Develop Renewable Energy
9. Protect Long Term Assured Access To Fishery Resources For Both Current and Developing Fisheries:

a. Erosion Of The Fisheries

b. Marine Spatial Planning

c. Protecting Long-Term Assured Access To Fishery Resources Through Research

d. Protecting Long Term Assured Access To Fishery Resources Through Appointment Process/Conflict Of Interest

10. Establish Region-Wide Mariculture Zoning

The initiatives which did not have full consensus of the Cluster Working Group are below:

10. Simpler, Flexible Regulatory Environment for Direct Market Producers And Small Floating Processors

11. Rural Community Permits

Action Initiative 1: Develop a Sea Otter Management Program in Southeast Alaska

Cluster Working Group:	Ocean Products
Champion:	Phil Douherty, SARDFA (Dive Fisheries Assoc)
Initiative Development Team	SARDFA (Executive Director – Phil Doherty) has played a lead role in attempting to establish a SOUTHEAST AK Sea Otter Task Force. Several other organizations are also involved including Petersburg Vessels Owners Association, Southeast Alaska Fishermen's Alliance, the Central Council of Tlingit and Haida, and several towns and communities of Southeast Alaska.

Description & Motivation:

Department of Fish and Game (ADF&G) reintroduced 412 sea otters into Southeast Alaska: populations remained low until 1987 when a period of rapid growth with annual rates of increase documented between 15.7% and 23.3% (pg. 16 Pritchett). Recent surveys conducted by the U.S. Fish and Wildlife Service (USFWS) now indicated that the sea otter population in Southeast Alaska is approximately 20,000 animals and growing. Sea otters are efficient predators, eating almost any invertebrate they can find and catch. They must be efficient, for they need to eat the equivalent of almost 26% of their body weight every day. Sea otters can grow larger than four feet and weigh up to 90 pounds. In areas with rocky bottoms the preferred species are sea urchins, sea cucumbers and abalone. In areas with softer bottoms they eat geoduck clams and crabs. All of these species are vitally important to subsistence, personal use, and commercial harvesters in coastal Southeast Alaska.

One of the first of the shellfish species to fall prey to the sea otter's appetite was the abalone fishery on the outer coast of Southeast Alaska. It is now obvious that sea urchins, geoduck clams, sea cucumbers, and crab are being impacted. Shrimp are also impacted to an unknown degree.

SARDFA along with other organizations in Southeast Alaska such as the Southeast Conference, Petersburg Vessels Owners Association, Southeast Alaska Fishermen's Alliance, United Fishermen of Alaska, and various native organizations and tribes are coming together to begin a sea otter management plan in Southeast Alaska. By working with the state and federal government, all of the organizations can develop a realistic plan which will help protect the subsistence, personal use, and commercial fisheries of the people that depend on shellfish in Southeast Alaska.

Objective:

Southeast organizations have begun to form a Task Force composed of USFWS members, ADF&G members, commercial fishing organizations, and Southeast Alaska native tribes and organizations to look at realistic management approaches to protect important

shellfish species and to allow a less restrictive harvest of sea otters by Alaskan natives. Southeast organizations are requesting the Federal and State agencies examine the impact of sea otters on the subsistence, personal use, and commercial harvest of sea cucumber, sea urchin, geoduck clam, and crab with the ultimate goal of an ecosystem-based sea otter management plan benefiting all users of shellfish resources protecting shellfish resources from depletion, and allowing effective subsistence harvest of sea otters by the Alaska Native people. Currently there are many groups interested in researching the depletion of resources by sea otters and returning the rights of Native Alaskans to sell intact sea otter pelts but there to date has not been the coordination necessary to prevent the duplication of efforts or exchange of ideas, solutions and information. The development of a task force would form a core group to coordinate efforts and provide for an exchange of information and consolidate efforts so that we work together on common initiatives.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
Develop a working Task Force to develop a management plan for Southeast Alaska.	SARDFA, PVOA, SEAFA, USFWS, ADF&G, Sitka Tribe, Tlingit/Haida Council, Sealaska, Jon Bolling, Zac Hoyt, members of towns and villages of Southeast Alaska.	A cooperative approach by all of the entities involved. Continued communication. At this time there does not seem to be a budgetary need, but one should be developed that reflects travel time.	Spring of 2011
Support clarifying the definition or changing regulation to allow the Alaska Native people the traditional right to make further use of subsistence sea otter catches.	USFWS, Sitka Tribe, Tlingit/Haida Council, Sea Alaska.		Spring of 2011

Action Initiative 1: Develop a Sea Otter Management Program in Southeast Alaska

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Develop an effective sea otter management plan to allow increased subsistence take of sea otters by the Alaska Native people.	SARDFA, PVOA, SEAFA, USFWS, ADF&G, Sitka Tribe, Tlingit/Haida Council, SeaAlaska		Spring of 2012
Support continued University of Alaska and USFWS research on Southeast Alaska sea otters.	Zac Hoyt, Doug Burn, Verena Gill, Phil Doherty, Julianne Curry, Sonny Rice.		Spring of 2011

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Sea otters are protected under the Marine Mammal Protection Act (MMPA). Alaska Natives under the MMPA are denied the customary and traditional ability to sell intact sea otter pelts. By working with the Federal Government to allow the Alaska Native people the right to make further use of subsistence sea otter catches or work with the Congressional delegation to amend the MMPA to allow the sale of intact sea otter pelts, we can work towards more effective harvest. Development of an effective management plan will come by working with Federal agencies and the Task Force.	USFWS must take a lead role on this. That agency must continue to work with tribal entities in Southeast Alaska and other groups and towns that are being impacted by the growing sea otter population.

Action Initiative 1: Develop a Sea Otter Management Program in Southeast Alaska

Funding:

Phase:	Budget:	Funding Source:
Cost would be minimal; perhaps some travel money within the region and meeting room rental. Costs would be borne by individual groups or municipalities to start with. Costs would increase due to necessary trips to Washington DC, or the use of a lobbyist to support legislation.	N/A	

Outcome/Results:

The first objective is to develop a SE Otter Task Force. Development of the task force with designated members would be the first measurement.

The second objective is to develop an effective management plan for increased subsistence take of sea otters by the Alaska Native people.

The third objective is to allow the Alaska Native people the right to make further use of subsistence sea otter catches. Allowing the sale of intact sea otter pelts will be the second measurement.

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

Cluster Working Group:	Ocean Products
Champion:	Doug Ward, Director of Shipyard Development, Alaska Ship & Drydock, Inc. Jason Custer, City of Saxman Deborah Hayden, Grow Ketchikan
Initiative Development Team:	Patricia Phillips, Fisherman, Pacific Fishing, Inc.

Description & Motivation:

Southeast Alaska's long term decline in population and school enrollments is well documented and projected to continue to at least 2034 (Alaska Dept. of Labor Research and Analysis, Economic Trends, December 2010 Population Projections: 2010 to 2034). A decline in opportunity for growth in the regions basic and priority industries has accompanied the population decline. The maritime industries sector, so far an unrecognized industry sector in Alaska, offers employment and economic development opportunities that can mitigate conditions that have produced declines in economic and employment growth.

Alaska's marine industry sector is not recognized as an industry sector in state, regional, or local planning and resource allocation initiatives. Where subsectors of Alaska's Marine Industry Sector are tracked, some appear to have high non-resident employment rates and relatively few Alaska owned businesses. Marine and Maritime Industry Sectors cut across (cross sectors) nearly all of Alaska's industry sectors suggesting opportunities for value adding growth in existing and attracting new marine industry businesses that could located in the region. The 2009 study titled, "The role of Maritime Clusters to enhance the strength and development in European maritime sectors," by the European Commission's Directorate – General for Maritime Affairs and Fisheries and the Oceans Technology Cluster in St. John's, Newfoundland, provide starting points for assessment of Southeast Alaska's Marine Industry Sector.

Enhancements to the efficiency and capacity of Southeast Alaska's maritime industry sector can result in net positive economic gains which are shared by the wide array of industries reliant upon marine transportation (such as forest products, ocean products, and mining businesses). Enhancements can also generate environmental and social benefits for rural communities which suffer from socioeconomic disparity and depend upon high environmental quality to support subsistence activities. Such cross-cutting benefits will support the responsible development of Alaska's economy and increase America's overall economic competitiveness.

In addition to enhancing existing businesses activities, a healthy and capable regional Maritime Industry Cluster is vital to supporting emerging opportunities, such as development in the renewable energy, energy efficiency, Arctic shipping and intra and inter-state shipping.

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

As an example, enhancing Alaska's port/harbor capacity to accommodate marine vessels operating in the region can allow rural businesses to capitalize on fuel savings and energy efficiencies associated with maritime support activities. Fuel savings also result in decreased greenhouse gas emissions, which supports the high environmental quality needed to ensure continuation of subsistence activities, which play vital economic and cultural roles in rural communities. The knowledge, skills and abilities required to operate, build, and repair marine vessels translates well to other career opportunities in all forms of energy exploration, production, transportation, ocean products, mining and other resource industry sectors.

The Ketchikan Gateway Borough's Planning Liaison Economic Development Advisory Committee Economic Development Action Plan for the Maritime Industry Sector can serve as a reference for this regional initiative.

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Map the businesses and physical assets that comprise the Southeast Alaska Maritime Industry Cluster. Develop electronic and physical platforms which maritime industry cluster members can utilize to exchange best practices, coordinate funding requests, ensure transparent flow of information, and collaborate in promotional advocacy efforts. Included in this effort would be Identification of existing and potential stakeholders for advocacy, funding, and implementation of action items. This deliverable can be used to identify gaps in regional maritime service, products, or infrastructure requirements and to prevent over capitalization or undesirable employment and opportunity relocation within the region.	**Project coordination:** Identify long term regional program management entity with adequate resources and contacts to sustain operation for regional benefit. Key contact lists for the following businesses, organizations and agencies will be developed as this project progresses. Indentify entities willing to provide advocacy, funding, or technical assistance.	1. Funding and staff to research and produce a relational cluster map delineating cluster sectors, subsectors, and businesses. See Ocean Technologies map, St. Johns, Newfoundland. Funding for mapping software, customization and data collection and input.	1 18 months to get through gap analysis

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
2. Identify regional, state, national, and international trade, resource, or energy - a. development initiatives and opportunities in which Southeast Alaska Maritime Industries can provide value added services or products (modernization of Bering Sea Groundfish fleets through recent revisions to the American Fisheries Act is an example) and, b. planning and/or assessment efforts that impact Southeast Alaska Maritime Industry sector and insert value propositions for utilization of regional maritime businesses and assets. 3. Using the Southeast Alaska Marine Industry Cluster as the driver for new investment, create a marine and maritime infrastructure plan that would leverage public investment, public and private investments with effective private partnerships to accelerate expansion of Southeast Alaska ports, harbors, marine vessels and industrial support capacity to increase regional participation in development of Alaska's resource and energy	**Advocacy:** **Local:** Marine businesses, Chambers of Commerce and economic and workforce development institutions, School Boards, Universities, Technical Centers, tribal governments, and municipalities. **Regional:** Marine businesses, economic and workforce development organizations (SE Conference, Central Council of the Tlingit and Haida Indian Tribes of Alaska (Central Council)), University and Technical centers, and foundation funders. **State:** Marine businesses, trade and business organizations, Governor's Office and regional legislators, state Chambers of Commerce and Economic and Workforce Development	2. Funding for staff to interview marine businesses and agencies to identify initiatives, opportunities, or assessments to be analyzed and develop SE Regional input where appropriate. 3. Funding for staff to collect project information from local, regional, and state sources and test drive scoring system from Task 5.	2. 3 months 3. 6 months

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
projects. See Task 5 for development of criteria. 4. Workforce Investment System - Pilot a regional, industry led collaborative funding partnership around the Marine Industry Sector using the National Fund for Workforce Solutions (NFWS) model for linking Economic and Workforce Development initiatives. Develop performance measures in economic and workforce development that are related to increased productivity, competitiveness, prosperity, and competence for new human and physical investments. The five strategic approaches guide how the NFWS sites develop their regional approach: a. Create regional funding collaboratives: b. Organize workforce partnerships: c. Develop strategies for specific industry sectors: d. Build career pathways: e. Align local workforce programs: This pilot project could be incorporated in the Alaska Workforce Investment Boards (AWIBS) role to advise	Organizations, Alaska Native Corporations, and foundation funders. **National:** Marine, resource, or energy business operating in Alaska, Alaska Congressional Delegation, economic and workforce development organizations, trade and business organizations, federal funding agencies concerned with economic and workforce development and marine and maritime issues, foundation funders and other regional examples of best practices for cultivating regional industry clusters focusing on maritime. **International:** International businesses with a maritime component and working in Alaska's resource or energy industry sectors, Universities and	4. Funding for staff to support a regional conference with representatives of National Fund for Workforce Development (NFWD). Travel and expenses for NFWD staff. Set up effective video conferencing for region.	4. 2 months for conference followed by 2 months for recommendations to regional economic development organizations and AWIB

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
the Governor on regional workforce investments. 5. Incorporate the findings, outcomes, and products of this initiative to support creation of a statewide Maritime Policy. Develop rational criteria for investment and policy decisions based on guidelines that support competitiveness and attraction of new investment as priority goals.	other maritime regions that have developed best practices for marine or related industry cluster development.	5. Funding for staff research and develop regional criteria for project and policy selection and implementation	5. 2 months early in project and 2 month to develop policy after test driving Tasks 1-4.

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Obstacle: Marine Industry Sector is not defined in Alaska.	This initiative will identify the existing Marine Industry Cluster in Southeast Alaska.
Obstacle: Southeast Alaska marine industry vendor and	An effective marine industry development strategy that will link

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

STEP:	Help needed:
subcontractor base has contracted over the last 15 years of regional economic decline as has population and school enrollment.	existing marine enterprises and new marine investments with effective workforce investment system programs that will lead to a stable, globally competitive workforce producing marine services and products. Regional available facilities and businesses.
Obstacle: Municipal, State, and Federal procurement rules and policies often do not provide competitive advantage for SE Alaska's regional marine industries.	Evaluate and implement municipal and state HUB Zone contracting programs.
Obstacle: Legislative and local government do not understand value of maritime industry sector investments.	Education of and eventual advocacy from the listed entities in column 2 will lead to more effective strategic funding decisions.
Increase public / government awareness of the cross-cutting role the maritime industry cluster plays in Alaska's economy.	Develop and publicize industry sector map.
Reduce redundancies in planning efforts and overcapitalization of marine industry infrastructure.	Develop policies and criteria to make policy and project selections and recommendations.

Funding:

Phase:	Budget:	Funding Source:
Task 1 - Asset Mapping & Gap Analysis	$200,000	Federal or State programmatic or appropriations; seek local, foundation or industry match.
Task 2 – Identify opportunities and policy/ planning efforts impacting the regional maritime industries. Post on interactive website.	$75,000	Federal or State programmatic or appropriations; seek local, foundation or industry match.
Task 3 – Identify projects and programs to accelerate expansion of regional maritime industries – test drive criteria.	$50,000	Federal or State programmatic or appropriations; seek local, foundation or industry match.

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

Phase:	Budget:	Funding Source:
Task 4 – Regional workforce investment system supporting maritime industries; could include other industry sector.	$125,000	Federal or State programmatic or appropriations; seek local, foundation or industry match.
Task 5 – Recommendations and advocacy for State of Alaska Maritime Policy – selection criteria	$30,000	State, Local, tribal governments, local businesses industry match in training, Foundations.

Action Initiative 2: Establish a Marine Industry Technology and Workforce Improvement Consortium

Outcome/Results:

Task 1 – Availability of an interactive Industry Sector map identifying regional service and product providers with gap analysis leading to new investment opportunities.

Task 2 – Availability of a public access document center identifying development opportunities and policy or planning initiatives that impact the regional maritime industries.

Task 3 – Inventory of regional needs for expansion and improvement of regional maritime industry.

Task 4 – Pilot a regional workforce development system supporting the maritime industries and develop recommendations for economic and workforce development stakeholders (AWIB).

Task 5 – Develop guidelines and criteria for selection of infrastructure, product, service, policy, or planning initiatives and recommendations for a statewide maritime policy.

Action Initiative 3: Ensure Southeast's Fishing Future: Targeted Education and Training in the Acquisition and Financing of Fishing Permits, Quota and Fishery Businesses

Cluster Working Group:	Ocean Products
Champion:	Casey Campbell, Business Relationship Manager, Wells Fargo
Initiative Development Team:	Bruce Wallace, Seiner, UFA, Silver Bay, ASMI Galen Tromble, Chief, Alaska Region Sustainable Fisheries, National Marine Fisheries Service Keith Criddle, Fisheries Division Director, SFOS UAF Kathy Hansen, Fisherman, Southeast Alaska Fishermen's Alliance Jim Seeland, Assistant Professor of Fisheries Technologies, University of Alaska Southeast Kate Sullivan, Program Director, Fisheries Technologies, University of Alaska Southeast

Description & Motivation:

The issue is known as the "graying of the fleet". As boat/permit owners (fish business owners) age and seek retirement, we see these businesses purchased by non-locals and the businesses leave the community. As a result, the economic base of our communities is eroding and this brings instability.

Each fishing business that is purchased and relocated outside of our community has a negative impact on the entire community through the loss of jobs, revenue from fish delivered and processed, local taxes, goods purchased, population, etc. These impacts can also extend regionally depending on the type of business and where it is relocated.

Objective:

The objective is to develop the awareness and capability of the local population to capitalize on economic opportunities within their communities. The industry has transformed over the years in both equipment and property rights. The next generation of business owners needs a new skill set to compete. They need to be innovative in structuring business deals, and proficient in financing to purchase these businesses.

This initiative will provide residents with the necessary skills to acquire and operate successful businesses in the region. If this initiative is successful, local ownership of the businesses associated with the Ocean Products CWG will at a minimum be stable and hopefully

increase.

Develop education program to teach future business owners how to participate and invest in opportunities. Work with existing business owners to increase partnerships and joint ventures. Teach interested individuals how to finance business acquisitions.

The long-term benefits will increase the local share of the revenue generated by these businesses. Those revenues will circulate throughout the economy more as residents spend income throughout the year on various local goods and services. As the economic multiplier increases, local wealth with increase as well.

Another long-term benefit will result from the invested interest residents have in the success of the community and region in which they live. Local ownership deepens the relationship between business and community.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Identify knowledge gaps			On-going
2. Develop targeted training to address 1. with the business community.	JEDC, UAF-MAP (Paula Cullenberg, Sunny Rice), UAS (Steve Krause, Kate Sullivan), Cooperative Extension (Fred Schlutt), Alaska Council for Economic Education	Salary and operating budget for MAP or Coop Ext agent to offer classes in SE and to work with High Schools to implement business/finance curriculum or after-school programs	On-going

Action Initiative 3: Ensure Southeast's Fishing Future: Targeted Education and Training in the Acquisition and Financing of Fishing Permits, Quota and Fishery Businesses

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
3. Implement education/training programs within the school systems. Also consider afterschool programs such as DECA.	UAS Fisheries Technology Program (Kate Sullivan, Jim Seeland)	Some instructional resources already exist but they need to be put together and promoted. Add one faculty/fisheries professional to UAS Fish Tech Program	On-going
4. Publicize training and education programs.	UAS Fisheries Technology Program (Kate Sullivan, Jim Seeland), MAP	Contained in #1,2 above	On-going
5. Institute a public awareness campaign on the benefits of keeping businesses locally owned and the need to support these businesses. (Whether they are fishery related or not)	UAS Fisheries Technology Program/MAP	Contained in #1,2 above	On-going

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Getting young people to accept fishing as a career choice and to see it as a business venture.	*(They need exposure to our industry and encouragement*.) Need to invest some time, get into classrooms and also gets students out of the classroom setting and in contact with industry professionals. Develop clear pathways for them and provide constant support.
State and federal labor laws prevent kids under 18 from working around machinery, knives, and driving boats.	(This is an obstacle to exposing young people to our industry.) Make it clear what can and can't be done within the industry – more education and outreach, working with industry.
The acceptance of the initiatives programs as they relate to	*(Get acceptance by the School Board to include in curriculum;*

Action Initiative 3: Ensure Southeast's Fishing Future: Targeted Education and Training in the Acquisition and Financing of Fishing Permits, Quota and Fishery Businesses

STEP:	Help needed:
traditional education might be an obstacle. It is expected that education will take place in middle schools and high schools to encourage students to seek opportunity located within their region and to give them basic business skills to allow them to succeed.	*consider after school program like DECA to promote business skills*). This kind of work is already being done on various levels through the UAS school of Career Education. We can build on what is in place by increasing staff, providing some travel funding (for both students to visit sites and also for personnel to visit students). Again, clear pathways to achieve goals are imperative.
How do we get folks to attend training/education when it is provided?	Provide some funding to get them to attend. Travel even from Juneau to Ketchikan for instance can be expensive. At least some form of supplemental funding for travel will need to be provided. Also need to be mindful of the seasonality for meetings to assure constituency is able to access meetings.
Another obstacle will be with current and future business owners and their willingness to participate in programs developed by the initiative. The success will depend heavily on the willingness of current business owners to teach and provide opportunity.	One of the first steps is to poll the industry and find out how much support there is and what they would like to see as a result. We have found tremendous support by industry to support programs which encourage secondary schools to get involved in AK's fisheries.
Need to convince people there is value/ benefit to selling their business to someone local and keeping the business in town rather than just selling to anyone who has the money first.	*(Can someone act as a "bridge" to putting local sellers together with local buyers?)* Do we know what the impact is? Are there economic studies done that indicate a trend here (McDowell, for instance)? If not, this needs to be compiled and is a good starting point.
Long-term funding may also be an obstacle as many education programs (including Marine Advisory Program, MAP) are competing for limited funding. Many small businesses do not have the spare funds to invest in a program. The transition for businesses takes time and will require a steady effort which requires a long-term approach.	A possible funding source for secondary school outreach programs is the Carl Perkins Fund. UAS Fish Tech Program is using a 3 year grant to create "career pathways" for instance. These grants are competitive but bridging secondary school to careers in fisheries is very consistent with the objectives of this grant source. Industry very likely would be willing to support this initiative as well – avoiding government funded grants altogether.

Action Initiative 3: Ensure Southeast's Fishing Future: Targeted Education and Training in the Acquisition and Financing of Fishing Permits, Quota and Fishery Businesses

STEP:	Help needed:
Long term access to the resource is a huge concern for those looking to make a major investment in the fisheries. Lots of volatility hinders investment.	

Funding:

Phase:	Budget:	Funding Source:
Extension/MAP specialist w/ operating budget for travel and program development	$150,000/yr	
Support for HS teachers for DECA or CEE after-school programs in SE communities	$20,000/yr/community	
Add one position to UAS Fisheries Technology program – either faculty of fisheries professional. Create a travel fund to facilitate participation	$75,000/yr $20,000/yr	USDA or perhaps Perkins Grant USDA?

Outcome/Results:

When business ownership stays with community or regional residents instead of being sold to outside owners.

When businesses which were once owned by non-residents are now owned by residents.

High school students graduate with good business skills and a sense for career path.

A well-defined annual evaluation should be established at the outset to assure goals are being met. Group should meet on a scheduled basis (semi-annual? Annual?) to assure funds are being spent efficiently and tasks are effective.

Action Initiative 4: Increase Wild Salmon Production through Habitat Restoration

Cluster Working Group:	Ocean Products
Champion:	Chris Knight, Executive Director, United Southeast Alaska Gillnetter's Association Don Martin, U.S. Forest Service
Initiative Development Team:	Kathy Hansen, Fisherman, Southeast Alaska Fishermen's Alliance Steve Reifenstuhl, General Manager, Northern Southeast Regional

Description & Motivation:

Past management activities have resulted in negative impacts to salmon habitat. By performing restoration activities, wild salmon production can be improved. Increased salmon production results in increased opportunity for commercial, sport, and subsistence harvest.

Objective:

1. Repair and improve salmon habitat through restoration activities.

2. Increase the number of productive salmon streams from existing salmon systems that are low producing or non-producing due to damage caused by past management activities or natural blocks.

3. Increase the number of jobs directly and indirectly stemming from wild salmon production for all sectors for salmon industries in SE Alaska.

4. Temporarily increase the number of jobs for salmon restoration efforts 5 annually, and 20-30 seasonally.

5. Increase the economic output of the SE region from wild salmon harvests for all sectors of the fishing industry. Increase the number of processing jobs in the region. Increase the number of jobs directly and indirectly relating to salmon harvests in SE Alaska while raising the overall value of the resource for all users.

Action Initiative 4: Increase Wild Salmon Production through Habitat Restoration

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Identify current wild salmon systems in need of habitat restoration on state, federal and native lands.	USFS, ADFG, and local user groups, Native Tribes	Project coordinator with USFS, and Native Tribe. Teleconferencing system, GIS mapping(contract)	6months –one year.
2. Fund contractually teams to work with ADFG, Native Land Managers, and USFS to rehabilitate wild salmon systems.	USFS, Native Lands, ADFG-contractual entities to do restoration	Funding for restoration	2-10 years depending on number of systems identified for restoration
3. Monitor the success of projects. Some systems may require back-planting quicken stock recovery.	USFS, ADFG, Native Land Managers, local hatcheries	Funding for wild salmon production	1-10 years depending upon species.
4. Future monitoring after restoration and back planting has occurred to maintain baseline data for future salmon production.	USFS-1 person, two to three seasonal staff.	Monitoring, assessment and counting of wild salmon production on restoration systems	5 years

Action Initiative 4: Increase Wild Salmon Production through Habitat Restoration

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Funding from USFS and other programs to complete restoration activities.	USFS, and Native Land managers secure more funding for restoration activities.
	ADFG interaction
	Participation by local user groups

Funding:

Phase:	Budget:	Funding Source:
Phase 1-Identify systems in SE in need of restoration	$100,000	USFS
Phase 2-Contract out and project coordinate	$4-20 million	USFS
Phase 3-backplanting of salmon	$1 million	USFS
Phase 4-monitoring and assessment	$400,000	USFS

Outcome/Results:

Systems are producing wild salmon. Monitoring that shows fish from restored systems are being caught in existing fisheries adding to and increasing the number of jobs and economic output of the region.

Action Initiative 5: Include the Seafood Industry in USDA Programs (Regulatory Review)

Cluster Working Group:	Ocean Products
Champion:	Julie Decker, UFA: National Seafood Marketing Coalition
Initiative Development Team:	Julianne Curry, Fisherman, Petersburg Vessel Owner Assoc. Patricia Phillips, Fisherman, Pacific Fishing Inc.

Description & Motivation:

The USDA FY11 budget is $149 billion, up from FY08's budget of $93 billion. However, the U.S. seafood industry is not included in many USDA programs which help support other food producers in the U.S. Even when the industry is technically included, many times there are still bureaucratic roadblocks (e.g. regulatory definitions) which prevent the industry from utilizing the programs. However, the U.S. seafood industry still competes with these other food producers in the marketplace which has severely hampered the seafood industry from making the investments and improvements necessary to compete with the rest of the U.S. food producers.

Objective:

The objective is to change the regulatory definitions of fish, farm, farmer, rancher, livestock, agricultural operation, and co-producers (and any other regulations identified in the process) in order to include (rather than exclude) the seafood industry in USDA programs. These are changes that could be made administratively, thus not requiring Congressional action. This would benefit those directly involved in the industry (commercial fishermen, hatcheries, shellfish farmers, and processors) as well as those indirectly involved (suppliers, support sectors, local communities). The benefits would be felt in Southeast Alaska and across the nation primarily in coastal areas. These changes would allow access to all USDA programs such as FSA operating loans, beginning farmers/ranchers (to address "graying of the fleet"), specialty crops, insurance, organic, food security, disaster assistance, etc. Access to these programs would: 1) help stabilize some of the natural volatility of the industry, 2) help the industry compete on a level playing field with other U.S. food producers, 3) help the industry invest in improvements which will yield tangible economic benefits, 4) help stabilize coastal communities.

Economic Benefits:

The economic impacts of the seafood industry are listed below:

Sector	Sales Impacts	Income Impacts	Job Impacts
U.S. Seafood Industry (2008)*	**$104,034,970,000**	**$44,943,002,000**	**1,488,880**

Action Initiative 5: Include the Seafood Industry in USDA Programs (Regulatory Review)

Alaska Seafood Industry (2007)**	**$3,600,000,000**	**$2,200,000,000**	**78,519**
Southeast AK Seafood Industry (2007)**	**$400,000,000**	**$200,000,000**	**13,000**

The benefits of these regulatory changes would be felt nationally, statewide, and within the Southeast Region. In Southeast Alaska, the seafood industry accounts for approximately 13% of jobs, compared with construction (3.9%), logging (1.7%), mining (1.0%), and oil/gas (0.1%)†, making it a significant economic driver in the region.

Although projecting numerical economic benefits as a result of these changes is difficult, areas of potential can be identified. For instance, these changes are likely to encourage investment in areas which increase utilization of harvested resources, increase efficiency of production, increase the development of new products, and increase production of farmed and enhanced species. These investments would likely contribute to extracting more value for these resources, which will further trigger additional investment in upgrades, safety, and support services.

Taken in collaboration with additional strategic infrastructure investment in the region by USDA Rural Development (e.g. cold storages, refrigerated transportation hubs, marine repair facilities, job training, shellfish hatcheries/nurseries, etc.), these regulatory changes could significantly increase the economic impacts from the seafood industry and the numbers of jobs related to the industry.

*NOAA, *Fisheries Economics of the U.S.*, 2008, April 2010.

**Northern Economics, *The Seafood Industry in Alaska's Economy*, January 2009.

†TCW Economics, *Economic Contributions and Impacts of Salmonid Resources in Southeast Alaska*, January 2011.

Action Initiative 5: Include the Seafood Industry in USDA Programs (Regulatory Review)

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
6. Form stakeholder working group to conduct USDA regulatory review	Reps from: USDA agencies (FSA, FAS, RD, etc.), seafood industry (UFA, ASGA, hatcheries, processors, JEDC/SEC, Gov Office)	Teleconference, or meeting space & travel expenses	1 month
2. Complete exhaustive delineation of USDA regulations and programs, identifying areas where the seafood industry is currently excluded and potential regulatory fixes.	Either USDA designates a staff person or a hire a contractor	USDA staff, or $25,000 to hire contractor	3 months
3. Report back to stakeholder working group on results of Step 2; discuss potential regulatory fixes; agree on package of regulatory fixes to put forward to Secretary of USDA.	Stakeholder working group from Step 1	Teleconference, or meeting space & travel expenses (minimum 2 meetings)	3 months
7. Complete internal USDA process required to change regulations	USDA staff	USDA staff, political will/desire to make the changes	3 months?

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Step 1: USDA needs convincing this is a significant problem with a solution that is beneficial.	Need help articulating the problem (providing adequate support documentation).
Step 4: USDA needs the political will/desire to accomplish this. There could be push-back from the farm lobby which may view it as a threat or dilution to their programs.	Need to provide political support from those affected through letters of support to both Secretary of USDA and Congressional Offices.

Action Initiative 5: Include the Seafood Industry in USDA Programs (Regulatory Review)

Funding:

Phase:	Budget:	Funding Source:
Stakeholder workgroup meetings/travel	$25,000	USDA
Regulatory review by contractor or USDA	$25,000	USDA
Regulation drafting by USDA	USDA staff	USDA

Outcome/Results:

SHORT-TERM: Are more USDA programs available to the US seafood industry?

- # of newly available programs
- potential value ($) of programs now available to seafood industry
- # of seafood industry participants utilizing the newly available programs

LONG-TERM: Have the economics of the seafood industry been positively impacted over time?

- $ value of sales impacts, $ value of income impacts, # of jobs
- # of product forms produced

Action Initiative 6: Enhance Salmon Production

Cluster Working Group:	Ocean Products
Champion:	Steve Reifenstuhl, General Manager, Northern Southeast Regional

Initiative Development Team:	Kathy Hansen, Fisherman, Southeast Alaska Fishermen's Alliance Bart Watson, Business Manager, Armstrong-Keta, Inc. Chris Knight, Executive Director, United Southeast Alaska Gillnetter's Association John Burke, SSRAA, ADF&G State Fishery Scientist PNP Section Chief. Additional people that should be brought in are Alex Wertheimer, retired NMFS scientist; Jeff Hard NMFS geneticist, & a University of Alaska fisheries scientist; John Garner, Trident Seafoods.

Description & Motivation:

The market demand for salmon is strong and growing. Japan has large chum production facilities (~2 billion fry) and Russia has large natural pink production but is also building large hatchery facilities to boost production. This combination leaves Alaska potentially in third place as a producer of chum and pink salmon. In order to increase market share new Alaska production is necessary to stay competitive. Second, southeast Alaska's communities depend on fish resources for stability and growth; hatchery production of salmon is a major economic engine in these communities.

In Southeast Alaska where communities are shrinking in population and per capita earning power, salmon enhancement is a proven and readily available strategy that can improve the economic environment, which is critical to reversing the current trend.

Objective:

The objective of the initiative is to improve the economy of Southeast fishermen and the communities in which they live.

To lay the groundwork for additional permitted chum, pink, or sockeye salmon production on the order of 200 million eggs/fry using existing facilities where feasible and/or constructing new facilities where necessary. The benefits would begin with construction of a $10 to

$15 million facility or perhaps two. Most importantly, when returns reach full production potential in approximately 8 to 10 years the first wholesale value would be $40,000,000 per year. First wholesale value would show benefits to fishermen, processors, and workers, but significant benefits accrue in transportation, fuel, goods and services (see McDowell report for NSRAA, SSRAA, DIPAC combined). Based on McDowell's 2009 NSRAA economic report, total job equivalents for direct and indirect impacts a program of this size would provide 700 to 800 jobs in all sectors combined. Additional tax benefits are realized by state and local governments.

A second objective is to define new sockeye production opportunities whether hatchery or lake based.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
8. Work with ADF&G on two fronts: Commissioner on policy side of issue and biological/management/science staff regarding research, monitoring, & evaluation.	Steve Reifenstuhl John Burke All enhancement groups ADF&G staff	ADF&G, NSRAA, SSRAA,	One to ten years. This will be a long term effort.
2. Design research program that attempts to answer genetic questions regarding fitness of F1 & F2 generation hatchery/wild crosses. Design monitoring program and/or continue existing monitoring program to document straying of chum salmon in southeast Alaska. Research should include addressing meta-population concept for chum.	ADFG Eric Volk & staff NMFS Geneticist Jeff Hard John Burke & Steve Reifenstuhl	ADF&G, NSRAA, SSRAA, NMFS, other	One to ten years. This will be a long term effort.
3. If solutions can be found in the policy arena expand production at current and new facilities	NSRAA, SSRAA, DIPAC	Organizations will fund	One to ten years. This will be a long term effort.
4. Even if solutions can be found at policy level continue research as in #2 above. These fundamental	NSRAA, SSRAA, DIPAC, ADF&G,		One to ten years. This will be a long

Action Initiative 6: Enhance Salmon Production

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
questions need to be understood better in the science community.			term effort.
5. Find funding for research.	NSRAA, SSRAA, DIPAC, ADF&G, NMFS, University of Alaska	$1,000,000	One to ten years. This will be a long term effort.
6. As research and monitoring supply answers, ramp up production.	NSRAA, SSRAA, DIPAC	$10,000,000 to $20,000,000	One to ten years. This will be a long term effort.
7. USFS needs to provide clear guidelines that reflect ANILCA Title 13 law for wilderness area enhancement activities and also new Roadless Rule areas. LUD II cannot be equal or more restrictive than Alaska Wilderness. Currently inconsistent USFS policy guidelines discourage enhancement activities whether on or near Alaska Wilderness or LUD II or Roadless Rule areas.	Chris Knight, Steve Reifenstuhl, Kathy Hansen, USFS Forest Supervisor	Organizations in-kind	One to two years

Action Initiative 6: Enhance Salmon Production

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Primary obstacle is ADF&G permitting of new facilities and new production.	Biological concerns regarding straying and genetic impact (a red herring) need to be addressed through research and education. Obstacles can be overcome by good science, government leadership, and favorable research results. Therefore there are two prongs in this effort: government policy and research programs that focus on genetic effects. Policy needs to be addressed through the governor's office, commissioner of ADF&G, legislature, Board of Fish, public relations, and education. Research needs to be addressed through the scientific community within ADF&G, University of Alaska, National Marine Fisheries and the aquaculture associations.
Another obstacle of primary importance is access to land and sites. Although ANILCA has specific section enabling enhancement and hatchery construction (TITLE 13 Section 1315 Wilderness) in Alaska wilderness areas, it has been nearly impossible to get sites permitted. Similarly the 'Roadless Rule' seems to have the hallmarks of no entry. Some conservation groups threaten to sue if projects are proposed in areas with these land designations.	USFS needs to develop policies that fit the law (TITLE 13 Section 1315 Wilderness) rather than allow personal interpretation in each district office dictate policy.
USFS project permitting has been an obstacle in some cases. This takes several forms – special use permitting in wilderness and also LUD II is turned down because project is not 'aesthetically pleasing'. In one case a '60-day' USFS permitting process extended to a year and a half and was then denied for aesthetics. We need a consistent and clear policy from the USFS for permitting and land uses that are in sync with the law. Enhancement can only be done in habitats where very specific biological parameters exist and in	USFS recognition that ANILCA and LUD II land designations provide for enhancement and policies need to synchronize with the law. Much of the planning for fisheries development on the Tongass occurs at the Regional Planning Team, a group of ADFG and regional association biologists, and fishermen. The RPT has a Comprehensive Salmon Plan which the USFS participated in at one time. The wildlife and fisheries program manager from the USFS Petersburg office held an ex-officio seat on the RPT for many years.

Action Initiative 6: Enhance Salmon Production

STEP:	Help needed:
some cases that opportunity may only occur in LUD I or II areas.	Therefore during those years communication was much better with the USFS; this should be resurrected by the USFS.

Funding:

Phase:	Budget:	Funding Source:
Planning-this has begun both within ADF&G and in partnership with ADF&G.		Costs are being borne by agencies in-kind.
Implementation – genetic studies will take a decade or more and will cost in the high hundreds of thousands. Straying studies are ongoing and will become part of ADF&G's operating budget and cost between $50,000 and $100,000 annually. Straying studies will become part of the cost of new production for enhancement organizations, and therefore will raise the cost of production. Additional cost is likely to be in the tens of thousands per program.		
		Sources of funding beyond ADF&G and enhancement organizations are NPRB, NMFS, congressional, other granting organizations

Outcome/Results:

Measurement is straight forward: an increase in salmon egg permitted capacity on the ADF&G books will demonstrate success. Production of eggs/fry is the measure, but true success is the number of adults that return and are caught by fishermen, processed in local plants, and shipped all over the world.

Action Initiative 7: Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion

Cluster Working Group:	Ocean Products
Champion:	Heather Hardcastle, Fisherman; Fishermen's Daughters Ecofuels & Trout Unlimited Alaska Program

Initiative Development Team	Len Peterson, Fisherman; Taku River Reds; Garry White, Executive Director, Sitka Economic Development Association

Description & Motivation:

Fish byproduct is a liability for most seafood processors because of the costs and regulations involved with the storage and disposal of significant amounts of offal (byproduct can total up to 50% of incoming seafood weight). Additionally, the regulation of fish byproduct discharge by Alaska Department of Environmental Conservation (ADEC), Alaska Department of Transportation (ADOT) and the Federal Aviation Administration (FAA) may become more costly and restrictive now that ADEC (and not the EPA) has primacy over seafood discharge in state waters. The current requirement for processors to grind byproduct to less than 0.5" and dump this waste offshore may no longer be allowed in the near future.

The utilization of fish byproduct would not only help processors to be compliant with seafood discharge regulations and to potentially lower or eliminate costs associated with this discharge. Fish byproduct utilization also presents a tremendous market opportunity in Southeast Alaska because an estimated 60 million pounds of salmon byproduct alone are annually generated by seafood processors and hatcheries in the region. In order to capitalize on this largely unrealized market opportunity, however, firms need to fully understand and contend with the composition, quantity, seasonality, locations and chemical nature (stabilization requirements) of this byproduct.

Alaska Protein Recovery (APR) is one firm that has been able to realize the value of fish byproduct by converting salmon offal to food-grade oil and hydrolyzed salmon protein concentrate aboard a processing vessel that's stationary for the summer season (Ketchikan). Additionally, beginning in 2012, several processors in Sitka, Petersburg and Excursion Inlet plan to pool their fish byproduct at a Sitka shore-based plant and convert this byproduct to fishmeal, food-grade oil and sulfate-rich chrondroitin gelatin with technology developed by Sitka, Meal, Oil and Gelatin (SMOG). Both the APR and SMOG efforts involve large volumes of fish

byproduct in fairly centralized locations (although some byproduct is transported by vessel to the processing facilities). The focus of this Action Initiative, however, is on investigating how relatively small (or large) volumes of fish byproduct in *isolated* locations can be utilized cost-effectively so that byproduct doesn't necessarily have to be stored and transported to centralized processing facilities in order to be utilized.

Heather (Peterson) Hardcastle and Kirsten (Shelton) Walker of Taku Renewable Resources, Inc. (DBA: Fishermen's Daughters Ecofuels) completed an Alaska Energy Authority-funded study in 2010 that assessed the feasibility of converting Juneau Area commercial fisheries byproduct into biodiesel (in the study, "Juneau Area" included seafood processors and hatcheries within the City and Borough of Juneau (CBJ), as well as Ocean Beauty's Excursion Inlet facility). The team ultimately concluded that biodiesel production from local fish byproduct is not feasible for the following reasons: (1) High Economic/Energetic Cost: Economic and energetic cost to collect, transport, stabilize, store and process fish byproduct is more than the economic and energetic benefit of final biodiesel product; (2) Low Volume: When biodiesel production from only CBJ fish byproduct was analyzed separately from Excursion Inlet fish byproduct, CBJ biodiesel production was wildly cost-prohibitive because of the relatively low volume of fish byproduct generated by processors in this centralized location. The team calculated that biodiesel production from only Excursion Inlet fish byproduct could be economically and energetically feasible. However, the team also concluded that biodiesel production alone is not the best use of the byproduct because it doesn't appear to be a hugely profitable venture, even given the relatively large volume of byproduct generated at the Ocean Beauty facility. Two additional issues also became apparent: (3) Disposal of Non-oily Byproduct: Biodiesel is produced through a transesterification process with only the oil that is extracted from byproduct through high-heat rendering or ensiling (acidification); thus, once the oil is removed from the byproduct, one still needs to further process or dispose of the rest of the byproduct *without* oil (water, protein and ash/bone); (4) Failure to Meet ASTM Standard: Salmon oil is not an ideal biodiesel feedstock because the long Omega-3 and Omega-6 fatty acid chains lead to a high carbon residue value in final fuel testing. Because the team found the carbon residue value of salmon oil-based biodiesel is 13-20 times higher than ASTM requirements, this fuel does not meet the official biodiesel standard, ASTM D6751. Thus, this fuel product does not qualify the biodiesel producer for a critical $1/gal. federal tax credit.

The following are additional conclusions of the Fishermen's Daughters Ecofuels' (FDE) study that inform future fish byproduct utilization work in Southeast Alaska, including the Action Initiative proposed here:

BYPRODUCT COMPOSITION: Between 75-100% of the byproduct generated by Southeast Alaska processors is salmon. At most processing facilities, waste of all fish species (and all body parts) are mixed together and not separated.

BYPRODUCT QUANTITY: Up to 50% of incoming seafood weight is discharged byproduct, and amount and type of byproduct (i.e. heads/skins/frames/viscera vs. heads/viscera only) varies with incoming quantity and type of final product produced (i.e. fillets vs.

H&G fish).

BYPRODUCT SEASONALITY: Because the majority of byproduct is salmon, the vast majority of byproduct is generated at processing facilities in June, July and August.

BYPRODUCT STABILZATION: To control enzymatic and microbial decomposition of fish offal (and resulting unpleasant odors), it is critical to stabilize fish byproduct within 30 hours of seafood processing and the byproduct generation. The two most common stabilization methods are high heat rendering ("wet reduction") and ensiling ("acidification"). The high heat rendering of byproduct involves heating the offal to >160-180˚ for at least twenty minutes to break down the cellular structure of the byproduct. The heated slurry is then separated into high quality, clarified oil, fishmeal ("press cake" that is largely protein) and stick water. Because of high capital and operating costs, high heat rendering is the chosen stabilization method for large amounts of byproduct (more than 50,000 pounds per day).

Ensiling involves the addition of a strong acid (usually the strong antimicrobial agent, formic acid) to the byproduct to counter bacterial production and to drive down the pH of the fish offal. At an ideal pH of 3.5-4.0, proteins become soluble enough that the byproduct autolyzes without spoiling. Within a week, proteins and bone sink to the bottom of the mixing tank and oil rises to the surface. This acidified waste, or "silage," can be stored at room temperature for up to three months prior to further processing. Ensiling can also be a means to extract the majority of lower quality, unclarified oil from byproduct prior to processing the liquid silage into compost, or using the silage as a liquid fertilizer. Ensiling for the purpose of storage or rudimentary oil collection requires the addition of formic acid at a concentration of at least 3%. Ensiling, the stabilization method of choice for smaller amounts of byproduct (usually much less than 50,000 pounds per day), is not currently employed at a commercial scale in Alaska. At $30/gal., the use of high volumes of formic acid quickly becomes cost prohibitive.

Other, potentially more expensive and/or highly specialized fish byproduct stabilization methods include freezing, APR's process of enzymatic hydrolysis at low temperatures and the first stages of SMOG's "Montlake Process."

FINAL RECOMMENDATION:

Because the FDE study identified the high cost of extracting oil from relatively small quantities of byproduct as the major hurdle to biodiesel production, biogas (methane) production presents a promising alternative use for the salmon offal. From what FDE witnessed in Finland, biogas production can be scaled to the level of the available waste, and the production of methane (for both heating and electrical generation) and fertilizer (additional co-product produced through the anaerobic digestion process), are two

potential revenue streams.

Furthermore, byproduct collection for the eventual placement of waste inside an anaerobic digester isn't limited by the short 30-hour timeframe discussed in this study. Not needing to transport and stabilize waste within 30 hours of byproduct generation should dramatically reduce byproduct collection and stabilization costs. The high capital and operating costs for a rendering plant are also not required for bacteria to digest byproduct (and form methane) in anaerobic conditions.

Objective:

The objective of the initiative is to determine at what scale(s) the conversion of fish byproduct to biogas (methane) for combined heat and power (CHP) and inorganic fertilizer through anaerobic digestion is feasible. Thus, this initiative will allow the ocean products industry cluster to determine if and how this method of fish byproduct utilization can meet the individual needs of a single processor, cluster of processors or entire community. Such a study will also include the identification of the specific bacteria ("psychrophiles") that currently break down fish waste in, and are uniquely adapted to, the anaerobic conditions [and pressure, depth, temperature and salinity] of Southeast Alaska waterways.

If this initiative is successfully accomplished, several benefits to the Ocean Products Industry cluster could be realized in the long-term, including the following:

-RENEWABLE ENERGY DEVELOPMENT: Development of a source of cost-effective renewable energy (electricity and heat) for participating isolated seafood processors and/or communities.

-FERTILIZER PRODUCT: The inorganic, odorless material that results from the anaerobic digestion process, in addition to methane, can be marketed and/or utilized in community greenhouses as a nutrient-rich fertilizer product (calcium from ash/bone is particularly important for plant growth).

-LOWER BYPRODUCT DISPOSAL COSTS: Elimination or minimization of the costs currently incurred by participating seafood processors to dispose of fish byproduct.

-**REGULATORY COMPLIANCE:** Assured compliance with ADEC (and ADOT and FAA) regulations governing seafood waste discharge

by participating processors.

-SE AK BECOMES AN R&D HUB: Southeast Alaska becomes a center of wild fishery "wet biomass" renewable energy research and development, with a focus on anaerobic digestion by local psychrophiles.

-IMPROVED MARINE ENVIRONMENT: Less fish byproduct will be discharged into Southeast Alaska waterways in high volumes in localized areas (which has lead to anoxic "dead zones" in some cases), and fewer fossil fuels will be burned.

-PROMOTIONAL OPPORTUNITY: Not only is byproduct ("waste") utilization a selling point on its own, but the utilization of some of this byproduct as a renewable energy source allows a company to promote their smaller carbon footprint.

Action Initiative 7: Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Resume conversations with multiple individuals, companies, organizations and laboratories who have expressed interest in the past with investigating the potential of biogas production from fish waste in SE AK: Leading biogas research and production company in Finland (produces biodiesel and biogas from millions of tons of fish byproduct annually in a climate similar to SE AK), USDA ARS researchers based in Fairbanks and Albany, CA, researchers at Pacific Northwest National Lab (PNNL) in Richland, WA, and others. Determine which individuals and entities are interested in helping conduct (and potentially have resources to contribute to) a fish byproduct-to-biogas pilot study.	Motivated Southeast Alaska seafood businesses, including Taku Renewable Resources, Inc.–"TRRi" (DBA: Taku River Reds; DBA: Fishermen's Daughters Ecofuels)–that has had introductory conversations with entities to the left.	Time and energy	Immediate – by Nov. 2011
2. Resume conversations with Dr. Katey Walter Anthony, aquatic ecosystem ecologist at UAF's Water and Environment Research Center, who specializes in lake-bed psychrophiles, and who has assisted Cordova high school students for a number of years with their project to develop small anaerobic digesters with which individual households can produce biogas to power appliances from relatively small amounts of organic waste. Determine if Dr. Anthony is still interested in	Motivated Southeast Alaska seafood business(es), including TRRi, that has already had introductory conversations with Dr. Anthony and Mr. Vance.	Time and energy	Immediate – by Nov. 2011

Action Initiative 7: Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
working on a Southeast Alaska fish byproduct-to-biogas study, including helping to identify the species of bacteria that break down organic waste in the Southeast Alaska marine environment. Also reach out to Eric Vance of Capital Disposal (Juneau landfill) on this topic again.			
3. Design and seek funding for a pilot study that examines how and if biogas production from fish byproduct at various scales is feasible [identification of small or medium-sized seafood processor(s) that is/are willing to participate in such a study]	Motivated Southeast Alaska seafood business(es), including TRRi, and USDA ARS researchers and UAF's Alaska Center for Energy & Power (ACEP) researchers. A small or medium-sized processor will need to be recruited to participate in this pilot study. Juneau's Alaska Glacier Seafoods is one such potential processor.	Time and energy	Nov. 2011 – March 2012
4. Design and seek funding for a study that strives to identify the species (or multiple species) of psychrophile bacteria that break down organic waste in Southeast Alaska anaerobic, marine conditions AND to determine how/if bacteria species can be cultured and eventually nurtured in an anaerobic digestion unit.	Motivated Southeast Alaska seafood business(es), including TRRi, as well as USDA ARS researchers, ACEP researchers and Dr. Katey Walter Anthony (and/or another Alaskan ecologist she recommends), ideally in collaboration with Finnish and PNNL researchers.	Time and energy	Nov. 2011 – March 2012
9. Conduct studies outlined in (3) and (4) above.	Motivated Southeast Alaska seafood business(es), including TRRi, at least	Time, energy, grant funds and in-	May 2012 – Sept.

Action Initiative 7: Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
	one participating processor and researchers at USDA ARS, ACEP, UA campuses, the Finnish company and PNNL, etc.	kind/cash donations	2013

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
(1) Identifying a small or medium-sized processor(s)that wants to participate in (and potentially contribute in-kind or cash donations for) a fish byproduct-to- biogas pilot study. (*possible* obstacle)	Outreach to processors and communities to explain potential benefits of this research
(2) Culturing, and transferring to an anaerobic digestion unit, large colonies of pychrophile bacteria. (*possible* obstacle)	Collaboration and information-sharing with Finnish researchers and researchers at labs specializing in biogas studies (i.e. PNNL)
(3) Acquiring the equipment and expertise necessary to compress and store biogas for future CHP use. (*possible* obstacle)	Establish lease agreements for equipment rentals to use in pilot study with Pacific Northwest companies or labs (i.e. PNNL)

Action Initiative 7: Study the Conversion of Southeast Alaska Fish Byproduct to Biogas and Fertilizer through Anaerobic Digestion

Funding:

Phase:	Budget:	Funding Source:
Phase I – Pilot Study: Biogas production from fish byproduct generated by small or medium- sized processor, including how to compress and store biogas for future use as a heat or electrical source and estimated value of fertilizer co-product.	$500,000	USDA (Rural Development? SBIR?) grant with in-kind or cash donations from businesses and/or community partners
Phase I – Associated Research Project: Identify the species (or multiple species) of sychrophile bacteria that break down organic waste in Southeast Alaska anaerobic, marine conditions. Determine how/if bacteria species can be cultured and eventually nurtured in an anaerobic digestion unit.	$200,000	USDA or National Science Foundation or Alaska's Emerging Energy Technology Fund grant(s)?

Outcome/Results:

In consultation with Finnish engineers and chemists, USDA ARS researchers will be able to design and conduct a pilot study with willing participating seafood processor(s). The outcome of this study will be a determination of the scale at which biogas production from fish byproduct is feasible, one of the objectives of this initiative. Additionally, the second objective of this study can be met through the identification of the specific pychrophiles that break down organic waste in the anaerobic, biophysical conditions of the Southeast Alaska marine environment.

Action Initiative 8: Further Develop Renewable Energy

Cluster Working Group:	Ocean Products
Champion:	Bart Watson, President, Armstrong-Keta, Inc.
Initiative Development Team:	Mike Round, Assistant General Manager, Southern Southeast Regional Aquaculture Assn.; Oceans Alaska Garry White, Executive Director, Sitka Economic Development Council Mike Goldstein, Executive Director, Alaska Coastal Rainforest Center Mike Forbush, Ocean Beauty Seafoods Bruce Wallace, seiner; United Fishermen of Alaska; Silver Bay Seafoods; Alaska Seafood Marketing Institute Heather Hardcastle, fisherman; Trout Unlimited

Description & Motivation:

Energy use is a major component of the ocean products industry in Southeast Alaska. Most of that energy is currently derived from fossil fuels, which are subject to increasing worldwide competition, driven by fast-developing emerging market demand. At the same time, global supplies have peaked or will do so soon, and in any case are getting more expensive to extract. The SE Alaska ocean products industry is highly vulnerable to rising price trends, price spikes, fossil fuel shortages and supply disruptions.

SE Alaska is also endowed with a bounty of renewable energy resources: hydro, wind, geothermal, tidal, wood and biofuels. Hydropower is commonly cheaper than diesel generated electricity and is currently in widespread use, notably in all the larger communities in SE as well as a few small ones. Even so, existing hydro generation capacity still supplies only a minor portion of our total energy use. Hydropower electricity is relatively inexpensive and prices are relatively very stable. There is a great deal of untapped hydropower potential still available along with other types of renewable energy resources, and no SE communities are completely powered by hydro or any combination of renewable energy, meaning that substantial quantities of fossil fuels must still be imported. At the end of a very long supply chain, SE will be increasingly at risk for major economic dislocations from world energy problems until we develop our local Renewable Energy resources.

The initiative to develop SE renewable energy is key not only to the ocean products industry, but also to maintaining an affordable quality of life for all residents of the region. This is an especially critical issue in rural SE communities, where the price of fossil fuels has become especially burdensome to both local residents and small processors.

Action Initiative 8: Further Develop Renewable Energy

Objective:

The development of significant additional renewable energy resources will be a major boon to the ocean products as well as other energy intensive industries in SE Alaska in several ways: 1) renewables can currently generate power more inexpensively than fossil fuels in many areas of SE, especially smaller rural communities where the seafood industry is often the economic mainstay; 2) while requiring upfront capital investment, renewables protect against future fossil fuel price increases and disruptions by utilizing free fuels or (in the case of wood and biofuel feedstock) inexpensive waste products; 3) as the world copes with higher fossil fuel prices, a region like SE Alaska that has the potential to run 100% on renewable energy will gain a major competitive advantage for both harvesting and processing locally; and 4) the development of renewable energy to power Southeast Alaska will add considerable value over the long term to our locally harvested and grown ocean products, while lower energy costs and stable supply will be an important economic factor in creating more and better-paid jobs for this industry and this region.

SE Alaska cannot compete on the basis of low labor costs in other seafood producing and processing areas of the world, such as Asia, but if we could convert to affordable clean energy to power our industry, we could gain a significant competitive edge.

In addition, the ocean products industry in Alaska is highly dependent on maintaining pristine waters and healthy ecosystems. The switch from fossil fuels to renewable energy sources will contribute to the preservation of these natural resource assets, helping to minimize potential impacts from oil spills, air pollution, climate change and ocean acidification.

From a marketing perspective, Alaskan seafood products fetch a premium price over competing products from other areas of the world due to consumer perceptions of Alaska as a clean, healthy, natural and sustainable ecosystem. Southeast Alaska has an opportunity to build on this reputation and enhance its price advantages by marketing the region's reliance on clean renewable energy. In coming years we are likely to witness the rapid growth globally of consumer awareness of this issue.

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Educate the public, and especially municipal and state leadership, on the advantages of planning ahead to create energy independence for SE	This is such a fundamental and pervasive issue in our region that it is really up to each of us –	Personal time and energy.	The sooner the better to start this long-term

Action Initiative 8: Further Develop Renewable Energy

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Alaska based on developing our renewable energy resources. Contact the governor, legislators, mayors, and city council members. Write letters to the editors. Speak to business groups. Inform our co-workers and friends.	those of us who recognize the looming crises and see the potential for a renewable energy solution need to become active advocates.		ongoing process.
2. Collaborate with electrical utilities to refocus their strategic planning on the development of renewable energy resources.	RE business owners and advocates; chambers of commerce when they can be brought on board; electrical utility CEO's.	Cost/benefit analyses highlighting fossil fuel price instability and rising trends can be most influential in showing utilities the path forward.	There's no time like the present for planting the seeds, followed by frequent cultivation.
3. Foster development of a regional Renewable Energy industry. Specific steps include pushing the AEA to adopt regulations governing utilities' purchase of Renewable Energy power from Independent Power Producers, lobbying the legislature and governor to support net metering to encourage small-scale innovation and local Renewable Energy generation, and encouraging legislative and administrative support for additional Renewable Energy legislation and funding along the lines of the good programs passed by the legislature over the past two years. Ensure that public/private hydro development partnerships qualify for state and federal funding. Establish a revolving loan fund for financing conversions to efficient electrical heat pump heating systems. Also work to make federal	Our legislators are key players in this arena and have been very active (and are now relatively well educated) on these issues. The current governor is another matter, myopically favoring the oil companies, pushing to reduce our oil income dramatically, and vetoing half of last year's Renewable Energy Grant Fund appropriation.	A few phone calls, letters and meetings to the appropriate politicians can be significant. Funding for new projects is a major challenge, and the Alaska legislature has been developing loan and grant programs for this purpose.	Lobbying during both the legislative session and the interim can be effective, but the push for this legislature needs to occur before the end of next year's legislative session in April 2012.

Action Initiative 8: Further Develop Renewable Energy

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
regulations more conducive to developing hydropower in designated wilderness areas. Creating a supportive environment for entrepreneurs to tap into our Renewable Energy resources, develop locally appropriate technologies and build financial interests will spur the transition to renewables regionally.			
4. Work to improve federal regulations to make them more appropriate to specific conditions in Alaska. Currently, hydropower is not considered a renewable resource at the federal level; efforts are underway to remedy that exclusion for Alaska. The reinstatement of the "Roadless Rule" in SE Alaska needs to be modified to encourage the development of renewable energy within USFS lands. Federal regulations should similarly be made more conducive to low-impact hydro and geothermal projects within designated wilderness areas.	Our congressional delegation can help reshape federal legislation to support hydropower and other renewable energy development. State and local politicians can add their voices to the requests.	Citizen lobbying, likely to be especially effective if the proposed changes are carefully crafted to garner the support of local and national environmental advocacy groups on the basis of shifting to green energy.	Ongoing long-term initiatives. Particularly important to collaborate with environmental groups to get them on board.
5. Create a regional energy transportation system tying together electric generation and consumption throughout SE Alaska. Such a system can balance supply from diverse interruptible Renewable Energy sources (e.g., wind, tidal), disseminate the benefits from major hydro projects and create markets for Renewable Energy production where the resources are located. The system could be an electric power transmission line grid or a fuel produced by	Governor, legislators, mayors, city councils, utility CEO's, business groups.	Cost/benefit analyses and citizen lobbying. The funding for a SE grid would likely come from a legislative appropriation negotiated as part of a bill creating a new	Ongoing long-term initiatives. Intense lobbying push whenever the legislature begins to focus on a comprehensive Railbelt energy bill.

Action Initiative 8: Further Develop Renewable Energy

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Renewable Energy generation, such as anhydrous ammonia. However, the high costs of constructing such a system must be balanced against the benefits of separate local Renewable Energy projects serving isolated communities.		energy source (such as Susitna or Chakachamna) for the Railbelt.	
6. Evaluate and promote the potential benefits of an electric transmission intertie between SE Alaska and the North American grid via BC. The vast markets for electric power could stimulate development of additional Renewable Energy resources in SE, especially as prices rise. The caveat is that legislation must firmly control the incentives to sell all power produced here to the highest bidders, subjecting SE consumers to electricity prices that vary with global energy prices and negating our potential competitive edge based on affordable and stable energy supplies. Anhydrous ammonia production may be an alternative way to reach major markets.	Federal and state governments; utility companies.	Such an intertie would be hugely expensive and would depend on federal and/or state appropriations. As Renewable Energy advocates, we could help evaluate whether this is the best place to invest limited financial resources. The AEA should carry out a major study of the anhydrous ammonia option.	Whenever the iron is hot.
7. Make the necessary moves now to invest in new renewable energy production, instead of waiting for crises to strike in fossil fuel prices or availability. Energy efficiency also needs greater emphasis in businesses and residences throughout the region, since renewables are most cost effective when	State and local governments; utilities.	Political leadership; feasibility studies; project financing.	The sooner the better to initiate multi-year processes and prepare for inevitable energy shocks.

Action Initiative 8: Further Develop Renewable Energy

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
paired with their efficient use.			
8. Submit Action Initiative 8 to Southeast Alaska Integrated Resource Plan.			

Obstacles and Impediments Likely to Affect Implementation:

STEP:	**Help needed:**
1) Public education.	Our own personal commitment to fight the inertia that characterizes human activities; time invested in contacting key players.
2) Work with electric utilities.	Enlist Renewable Energy experts to help create persuasive cost/benefit analyses. Go public in your community to build pressure on utilities to plan ahead.
3) Promote regional Renewable Energy industry.	Legislative support to ensure the regulatory climate is favorable.
4) Improve federal regulations.	Congressional support to ensure the regulatory climate is favorable.
5) Create a regional energy transportation system.	Cost/benefit analyses; the political will to provide the public funding required. Support the Alaskan Renewable Energy advocacy groups in their work.
6) Electric transmission intertie to North American grid.	Cost/benefit analyses; the political will to provide the public funding required. The utilities and AEA will be key in these analyses.
7) Investment now to prepare for future energy stability and affordability.	Political and utility leadership open to change. In the case of intransigence, working to change leadership. We are the voters.

Action Initiative 8: Further Develop Renewable Energy

Funding:

Phase:	Budget:	Funding Source:
Local education.	Minimal expenditures are required; personal involvement is key.	Grants, memberships and donations to appropriate advocacy groups can be a big help.
Government support of Renewable Energy industry.	Same as above.	Same as above.
Creation of energy transportation systems.	Massive.	State and federal governments.

Outcome/Results:

Renewable energy production in Southeast Alaska will likely be tracked by utilities and state agencies. Every incremental gain in this direction will be positive. Complete success will be when SE is running 100% on sustainable and affordable Renewable Energy with virtually no fossil fuel use for heating and transportation.

Action Initiative 9: Project Long Term Access to Fishery Resources for both Current and Developing Fisheries.

Cluster Working Group:	Ocean Products
Champion:	Kathy Hansen, Fisherman, Southeast Alaska Fishermen's Alliance

Initiative Development Team:	Steve Reifenstuhl, General Manager, Northern Southeast Regional Bruce Wallace, Seiner, UFA, Silver Bay, ASMI Tom Gemmell, Self Julianne Curry, Fisherman, Petersburg Vessel Owner Assoc. Jev Shelton, Fisherman

9A - Access to The Resource - Erosion Of The Fisheries

Description & Motivation:

Although commercial fishing has existed in Alaska for over 100 years, limited entry permits and Quota Share programs only grant the owner the privilege to harvest a resource with a specific gear type in a certain area and the right to revoke the program is contained within law – federal for Quota Share programs and State for limited entry permits. The value of these permits and quota shares depends on healthy resources and stable allocations between commercial and sport fishery.

There is a growing desire to turn Alaska and particularly Southeast Alaska into "a playground" for those coming to Alaska. But vibrant industries need to exist in Southeast Alaska including access to our natural resources whether they are Ocean products or access to the lands in Alaska.

The erosion of commercial fisheries by reallocation is another threat to the existence of vibrant and economically viable commercial fisheries. For example, the Chatham blackcod fishery is the highest value groundfish fishery in Southeast Alaska with approx. 100 permit holders fishing yearly with 2-4 crewmen per vessel. A growing sport fishery was developing on this fishery while the commercial fleet was facing continually declining harvest limits, and because ADFG wasn't aware of the growing fishery, they didn't factor it in the model for

setting appropriate harvest limits because the growth of the sport fishery was unknown.

With larger human populations in Alaska and increased tourism, unregulated and/or unmonitored ocean resources are being harvested at greater rates than in the past, and perhaps are unsustainable. With this growth comes the need for accurate accounting of removals of all species in the recreational, personal use and subsistence fisheries in order to maintain sustainable populations. The current system of a statewide harvest survey is a measurement of TREND and not actual accounting. It doesn't measure all species, and the survey is sent out up to a year later and memory is not always the best by then. Plus there is a large proportion that doesn't even bother to return their survey when sent to them. Creel Sampling is used in addition to the Statewide harvest survey but the state employed creel samplers have to receive permission before stepping onto private property so large amounts of harvest are not sampled, particularly from remote lodges where a substantial portion of the harvest is occurring.

The definition of "guided fishing" needs to be changed in order to better represent all models of tourism client fishing, and make sure they are being documented and accounted for. Assisted unguided fishing, bare-boat, motherships, and Canadian style self-guided are all models of fishing that the guided sport fishing industry currently has that need registration and accounting of harvest. SB 24 was introduced in 2011 in Alaska State legislature. A portion of this legislation defines and would require "outfitters" and "transporters" to register and could require logbooks etc. The legislation also contains a lot more that is not necessary for the management of accountability of ocean resources. SB 24 has been stalled, a legislature sub-committee will be holding hearings on this issue in the fall. The current sport fish guide licensing and log book program is being extended one year at a time with some sport fish guides lobby against renewal of the program as being unnecessary.

Maintaining and increasing research along with an appropriate level of funding for ADFG management is a necessary component of maintaining access to and gaining access to developing fisheries. One area of research and development needed is to determine release mortality for hook and release landing of different species of fish and then establish a reliable sampling procedure for establishing the volume of hook and release occurring.

A strength of managing Alaska's ocean resources is that the State Constitution requires "Sustainable" management of the resources, we have a good public process including the Board of Fish and North Pacific Fisheries Management Council, with a local fish and game advisory committee system to support the Board of Fish process. Unfortunately this good managing system that is upheld as a model for other states and countries is only as good as the caliber of the people who volunteer to serve on the committee or appointed to the Board, and their ability to let science, policy and standards guide their actions and not let personal agendas and politics to trump.

Board of Fish conflict of interest policy prevents fishermen serving on the board in the region they fish from participating in the discussion and sharing the knowledge that they have on the subjects in front of the board. The legislature uses the following standard for conflict of interest "that if a bill affects an entire group of citizens the same, then it is not considered a conflict of interest under Alaska law." Although the regulations and statutes have not changed at all over the years the interpretation by law advisors to the Board of Fish has changed so

now the Board of Fish member has to actually join the audience before they will deliberate on a proposal. Only commercial fishermen are viewed to have a direct financial interest if they hold any limited entry permits or QS along with any family members including brothers and sisters, sons and daughters, parents etc will cause a conflict to be declared if a proposal on that fishery is being deliberated on.

New developing fisheries have their own set of difficulties in trying to develop opportunities on un-utilized and under-utilized fisheries. A policy was being developed at one time for a process to use for new developing fisheries but the process was unwieldy and never finished at the board of fisheries.

Objective:

Maintain viable access to fishery resources so that viable and vibrant commercial fisheries exist throughout Southeast Alaska, particularly in smaller rural communities where commercial fisheries are/were the backbone of the community. Let science be the driving force for decisions made in our management agencies based on the abundance of the resource. Commercial fishermen do not object to declining harvest limits when science based rather than a response to uncontrolled growth of sportfishing. The benefit to the region is the continuation of thousands of small businesses, maintaining important infrastructure within the communities such as harbors and processing facilities etc.

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Encourage the State of Alaska Legislature to fund ADFG and provide funding for research needs.	ADFG, UFA, Fishing Associations, Processors, SEC and local municipalities		Yearly event
Encourage the Board of Fish, State of Alaska Legislature to develop an accounting system that accounts for all removals of the resource so that the fisheries can be sustainably managed. Part of this	ADFG, UFA, Fishing Associations, Processors, SEC and local municipalities. Individuals will be		

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
would be to allow access by enforcement and creel samplers to remote lodges.	particularly important to speak up.		
Develop a reliable sampling procedure for establishing the volume of hook and release landing with associated data-based estimates of resulting mortality. Ask for funding through the legislature and the regulatory authority for program developed. Work on closing the loophole regarding "assisted unguided" either through SB 24 or other legislation. Document the fishing sector, vessels, crew, processing industry, fishery dependent businesses and document the footprint/grounds we use and the value of the resources Stabilize allocation process and hold sectors to their allocation.	ADFG would have to be involved with fishermen, State of Alaska Legislature		

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Acknowledging that you must have vibrant and viable commercial fisheries, along with other industries and that Southeast Alaska cannot survive locked up to become a playground only for the well off.	PR efforts can help
Accounting of harvests – while commercial fishermen can understand how a fishery can be sustainably managed for the long-	Encourage individual Alaska sport fishermen and the sport fishing industry to understand the need for the accounting and to ask the

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

STEP:	Help needed:
term, there is this perception that an individual angler in the rowboat with his one fishing pole doesn't hurt anyone. But when you multiply by the number of people out fishing and factor in that an individual sport fishing, if they take all sport fish species available to them, will have a daily bag limit of 33 fish.	legislature to fund and implement a system so that we don't follow the path of other coastal states that crashed their fisheries such as Washington, Oregon and California. When commercial fishermen and associations bring up this issue it is viewed that we are doing it for selfish and allocation reasons. It's possible with accurate accounting that commercial fishermen will lose significant access and allocation, but at least the resources will be protected and maintained for the future.

Funding:

Phase:	Budget:	Funding Source:
All phases	This is one of those initiatives that can have zero funds and still move forward to 100K + dollars for PR campaigns to sell the importance of commercial fishing industry to Southeast AK and the State of AK, hire lobbyists, travel to attend hearings/meetings etc.	Unknown

Outcome/Results:

There is still an economically viable commercial fishing industry along with processors and supporting businesses within the communities spread out throughout Southeast Alaska including the smaller rural communities.

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

9B - Access to the Resource - Marine Spatial Planning

Description & Motivation:

Commercial fishing in Alaska has existed for over 100 years and is the backbone to the coastal rural communities. Commercial fishing and access to the resource is slowly being eroded from multiple directions.

President Obama in July 2010 signed an Executive Order for Stewardship of the Ocean, Our Coasts and the Great Lakes which includes "coastal and marine spatial planning" (i.e. ocean zoning) as a top down process on a nationwide basis.

Marine spatial planning is driven by mineral and development interests, where these organizations are able to easily identify the value of specific places and resources.

Objective:

Maintain access to fishery resources for viable and vibrant commercial fisheries throughout Southeast Alaska, particularly in smaller rural communities where commercial fisheries are/were the backbone of the community. Within the marine spatial planning, make sure that Alaska commercial fisheries footprint is documented and assured.

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Work with the State of Alaska and develop comments for submittal by the April 29th deadline that encourages any ocean planning to be done from the ground up within the region. Use the current regulatory bodies and processes and don't allow for an additional layer of bureaucracy to form.	Doug Vincent-Lang is ADFG lead person on marine spatial planning, work with other Commercial fishing associations around SE and United Fishermen of Alaska. Use forums such as this and SEC to notify the communities of this initiative.	Communication and letter writing for this particular stage.	April 29th for comments at this stage but will continue into the future.

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
	Pass the message to the Forest Service that they should also encourage a local ground up view and not Washington, DC agency top down mandates.		
Document the footprint of the Alaska commercial fishery and subsistence uses of the resources. Document the fishing sector (vessels, crew, processing, fishery dependent businesses.	ADFG, NPFMC , Univ. of AK, Sea Grant, UFA, Fishing Associations, ASMI, State of Alaska, Forest Service		Next several years
Monitor the Marine Spatial Planning process and participate as each step moves forward.	ADFG, NPFMC , Univ. of AK, Sea Grant, UFA, Fishing Associations, ASMI, State of Alaska	Unknown – as we don't know what will happen from the results of Step one.	

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Acknowledging that you must have vibrant and viable commercial fisheries, along with other industries.	PR efforts can help
Understanding and having in one easily accessible place information on the fishery resources, their value, uses, particularly	

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

STEP:	Help needed:
commercial but also sport and subsistence	

Funding:

Phase:	Budget:	Funding Source:
All phases	This is one of those initiatives that can have zero funds and still move forward to 100K + dollars for PR campaigns to sell the importance of commercial fishing industry to Southeast AK and the State of AK, hire lobbyists, travel to attend hearings/meetings etc.	Unknown

Outcome/Results:

There is still an economically viable commercial fishing industry along with processors and supporting businesses within the communities spread out throughout Southeast Alaska including the smaller rural communities.

9C - Access to the Resource – Protecting Long-Term Assured Access To Fishery Resources Through Research.

Description & Motivation:

Although commercial fishing has existed in Alaska for over 100 years, and is still the State of Alaska's number one private employer, one of the top exports of the state, produces the majority of wild harvest of fishery resources in the country, less and less funding and research is occurring to maintain and protect the resources we are dependent upon.

Maintaining and increasing research along with an appropriate level of funding both at the State and Federal level is a necessary component of maintaining access to and gaining access to developing fisheries.

There are many areas of research necessary including changes to the habitat and ecosystems, additional life cycle information, interaction of prey and predator species, marine mammals. Also, there is a need to determine release mortality for hook and release landing of different species of fish and then to establish a reliable sampling procedure for establishing the volume of hook and release occurring.

Objective:

Maintain viable access to fishery resources so that viable and vibrant commercial fisheries exist throughout Southeast Alaska, particularly in smaller rural communities where commercial fisheries are/were the backbone of the community. Let science be the driving force for decisions made in our management agencies based on the abundance of the resource. The benefit to the region is the continuation of thousands of small businesses, maintaining important infrastructure within the communities such as harbors and processing facilities etc.

Increased research would lead to an increase in jobs.

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Encourage the State of Alaska Legislature to fund ADFG and provide funding for research needs.	ADFG, UFA, Fishing Associations, Processors, SEC and local municipalities		Yearly event
Encourage Forest Service to continue with salmon research at Little Port Walter and/or	Forest Service		
Develop a world class research facility in Southeast Alaska.	Forest Service		
Develop a reliable sampling procedure for establishing the volume of hook and release landing with associated data-based estimates of resulting mortality.	ADFG or federal agency would have to be involved along with fishermen		

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Acknowledging that you must have vibrant and viable commercial fisheries, along with other industries and that Southeast Alaska cannot survive locked up to become a playground only for the well off.	PR efforts can help
Accounting of harvests	

Funding:

Phase:	Budget:	Funding Source:
World class research facility and/or continuation of salmon research at Little Port Walter	Don't have the knowledge to adequately determine	Forest Service

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

Outcome/Results:

Providing research necessary to support the sustainability of the fisheries, understand life cycles of species important to commercial fishermen. Better research protects and provides for better management of the fisheries, which maintains an economically viable fishery, along with processors and supporting businesses within the communities spread out throughout Southeast Alaska including the smaller rural communities. Providing jobs in the field of fishery research.

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

9D - Access to the Resource - Protecting Long Term Assured Access To Fishery Resources Through Appointment Process/Conflict Of Interest.

Description & Motivation:

Commercial fishing in Alaska has existed for over 100 years and is the backbone to the coastal rural communities. The erosion of commercial fisheries by reallocation is another threat to the existence of vibrant and economically viable commercial fisheries.

A strength of managing Alaska's ocean resources is that the State Constitution requires "sustainable" management of the resources. We have a good public process including the Board of Fish and North Pacific Fisheries Management Council, with a local fish and game advisory committee system to support the Board of Fish process. Unfortunately, this good managing system, that is upheld as a model for other states and countries, is only as good as the caliber of the people who volunteer to serve on the committee or are appointed to the Board or NPFMC, and their ability to let science, policy and standards guide their actions, rather than let personal agendas and politics to trump.

Board of Fish conflict of interest policy prevents fishermen serving on the board in the region they fish from participating in the discussion and sharing the knowledge that they have on the subjects in front of the board. The legislature uses the following standard for conflict of interest "that if a bill affects an entire group of citizens the same, then it is not considered a conflict of interest under Alaska law." Although the regulations and statutes have not changed at all over the years the interpretation by law advisors to the Board of Fish has changed, so now the Board of Fish member has to actually join the audience before they will deliberate on a proposal.

Only commercial fishermen are viewed to have a direct financial interest if they hold any limited entry permits or QS along with any family members including brothers and sisters, sons and daughters, parents, etc., and will cause a conflict to be declared if a proposal on that fishery is being deliberated on.

New developing fisheries have their own set of difficulties in trying to develop opportunities on un-utilized and under-utilized fisheries. A policy was being developed at one time for a process to use for new developing fisheries but the process was unwieldy and never finished at the board of fisheries.

Objective:

Maintain viable access to fishery resources so that viable and vibrant commercial fisheries exist throughout Southeast Alaska, particularly in smaller rural communities where commercial fisheries are/were the backbone of the community. Let science be the driving force for decisions made in our management agencies based on the abundance of the resource. Commercial fishermen do not object to declining harvest limits when science based, rather than a response to uncontrolled growth of sport fishing. The benefit to the region is the

continuation of thousands of small businesses, maintaining important infrastructure within the communities such as harbors and processing facilities etc.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
Actively encourage appointment of qualified, ethical individuals to the Board of Fish and NPFMC	Governor's office, grass roots request for balanced board composition		Yearly event
Encourage the Board of Fish, State of Alaska Legislature to develop an accounting system that accounts for all removals of the resource so that the fisheries can be sustainably managed. Part of this would be to allow access by enforcement and creel samplers to remote lodges.	ADFG, UFA, Fishing Associations, Processors, SEC and local municipalities. Individuals will be particularly important to speak up.		Yearly event
Clarify the Board of Fish Conflict of Interest issue.	Governor, Legislature (maybe), fishing organizations, Processors, Municipalities, SEC and PARTICULARLY individuals will need to speak up to get this changed.		Yearly event
Work on Developing Fishery Policy so that there are clear procedures for accessing resources commercially that have not been developed before.	ADFG and fishing associations, likely Board of Fish would eventually be involved		Yearly event
Document the fishing sector, vessels, crew, processing industry, fishery dependent businesses and			

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
document the footprint/grounds we use and the value of the resources Stabilize allocation process and hold sectors to their allocations.			

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Acknowledging that you must have vibrant and viable commercial fisheries, along with other industries and that Southeast Alaska cannot survive locked up to become a playground only for the well off.	PR efforts can help

Funding:

Phase:	Budget:	Funding Source:
All phases	This is one of those initiatives that can have zero funds and still move forward to 100K + dollars for PR campaigns to sell the importance of commercial fishing industry to Southeast AK and the State of AK, hire lobbyists, travel to attend hearings/meetings etc.	Unknown

Action Initiative 9: Project Long Term Access To Fishery Resources for Both Current and Developing Fisheries.

Outcome/Results:

There is still an economically viable commercial fishing industry along with processors and supporting businesses within the communities spread out throughout Southeast Alaska including the smaller rural communities.

Action Initiative 10: Develop Region-Wide Mariculture Zoning

Cluster Working Group:	Ocean Products
Champion:	Anthony Lindoff, Ha'ani/Sealaska

Initiative Development Team:	Mike Round, Assistant General Manager, Oceans Alaska SSRAA David Mitchel, General Manager Oceans Alaska Casey Havens, President/CEO, Yak Tat Kwaan John Sund, Mariculture Advocate Ray RaLonde, Sea Grant Marine Advisory Program Aquaculture Specialist Tom Henderson, OceansAlaska Mariculture Director Rodger Painter, Alaska Shellfish Growers Association

Description & Motivation:

Developing a new industry based on growing shellfish, oysters, geoduck, clams and other species takes a tremendous amount of energy, vision and leadership from the Federal Government who own 95% of the land the State who controls 100% of the water. The potential is the creation of significant economy that is environmentally sustainable, and will produce jobs for a year around based work force. The preliminary outlook shows the potential of a $20 - $30 million dollar annual industry that creates 400 plus jobs. The industry can develop in a fashion that has no or a minimum level of conflict with current existing uses of the land and water. This is a great opportunity for the government land owners to help create a new industry that can generate jobs in economically depressed areas of the Tongass National Forest.

The challenge is attracting new people to invest substantial amounts of private funds to build the farms, acquire the seed, buy or invent the equipment, obtain the training and education and locate the farm sites through the permit and license process of using public land and water. How to reduce the risk of failure is a major task.

The history gained over the last 10 – 20 years from the pioneers in the mariculture industry has produced a few lessons. First,

site selection is critical. This step should include a comprehensive approach that enables entrepreneurs to decrease the risk of investment, and mariculture zoning and clustering is one approach to this issue. Currently, batch processing is done every other year for permit applications, and the burden falls upon the applicant to identify an appropriate location. The time, financial investment, and risk of the unknown are all deterrents to applying for a farm site and investing in mariculture. Mariculture zoning initiatives would help create "clusters" of farm sites. Farm clusters in proximity to each other helps reduce the cost of operations and the risk of failure. The cluster of farmers allows for creation of cooperative processing facilities that lower costs. It allows transfer of knowledge and information. The cluster provides for a flexible workforce to help on the various farms in the area. Transportation of product to market is lower because of the collective volume of production. There is the opportunity to create cooperative sales and marketing entities to help maximize the penetration of certain market places and supply steady volume of product.

Access to seed is also critical- it is impossible to farm without a secure and reliable seed supply. Transportation of materials to the farm and products from the farm to market is critical in the cost of operations. Training and education in terms of best management practices, biological advantages and threats, new technology, impact on growth yield, business management, sales and marketing are important to the success of every industry and business. But it is especially necessary in Alaska in the creation of an industry that is just getting started.

Financing the building of new farms on land and water leased from the state and federal government with very little fee simple or private ownership is difficult. The Farm Services Agency is a reliable supplier of financing to new farmers, but terms can be improved to attract new entrants to invest in a sustainable business. The creation of "clusters" or the start up of a new farm in the close proximity of existing farms or other new farms reduces the risk of failure and increases the chances of the new farmer succeeding and repaying the start up financing.

There are many challenges in creating new initiatives. The creation or identification of specific areas that will assist a new mariculture farmer succeed is imperative to attracting the entrepreneur needed to build a new industry. The mariculture zoning initiative will help establish known areas that are biologically productive for growing shellfish, located in areas that reduce or lower the cost of operations, help to lower transportation costs and provide ease of access to communities. It also will resolve many of the user issues in a comprehensive manner, and increase the likelihood of a successful application and business. It does not cover all of the challenges and issues facing a new industry such as access to secure seed supply, training and education, financing, lower transportation costs and community support and development.

Action Initiative 10: Develop Region-Wide Mariculture Zoning

Objective:

Create strong and sustainable mariculture industry that supports vibrant coastal communities. This is especially possible in the smaller rural communities throughout the Tongass that have been hard hit by the loss of fisheries related jobs, decline in the timber industry and slow down in tourism. The identification of the opportunity for a mariculture industry and an area for specific farm sites needs to include access to reliable seed supply, cluster development of farm sites, access to training and education and good transportation systems. These actions will help attract the new farmers and investment of private capital to build successful farms.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Define Mariculture Development Zone concept, including role of local residents, regulators and policymakers, and industry.	ADF&G, ADNR, ADEC, USFS, aquatic farm industry, Native organizations and local communities.	Project coordinator with USFS, teleconferencing system, and travel funds.	3 months
2. Identify candidate areas and proposed boundaries.	Aquatic farm industry, Native organizations, local communities, ADNR, USFS and ADFG.	GIS mapping, teleconferencing, USFS coordinator, travel funds.	3 months
3. Survey zones, identify potential farm sites, interact with local residents, and gather background data (land use classifications, human use, etc.).	Industry, user groups, local residents, ADFG, ADNR, USFS.	GIS mapping, teleconference, funding for field work and reporting and community meetings.	8 months

Action Initiative 10: Develop Region-Wide Mariculture Zoning

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
4. Conduct public hearings and complete farm site classification process	ADNR	Funding for public hearings and farm site classification	1 month

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Buy-in from all levels of State and Federal Government	Legislators to champion effort; Governor's cabinet
	State and Federal Government Agencies, who play the critical role in water and land allocation, and processes involved in leasing

Funding:

Phase:	Budget:	Funding Source:
Mariculture Conference & Buy-In	Travel & Conference Expenses	USDA/Forest Service
Community Outreach	Travel & Meeting Expenses	USDA/Forest Service
Working Group – Training, Education, Development		USDA/Forest Service

Outcome/Results: Create an economically viable shellfish industry

Increasing # of permitted, commercially productive farms

Mariculture Working Group that can continue to address other barriers to entry for mariculture entrepreneurs- including training and workforce development, seed security, financing, best practices, and public-private partnerships in developing the industry.

Action Initiative 11: Simpler, Flexible Regulatory Environment for Direct Market Producers and Small Floating Processors (without full CWG consensus)

Cluster Working Group:	Simpler, flexible regulatory environment
Prepared By:	Len Peterson
Date:	03/31/2011

Title or Name of Action Initiative: Simpler, flexible regulatory environment for direct market producers and small floating processors

Initiative Champion/Implementation team members:

Co-Champions: Jev Shelton, Len Peterson Team members: Heather Hardcastle, Kathy Hansen

Description & Motivation:

Multiple state agencies permit large and small salmon processors. For small vessel processors, only AK Fish and Game and AK Revenue have a common packet for permitting. All agencies have there own permit forms, instructions, definitions, and inspection/audit procedures. Particularly Department of Environmental Conservation procedures appear to be inflexible and "out of tune" with small vessel processors only heading fish destined for direct markets. The permitting and reporting structure is discouraging for small catcher/exporter processors and direct-marketers that cannot afford personnel to navigate the complicated, often inflexible, multi-agency permitting and reporting requirements. Comprehending the requirements alone can be daunting, meeting those requirements and dealing with audits/inspections becomes a year-round burden without compensation.

Objective: There does not appear to be much growth potential for direct market salmon businesses or small floating processors to warrant extensive effort trying to simplify the permit/report processes. Prices for salmon and halibut from larger, established processors are good with risk to producers minimal. Those small businesses already successfully navigating the permitting/reporting "minefield" have adopted coping strategies that work. An objective of multi-agency cooperation is probably unrealistic and could distract from more important initiatives such as habitat protection. We propose no action steps outside the following information supplied by Kathy Hansen.

United Fishermen of Alaska (UFA) is writing a letter requesting the Governor and Legislature to put together a multi-agency review panel with industry to review Alaska fishery regulations and statutes to try to reduce redundancy and duplicative efforts, create efficiencies, justify information that is being requested. The intent of this request is not to weaken the current regulatory regime necessary for good accounting of harvest, food safety protections, and is not committing UFA staff time.

Action Initiative 11: Simpler, Flexible Regulatory Environment for Direct Market Producers and Small Floating Processors (without full CWG consensus)

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1.Request a multi-agency review	UFA	Time	unknown
2.Participation in multi-agency review	UFA, ADFG, DOR, DEC, DCCED		Unknown
3.Changes to regulations to implement changes suggested by review process			Unknown

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Agencies reluctance to make changes – they are satisfied with current situation and don't really care about the effects on the end users	Raising awareness of the issue, helps create the demand for participation in the regulatory review.

Funding:

Phase:	Budget:	Funding Source:
Multi- agency review	Possible funding for travel will be needed	Unidentified at this time

Outcome/Results: Changes to the regulations will have been enacted.

Action Initiative 12: Rural Community Permits (without full CWG consensus)

Cluster Working Group:	Rural Community Permits
Prepared By:	Kathy Hansen
Date:	3/30/11

Title or Name of Action Initiative: Rural Community Permits
Initiative Champion/Implementation team members: Kathy Hansen
Description & Motivation: Returning State of Alaska Limited Entry Permits to rural coastal communities. This is one possible solution to turning the tide for permits and residents leaving the small rural communities but is possibly controversial.
Objective: This is an idea that Rep. Thomas mentioned once to me and I always thought it had possibilities to return permits to rural coastal communities. CQE's were an entity developed by the NPFMC to allow quota share to be held by small rural community trying to keep permits in the communities. CQE's have recently been expanded to be allowed to purchase or hold halibut charter limited entry permits. While the requirements between the two programs are slightly different they both have requirements that the community has to benefit. For example halibut charter limited entry permits have to either start or end the trip in the community. With State of Alaska limited entry permits you could make the requirement that the permit can only be leased to a community resident so the income earned by the permit holder leasing the permit benefits the community. If the initiative was successful you would be providing the opportunity to give a younger community member a start into commercial fishing with the intent that he would be able to eventually purchase his own permit and then another community member could be leased the permit. This would help return permit into the small rural coastal communities, would help with starting younger individual into commercial fishing, help support the processing sector and supporting businesses in the communities and the income earned with the limited entry would help the economics within the community.

Action Initiative 12: Rural Community Permits (without full CWG consensus)

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Research Issue and see if the Constitutional Amendment for Limited Entry would allow the legislature to authorize Community Quota Entities to hold State of Alaska Limited Entry Permit	Consult with CFEC		Anytime prior to UFA Fall Board Meeting so materials would be available then
2. Consult with United Fishermen of Alaska and see if support for allowing CQE's to hold limited entry permits can gain support from around the state with fishermen.	United Fishermen of Alaska	None	Likely Fall Board Meeting is when discussion would take place
3.If Commercial Fishermen would support the idea, consult and collaborate with Native Associations & coastal communities & CQE groups to pursue the idea as legislation.	Native Associations UFA Coastal Community Leaders CQE's		November & December
4. Get the idea translated into legislation and find a legislator to carry the legislation	Representative Thomas, Representative Austerman and other Southeast Legislators		January

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Largest obstacle to this issue will be gaining acceptance to the idea of allowing Limited entry permits to be held by a corporation and be leased to someone in the community rather than the permit holder on board provisions that limited entry is built upon.	Idea needs to be brought out into the open and discussed or it will go nowhere.

Action Initiative 12: Rural Community Permits (without full CWG consensus)

Outcome/Results:

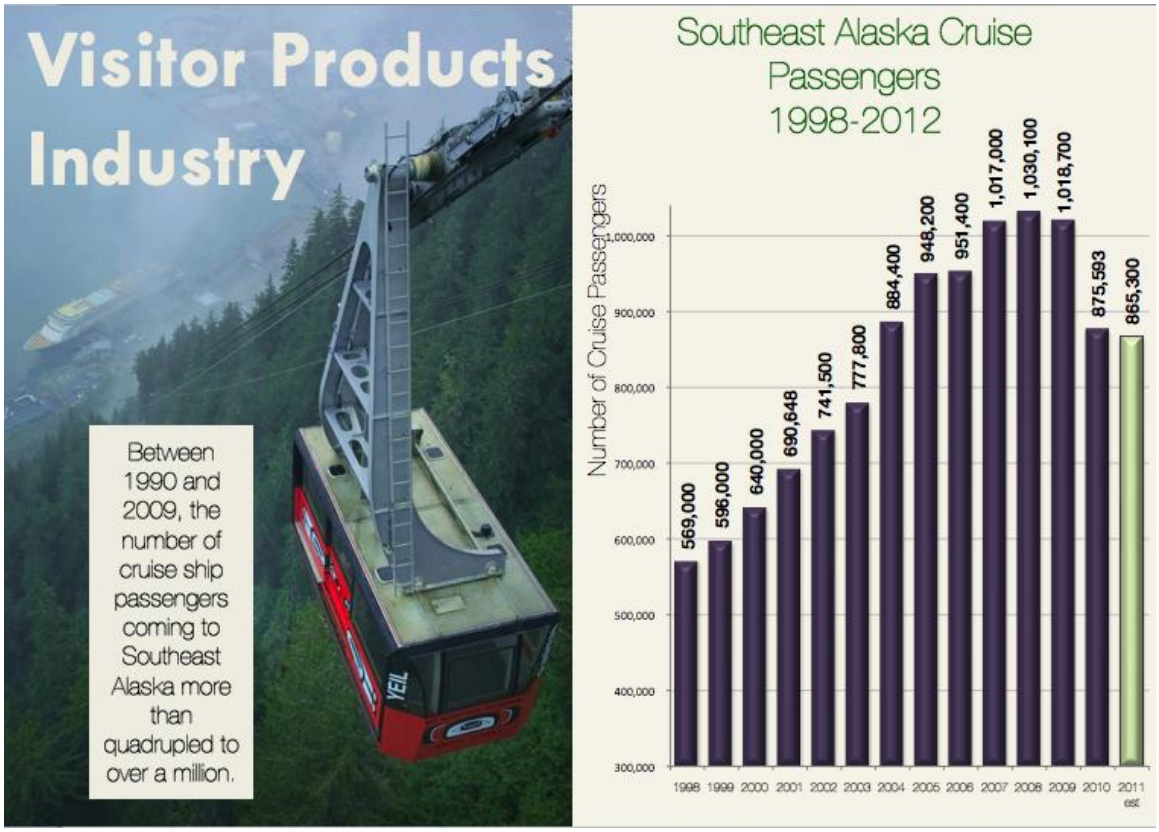
Final measurement of the initiative is that legislation will be passed and a CQE takes advantage and holds limited entry permits.

Incremental steps are 1.) gaining support for the idea; 2.) introducing legislation; 3.) Legislation passed & signed by Governor

4.) CQE holds a limited entry permit and leases it to a community member.

Action Initiative 12: Rural Community Permits (without full CWG consensus)

Southeast Alaska Visitor Products



The Visitor Products Industry Cluster, as defined by the NAICS codes in the Southeast Alaska Visitor Industry Cluster chart below, is the largest private sector regional employer in term of employees, accounting for 15% of all regional employment; and the second largest in terms of wages, accounting for 10% of all regional wages (second to the seafood industry).

The cluster accounted for 5,689 annual average jobs in 2009 and paid $151.5 million in wages through more than 600 various businesses. The average wage for this sector was $26,624—although jobs with less than 40 hours per week are measured the same as full time jobs—so the lower wages could be partly due to a high number of part-time jobs. Seasonal jobs are correctly measured as seasonal.

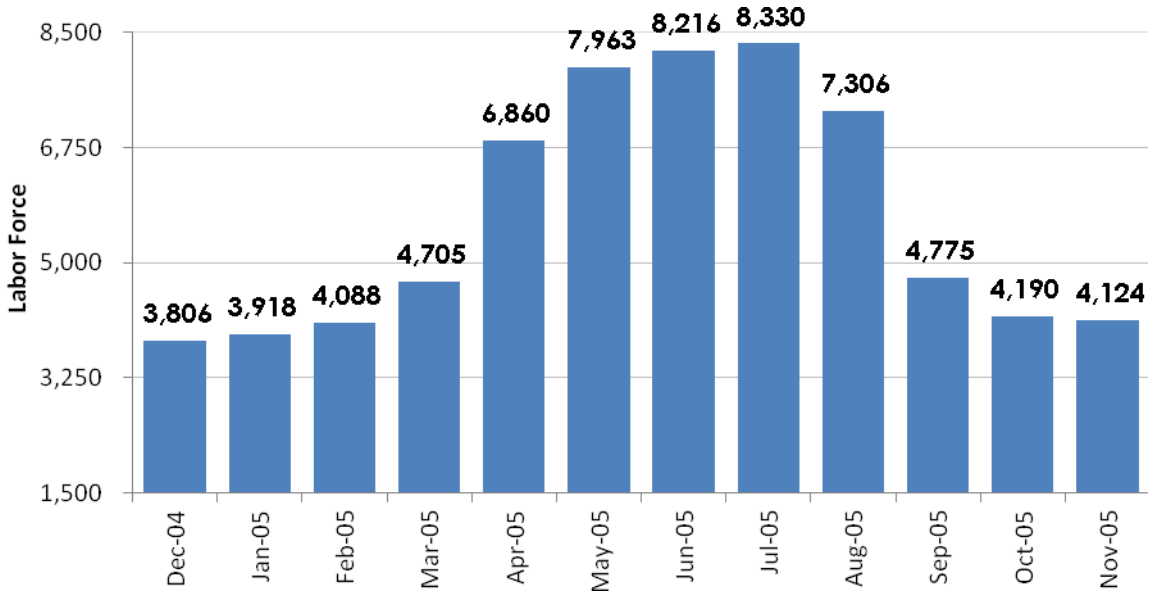
Southeast Alaska Visitor Industry Cluster

Sector Name	NAICS Industry Code	Annual Average Monthly Employment 2003	Annual Average Monthly Employment 2009	SE Businesses 2009	Total SE Wages 2009	Avg. SE wage 2009
Transportation and Tourism		**3,175**	**3,225**	**312**	**$109,505,610**	**$33,953**
Air transportation	481	702	716	39	$26,690,965	$37,295
Water transportation	483	262	268	19	$15,859,978	$59,124
Truck transportation	484	189	214	21	$8,497,920	$39,787
Scenic and sightseeing transportation	487	488	727	100	$25,185,358	$34,639
Support activities for transportation	488	321	207	26	$10,300,807	$49,762
Accommodation	721	1,213	1,094	107	$22,970,582	$21,005
Arts, Entertainment, Recreation, Food, Drink		**2,287**	**2,464**	**289**	**$41,956,506**	**$17,028**
Performing arts and spectator sports, Museums, historical sites, zoos, and parks	711 712	69	159	19	$3,805,743	$23,986
Amusements, gambling, and recreation	713	584	691	83	$12,599,820	$18,243
Food services and drinking places	722	1,634	1,614	187	$25,550,943	$15,833
Total Cluster		**5,462**	**5,689**	**601**	**$151,462,116**	**$26,624**

The reality is that this cluster could be slightly larger or slightly smaller than what is represented above. ADOL employment data does not include proprietors (self-employed workers), including guides, bed & breakfast operators, charter-boat operators and any other person operating a business that does not report itself. At the same time, some of the businesses included are likely not to be involved in the visitor industry.

As previously discussed, the regional economy is seasonal, and this is very much the case in the visitor industry. The chart below presents the data above on a monthly scale. Employment is at its lowest in December with fewer than 4,000 employees, and it peaks in July, with 8,330.

Southeast Alaska Visitor Industry Employment by Month, 2009



Visitor Products as an Economic Force in the Regional Economy

In the last decade, tourism as a whole has been the fastest-growing industry in Southeast Alaska.

The largest component of the Southeast Alaska tourism industry is the cruise ship industry, because the majority of the visitors coming to Southeast Alaska arrive by cruise ship. The number of cruise ship visitors to the region doubled between 1997 and 2007, when more than a million passengers visited the region. However, although, tourism in Southeast Alaska has been on a long upward trend, the number of cruise passengers visiting the region decreased by 15% over the past two years (2009 and 2010). This downward trend has been in response to the impact of the great recession globally on tourism and an Alaska head tax. Cruise visitor numbers are expected to decline by an additional one percent in 2012, or at best, hold steady, before an expected rebound in 2013. By tracking the number of cruise passengers to the region, the growth or decline of tourism overall can also be tracked.

In addition to the region's cruise passengers, Southeast hosts up to 200,000 independent travelers during the summer, and 30,000 during the winter and fall, according to the Alaska Visitors Statistics Program (AVSP). Visitors who travel to Southeast Alaska by air, ferry, or highway spend significantly more per person than cruise ship passengers in the region. Travelers coming to Southeast Alaska by air spend nearly twice as much per party as those arriving by cruise ship, while those arriving by ferry spent nearly three times as much.

Recreation is a key draw to Southeast Alaska for both residents and visitors alike. While residents and nonresidents use Southeast Alaska recreational resources quite differently, it is clear that

recreation opportunities in Southeast play a major role in terms of why people choose to live, work, or travel here. In the Southeast Alaska Business Climate Survey 2010, businesses ranked "recreational opportunities" as the most significant benefit towards operating business in Southeast Alaska.

Visitor Products Cluster Strategy Development Process

In March and April of 2011, the Juneau Economic Development Council convened a 35 member Visitor Products Cluster Working Group with representation from private industry, including private sector firms headquartered outside the region, firms headquartered in the region, and small local service providers; federal, state and local government agency representatives; tribal corporation representatives; university faculty; and local economic development entities. A full roster of the Working Group membership is below.

Southeast Alaska Visitor Products Cluster Working Group Membership*

Individual	Affiliation	Position
Linda Kadrlik	Adventures Afloat	Owner
Erica Simpson	Alaska Canopy Adventures	Juneau Manager
Michael Goldstein	Alaska Coastal Rainforest Center, University of Alaska, Southeast	Executive Director
Michael Neussl	Alaska Department of Transportation and Public Facilities	Deputy Commissioner for Marine Operations
Louis Juergens	Alaska Galore Tours	Owner
Odin Brudie	Alaska Office of Tourism Development	Tourism Transportation & Product Development
Tory Korn	Alaska Rainforest Sanctuary / Alaska Canopy Adventures	General Manager
Kelli Dindinger	Alaska Travel Adventures, Inc	President
Brent Fischer	City of Juneau	Incoming Director, Parks and Recreation
Marc Matsil	City of Juneau	Outgoing Director, Parks and Recreation
Carol Rushmore	City of Wrangell	Economic Development Director
Drew Green	Cruise Line Agencies of Alaska	Port Manager
John McConnochie	Cycle Alaska	Owner
Jon Martin	USDA Forest Service	Tongass Transition Framework Coordinator
Marti Marshall	Forest Service	Juneau District Ranger

Attended one or more meetings

Individual	Affiliation	Position
Sharon Gaiptman	Gaiptman Communications	Principal
Bob Janes	Gastineau Guiding	Owner
Sean Smith	Glacier Gardens	
Derek Duncan	Goldbelt	Vice President of Operations
Melanie Lesh	Gustavus City Council	Gustavus Visitor Assoc
Bill Hagevig	HAP Alaska-Yukon	Juneau Division Manager
Larry Gaffaney	Huna Totem Corporation	President, CEO
Jodi Wise	Huna Totem Corporation	Sitting in for Larry Gaffaney
Johan Dybdahl	Icy Strait Point	President
Linda Kruger	PNW Research Station, US Forest Service, Juneau Forestry Sciences Lab	Research Social Scientist
S. Kirby Day, III	Princess Cruises	Director of Shore Operations, Alaska and Pacific Northwest
Katherine Eldemar	Sealaska	Assistant to the President & CEO
Tim McDonnell	TEMSCO	Vice President
Forest Wagner	UAS Outdoor Studies	Program Director
Kathy DiLorenzo	UAS School of Professional and Technical Studies	Assistant Professor of Public Administration and MPA Director
Ernestine Hayes	UAS, School of Arts and Sciences	Assistant Professor of English
Rick Wolk	UAS, School of Management	Assistant Professor of Marketing & Entrepreneurship
Steve Krause	University of Alaska, Southeast	Dean, Professional & Technical Studies
Marsha Sousa	University of Alaska, Southeast	Dean, School of Arts and Sciences
Greg Brown	Weather Permitting Alaska	Captain

Over the course of three facilitated meetings and numerous between meeting teleconferences, this diverse group worked collaboratively to identify areas where opportunity for job creation and industry development may exist within this broad sector. In addition, the group identified opportunities for collaboration and partnership to overcome current constraints that stand in the way of business growth.

Southeast Alaska Visitor Products Industry Opportunities and Challenges

The cluster working group was asked to develop a list of the opportunities and challenges offered by the Southeast Alaska visitor products industry. The group developed the following list:

Opportunities

Increase numbers of independent/multi-day visitors, and marketing:

- Create and promote multi-day visitor packages – e.g., educational, lifestyle packages, outdoor recreation
- Better information, itineraries and promotion to link multi-community regional experiences
- Develop 'volunteer-tourism' opportunities
- Market Southeast as seafood capital of the world (like Napa Valley wine country)
- Find ways to bring Juneau and/or cruise ship visitors to smaller rural communities
- Incentivize a "step-on/step-off" program with cruise industry
- Market an 'add-a-day' program for cruise visitors
- Training on how to raise profile and hits on search engines
- Use internet/social media to showcase regional tourism opportunities
- Better information, itineraries and promotion to link multi-community regional experiences

Create new visitor experiences that build on authentic local assets:

- Develop Juneau as a mining and/or maritime and/or seafood destination
- Multi-agency and private sector partnering in an maritime interpretive center

Government assistance rather than impediment:

- Create a multi-agency one-stop permitting center
- Expedited permitting, at all levels
- Government needs to advocate for economic benefit of projects
- More convenient/less expensive access to the forest
- Allow use of more areas and of more former logging roads for commercial tourism opportunities
- Provide flexibility/local Forest Service control of fee structure, consider opportunities for in-kind efforts rather than fees
- Develop a team to allow permitting to happen more quickly
- Control fees: one operator states that permit fees have increased 800%

Infrastructure:

- Develop connections and links between region's trails
- Hut-to-hut trail systems, Juneau to Skagway trail, Treadwell Ditch trail

- More information centers to connect visitors to guides and trailheads (e.g., satellite visitor center on west side of Mendenhall Glacier)
- Bring broadband/high speed internet to rural communities so they can connect with markets and showcase tourism opportunities

Education and Training:

- Develop a UAS visitor industry management/training program or degree with government and private sector internships

Challenges

Obstacles and challenges cited by participants were grouped in categories; concerns related to the regional and business climate are most acute.

Regional Business Climate/Leadership

- Too parochial; we're always looking for someone else to blame and to solve our problems
- Not enough teamwork and cooperation within region
- Southeast culture is risk averse, we don't have an entrepreneurial spirit
- Business climate is in defensive/survival mode rather than in growth mode
- Leadership failure to get message out as to how important private sector is to economy of community/region
- State leadership shows no interest in/does not care about industry
- Everyone's time is engaged in their own communities and don't have time left to connect across communities; high cost of inter-regional travel limits communication
- Long time frame needed for change and don't have committed and persistent leadership to stay with initiatives over many years
- Local resident attitudes to industry are sometimes not favorable
    - Community attitudes – not willing to make changes
    - Lack of understanding in community about role tourism plays in providing quality of life to residents – quality of life wouldn't be available without visitor industry contribution
    - Lack of community support for visitor industry – industry is continually beat up when trying to work with community
    - Community perceives commercial efforts as adversely affecting their quality of life
    - Region significantly under marketed for overnight/multi-day visitors
    - Need higher quality shops and experiences

- Price of getting to region is very high

Human Resources

- Local workforce constraints (both number and skill sets) – not enough local workers available, but lack of affordable housing is obstacle to hiring from outside region.
- Need opportunities to keep workforce employed during off season so they don't leave.

Technology

- Technology advances slow to come and expensive in region; communities in Southeast still have very slow internet access
- Independent visitor sector is not good at using web/ social media to provide destination information

Infrastructure

- Smaller communities need road infrastructure
- Insufficient funding to develop infrastructure, e.g., trails, huts
- High cost of energy makes it hard to be profitable
- Cost of capital investment in smaller community visitor facilities and infrastructure can be too high for adequate return on investment

Regulatory/Tongass oversight

- Need better conflict resolution between competing forest user groups
- Rising fees create rising prices for visitor experiences
- Excessive regulation is significant barrier to developing new products/experiences that use the forest
- Excessive regulation creates barriers to entry into business
- Jones Act limits business opportunity and forces higher prices
- Forest Service bureaucracy is hard to change to better align with industry needs
    - How can it take *three* years to update management plan Mendenhall Glacier area (and at a time when visitor numbers are decreasing); no changes can be made during this 3-year time period?
- Lack of trust of Forest Service because interaction with industry always results in more fees or regulation
- Wetlands permitting is a challenge
- Roadless rule

- Juneau's Tourism Best Management Practices (TBMP) model needs to be implemented on a state and federal level

Access to Capital

- Insufficient funding for marketing collateral

Participants were asked to identify opportunity areas that seemed most critical or promising, and chose the following eight:

1. Have a place to accomplish one-stop permitting (city, state, federal).
2. Create a UAS visitor industry management/training program or degree with government and private sector internships.
3. Better linking and promotion of multi-community, regional visitor opportunities and packages.
4. Develop a maritime/whale/visitor and education center in Juneau.
5. Need more convenient, abundant, and less expensive access to, and around, the region – by all modes.
6. Provide greater access to the forest for residents, visitors and visitor businesses.
7. Develop hut-to-hut system along and connecting key trails.
8. Have a public agency branch that advocates for and explains the economic benefits of development projects.

By the conclusion of the third meeting, the group developed five initiatives that addressed themes emerging from the Cluster discussions. There was agreement that the region is not effectively marketed to the independent traveler, and that the number of independent travelers could be greatly increased, especially to the smaller communities, if there was an easy one-stop way for the independent visitor to find information to put together a regional itinerary. Sufficient funding for web design and marketing collateral was identified as a key obstacle.

The group felt that the region has many unique local assets that can be better developed into visitor experiences. There was general agreement that one underdeveloped regional opportunity is the many land and water trails that could be upgraded and /or linked to attract the independent "soft" adventure market. Coordination between trail entities for itinerary development, partnership with the Alaska Marine Highway and funding for marketing collateral were identified as priorities In addition, there is demand for greater guided access to public land than current permit levels allow. The industry felt that capacity control is hindering business expansion. This, along with the desire from the private sector for greater accountability on the part of the Forest Service for user fees, were the focus of the group's initiatives aimed at developing collaborative government assistance in place of current bureaucratic impediment. Finally, workforce development through

education and training emerged as a need within the industry, and partnership opportunities with the University of Alaska, Southeast emerged.

Visitor Products Action Initiatives

Five action initiatives were developed by the Working Group for inclusion with full consensus in the regional strategic plan. Each initiative addresses a specific obstacle or opportunity, based on an assessment of a positive contribution toward growing and promoting the Visitor Products Cluster. Because the timing of working group meetings coincided with the ramp-up period for the summer tourism season, the group could not put more time into developing the action plans with detailed timelines for completion and resource requirements. Each initiative identifies a champion, or co-champions, who has committed to coordinating further work to complete the planning and carry forward the implementation in late summer or early fall.

The initiatives with full consensus by the Cluster Working Group at this time are:

1. Develop Multi-purpose, Multi-community Land and Water Trails and Support Facilities
2. Increase Guided Access to Land
3. Promote Multi-community and regional visitor packages
4. Strengthen Accountability for Tongass Access Fees
5. Integrate Tourism Coursework with UAS Existing Degree Program

Action Initiative 1: Develop Multi-Purpose, Multi-Community Land and Water Trails And Support Facilities

Cluster Working Group:	Visitor Products
Champion:	Linda Kruger, Research Social Scientist, PNW Research Station, US Forest Service, Juneau Forestry Sciences Lab

I**nitiative Development Team:**	Bob Janes, Gastineau Guiding Carol Rushmore, Economic Development Director, City of Wrangell (representing SEATRAILS) Ernestine Hayes, Assistant Professor of English, UAS, School of Arts and Sciences Lorene Palmer, Juneau VCB/ SATC Marti Marshall, Forest Service, Juneau District Ranger Michael Neussl, Deputy Commissioner for Marine Operations, Alaska Department of Transportation and Public Facilities Odin Brudie, Tourism Transportation & Product Development, Alaska Office of Tourism Development Sharon Gaiptman, Consultant
Description & Motivation: In a 2007 report ISER estimated that nature-based tourism generated over $250 million per year of direct business revenues in Sitka, Juneau, and Chichagof Island. The ISER report goes on to say that nature based tourism creates an economic ripple effect and Visitors are willing to pay premium prices for higher quality experiences in more pristine environments – something we have in Southeast Alaska. Independent travelers stay longer and have more open itineraries than cruise visitors. SEAtrails, a regional non-profit awarded $120,000 in grants to 10 communities for trail projects, maps, and signs. SEAtrails is a coalition of communities across the region. This initiative can explore how to move the SEAtrails agenda forward.	
Objective: Examine SEAtrails accomplishments and proposals and develop a plan to move a coordinated plan to the next stage.	

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Review SEAtrails plans and meet with SEAtrails board members	SEAtrails Board and interested community members: Amber King, Zieak McFarland, Jim Mitchell, Karen Peterson, Elaine Price, Carol Rushmore, Davey Lubin		
2. Review state and community trail plans. Gather trails organizations, review efforts, identify regional priorities and interest in forming a group to work together.	Sitka Trail Works, Juneau Trail Mix, Ketchikan Outdoor Recreation and Trails Coalition, Alaska State Parks, local Parks and Recreation Departments	Copies of plans and other documents Funding for meeting Lead to organize meeting	
3. Review Tongass National Forest trail plans and efforts.	Tongass NF and ranger district employees	Copies of plans and other documents	
4. Identify and evaluate levels of interest among individuals and SEAtrails board and agencies and develop priorities and a plan to move forward	All the individuals and groups listed above	Contact lists	
5. Explore other trail networks and long distance trails for funding, facility and marketing ideas, and users' profiles.	Pacific Crest Trail, Appalachian Trail, Continental Divide Trail, Ice Age Trail, Northwoods Trail, Tour du Mont Blanc and other trails in Europe, New Zealand, etc.		
6. Develop itineraries that enable visitors to visit one or more communities.			
7. Develop partnership with Alaska Marine Highway to provide access/promotion	AMHS, Seatrails, USFS		

Action Initiative 1: Develop Multi-Purpose, Multi-Community Land and Water Trails and Support Facilities

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Develop Tongass Trails passport/SEAtrails passport			
8. Explore developing/linking mountain biking trails			
9. 8. Write material for websites, magazine articles, develop brochures. Integrate culture, history, natural history	Writers		
10. Identify funding needs and possible sources for funding	DOT-PF, Alaska State Parks, USFS, NPS, SEAtrails	Scenic Byways grant	

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Time to commit to tasks	Help is needed with each task – volunteers, Job Corps, Vista?
Funding is difficult to obtain	

Funding:

Phase:	Budget:	Funding Source:
A budget needs to be developed		

Outcome/Results: New trails will be developed and new and existing trails will be linked across communities in such a way that visitors can get information enabling them to engage in trail activities going from one community to another.

Brochure identifying trails, websites, info for SEAtrails website.

Action Initiative 2: Increase Guided Access to Land

Cluster Working Group:	Visitor Products
Champion:	John McConnochie, Cycle Alaska

Initiative Development Team:	Kelli Dindinger, President, Alaska Travel Adventures, Inc Kirby Day, Director of Shore Operations, Alaska and Pacific Northwest, Princess Cruises Louis Juergens, Alaska Galore Tours Marti Marshall, Forest Service, Juneau District Ranger Molly Kiesel Jon Martin, Tongass Transition Framework Coordinator, Forest Service

Description & Motivation:

Demand exceeds permitted access levels. Agency permitting processes are limiting economic opportunity in the tourism industry in the Tongass National Forest and other public lands. Lack of permitting flexibility to make quick changes in response to market conditions (more adaptive management and a more micro managed approach). More access to public lands (and to existing areas) to increase capacity.

Objective:

Increase guided access to public lands to promote economic opportunity and job growth while maintaining a quality experience for all.

- Ability to adjust access levels: Permitting flexibility to make short term adjustments in capacity and access to Forest Service and other public lands.
- More people see and experience public lands: Add new and existing areas to access.
- More fees for the Forest Service. Possibly more hires in the public sector.
- Economic enhancement to business and their employees.
- Private business hiring more people and/or providing additional work opportunities for current employees: Immediate job creation of approximately 20 to 30 jobs over the course of a 2-3 year period.

Action Initiative 2: Increase Guided Access to Land

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Strengthen the partnership between outfitters/guides and the FS (e.g. through certifications, training, TBMP guidelines for public lands. Goal is quality experience for all.	Tour operators conducting guided product at Glacier and FS mgmt/staff	Review of current plan and continued discussions/dialogue	Ongoing thru out 2011 and 2012
Improve the responsiveness and efficiency of FS permitting	Tour operators conducting guided product at Glacier and FS mgmt/staff	Review of current plan and continued discussions/dialogue	Ongoing thru out 2011 and 2012
Increase access by changing the FS decision making process for issuing/adjusting permits to be more flexible and adaptable to meeting market demand, e.g. NEPA	Tour operators conducting guided product at Glacier and FS mgmt/staff	Review of current plan and catalog request for additional access by operators	Possible initial review July 1, 2011 and ongoing for 2012
Monitor FS user fees to gauge how operators are faring economically	FS and Tour operators	Need to collaborate on any additional short term space made available and resulting job growth, fees paid	Possible July 1, 2011 issuance of new space and monitor benefits thru rest of 2011 season
Investigate comment card from FS to gauge and monitor guests experience	FS and Tour Operators	FS to develop very short comment card to	If new space possible for

Action Initiative 2: Increase Guided Access to Land

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
		gauge overall guest satisfaction at rec area and operators agree to distribute and collect and return to FS	July/Aug 2011, then need comment card by July 1, 2011
After the season ends commit to meet and discuss outcome of the adjustments. This would include operators, District Ranger, permitting officers, etc.	Tour operators, District Ranger, permitting officers, etc.	Fee data from FS and comment card review/summary from FS and Tour Operators	November 2011
If conflicts occur between permittees then they need to resolve amongst themselves (TBMP model)	Tours operators and FS – FS needs to identify any space conflicts	Information from FS on potential space conflict	Ongoing during 2011

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Current rigid and somewhat inflexible permitting process utilized by FS and other agencies which does not allow for quick, short term adjustments in space and access allocations to respond to current market conditions. This may result in jobs not being added and fees not collected.	Frank and open discussions between FS (or other permitting agency) and operators to identify opportunities to flex the process on a trial basis with steps/commitments necessary from both FS and operators.
Public may initially be against adjusting permits to add capacity.	FS and Operators may need to reach out to public to assure them that initial trial of adding capacity on certain days will not negatively affect the experience of tour guests or of those local

Action Initiative 2: Increase Guided Access to Land

STEP:	Help needed:
	residents utilizing the rec area. Will need some positive PR strategy.

Funding:

Phase:	Budget:	Funding Source:
No initial cost other than time spent by agencies and operators		

Outcome/Results:

Fees revenues are going up – indicates more access to lands.

Review of comment cards to monitor quality visitor experience and insure that no negative results to adding space.

Measure job growth identified by operators – either additional positions and/or additional hours of work available for present staff.

NOTE: true measure of job growth cannot be gauged until operators come forth and identify what days and additional space/capacity/tour departures they desire. Once these are identified, with the assumption of 75% + utilization, these job growth figures could be estimated.

Action Initiative 3: Promote Multi-Community and Regional Visitor Packages

Cluster Working Group:	Visitor Products
Prepared By:	Melanie Lesh, Gustavus Visitor Assoc, Gustavus City Council

Initiative Development Team:	Michael Neussl, Deputy Commissioner for Marine Operations, Alaska Department of Transportation and Public Facilities Linda Kadrlik, Adventures Afloat Linda Kruger, Research Social Scientist, PNW Research Station, US Forest Service, Juneau Forestry Sciences Lab Lorene Palmer, Juneau VCB/ SATC Sharon Gaiptman, Consultant
Description & Motivation: There needs to be a one-stop place for information for the independent tourist to figure out how to design a multi-community itinerary for the region. This initiative will promote more multi-community, regional visitor itineraries through better marketing and promotion of these opportunities. Multi-regional itineraries for the independent travelers need to be better developed and promoted in the region. Definition of independent traveler includes anyone that uses the Marine Highway, including local residents. There is a need to facilitate multiday itineraries – coordinated across communities.	
Objective: This initiative is aimed at how to facilitate the independent tourist to design their own multi-community tour using ferry or small air carrier. Market & promote multi-community packages. Increase visitors to multiple communities.	

Action Initiative 3: Promote Multi-Community and Regional Visitor Packages

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Coordinate with AMHS Re: events and multi-stop pass initiative. Challenge (1 year lead time on schedule changes) a) Marketing/questions/answers	Michael Neussl	DOT and PF	Completed
2. Pull together past SE multi-community inventories, itineraries and events with the SE Tourism Council. Recognize all transportation alternatives (jet, air, ferry…) a) Update JEDC Calendar of Events and all known other sources of multi-community calendars	Linda Kruger Michael get list from AMHS	AMHS feedback received	Ongoing
3. Liaison with SE Tourism Council on ongoing branding efforts	Lorene Palmer/Melanie Lesh	Time	Ongoing
4. Investigate developing links to area websites that promote visitor packages. Links to Website/info/community, i.e. Alaska Airlines Free stopover in Juneau	Melanie Lesh	Grid (linked to SETC)	Deadline 4/8/11
5. Involve new Committee member Sharon Gaiptman (prior AMHS Marketing Input) for additional background. Private Marketing consultant SE Tourism	Hold interim meetings to discuss long-term approach		Ongoing
6. Find out what independent traveler questions come in to RSVT centers and what info is being put out by	Michael for AMHS	In house (AMHS) response	Completed

Action Initiative 3: Promote Multi-Community and Regional Visitor Packages

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
them?			
7. AMHS Membership on SATC (SATC – all community reps SE, Ferry Rep, Parks Rep.) 8. Legislative lobbying, advocate/market	Already occurring to great extent (most communities and AMHS are currently members)		Completed
9. Look for funding opportunities			Deadline 4/8/11

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Smaller clusters necessary Northern SE, Southern SE	
One year lead on AMHS schedule changes	Staff
There are consolidators but none target independent travelers…	
Expense of travel between communities	
Time commitment to learn, schedule and book – traveler investment	
Commissions on package coordination service – not what we are pushing	
Online connectivity and linkage to facilitate coordination by independent traveler difficult	

Action Initiative 3: Promote Multi-Community and Regional Visitor Packages

Funding:

Phase:	Budget:	Funding Source:
SATC Membership		

Outcome/Results:

SATC – Survey of customers/online survey

Action Initiative 4: Strengthen Accountability for Tongass Access Fees

Cluster Working Group:	Visitor Products
Champion:	Drew Green, Port Manager, Cruise Line Agencies of Alaska

Initiative Development Team:	Bill Hagevig, Juneau Division Manager, HAP Alaska-Yukon Tim McDonnell, Vice President, TEMSCO Jon Martin, Tongass Transition Framework Coordinator, Forest Service John McConnochie, Cycle Alaska Marti Marshall, Forest Service, Juneau District Ranger
Description & Motivation: Limited or no benefit to the USFS business partner from fees paid (fees have increased dramatically but services/benefits have not). Fees are not clearly used for improvements to the user or region with exception of Mendenhall GVC and Discovery Center.	
Objective: Develop a mechanism for more private sector input to decide where fees are allocated. Work with Forest Service to establish more affordable access and /or local control of fee structure and more accountability. More revenues from users reflected locally on user benefits: Secure a portion of the revenue collected to improve local infrastructure and enterprise support.	

Action Initiative 4: Strengthen Accountability for Tongass Access Fees

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Private sector operator presence on the Tongass Fee Board	Local operators, USFS		
2. Investigate how the fee can be lowered			
3. Annual report to outfitter/guides on how fees were spent	USFS		
4. Investigate: Can revenues be used on capital investment and marketing for the Tongass?			

Obstacles and Impediments Likely to Affect Implementation:

STEP:	**Help needed:**

Funding:

Phase:	**Budget:**	**Funding Source:**

Outcome/Results:

Action Initiative 5: Integrate Tourism Coursework with UAS Existing Degree Programs

Cluster Working Group:	Visitor Products
Champion:	Kelli Dindinger, President, Alaska Travel Adventures, Inc

Initiative Development Team:	Bill Hagevig, Juneau Division Manager, HAP Alaska-Yukon Erica Simpson, Juneau Manager, Alaska Canopy Adventures Ernestine Hayes, Assistant Professor of English, UAS, School of Arts and Sciences Forest Wagner, Program Director, UAS Outdoor Studies Linda Kruger, Research Social Scientist, PNW Research Station, US Forest Service, Juneau Forestry Sciences Lab Marsha Sousa, Dean, School of Arts and Sciences, University of Alaska, Southeast Odin Brudie, Tourism Transportation & Product Development, Alaska Office of Tourism Development Sean Smith, Glacier Gardens
Description & Motivation: Lack of local interest in tourism employment opportunities. The initiative will produce a more qualified and larger group of local applicants for entry level as well as management level positions in tourism.	
Objective: Create more employment and educational opportunities for Alaskans. Groom more prepared managers and guides to showcase the Tongass and other Southeast Alaska attractions. Provide an opportunity for UAS to attract and retain four year students.	

Action Initiative 5: Integrate Tourism Coursework with UAS Existing Degree Programs

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Discuss additional program/curriculum opportunities and internship programs with Kathy DiLorenzo and Rick Wolk to gain an understanding of the process that we would need to go through to integrate tourism management courses into existing business degree program.	Kathy DiLorenzo & Rick Wolk Kelli will coordinate this meeting.		May 15th
Write a letter to UAS supporting the 4 year Outdoor Studies Program to the Chancellor John Pugh & Richard Caulfield Also to Regional Forester, CBJ Mayor and Assembly	Forest to draft and JEDC to send final letter		April 15th
Evaluate what classes would we introduce and what degrees would they be applicable for.	Working group members conference call (need to schedule)	Catalogue of classes	May 10th
Create a list of employers who would be able to participate in a collaborative internship program with UAS. Establish internships.	K, Sitka CVB, JCVB, ATIA (Juneau Sitka and Ketchikan). Bill Hagevig will send out the emails.		July 20th
Recruit UAS students from Alaska high schools with a promotion of tourism course emphasis along with promotion of related employment opportunities.	Career advisors Industry employers	Courses implemented Recruiting Program implemented	Feb 2012

Action Initiative 5: Integrate Tourism Coursework with UAS Existing Degree Programs

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
		Targeted HS list List of Employers	
Investigate tie-in to Department of Commerce Step-up Guide program.			

Obstacles and Impediments Likely to Affect Implementation:

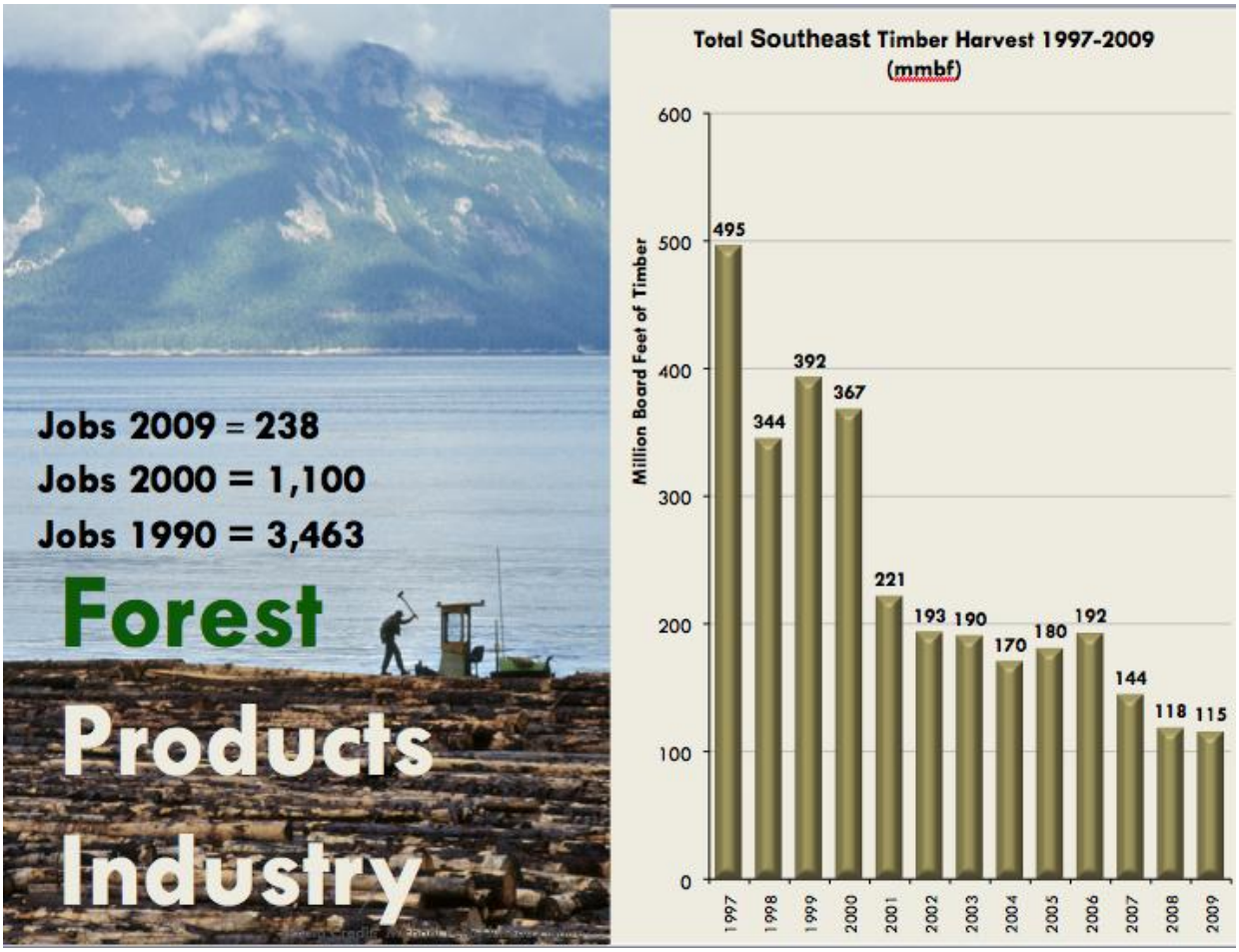
STEP:	Help needed:
There is a current mandate at UAS to not initiate any new programs, so we will need to start out working with existing programs to create an emphasis in the program or additional courses. We will work toward creating a new program over time.	
UAS has some vacant faculty positions which could limit the addition of new classes until those positions can be filled.	

Funding:

Phase:	Budget:	Funding Source:

Outcome/Results: We will be successful if we are able to develop a tourism program and a recruiting system that works. The assessment will be ongoing based on the participation level in the classes as well as the retention time of the students. If we see that classes are not filling, then we would have to reevaluate the benefits for the students and make some adjustments.

Southeast Alaska Forest Products



The Forest Products Industry Cluster, as defined by the NAICS codes in the Southeast Alaska Forest Products Cluster chart below, accounted for less than one percent of jobs and wages in the region in 2009, representing 238 jobs and a payroll of $11.8 million. In 1990, forest products related employment accounted for 10% of all wage and salary employment in Southeast Alaska. In the last two decades, there has been a 94% decrease in employment. Employment levels are expected to continue to fall.

Southeast Alaska Forest Products Cluster

Cluster/Industry Name	NAICS Industry Code	Annual Average Monthly Employment 2003	Annual Average Monthly Employment 2009	SE Businesses 2009	SE Wages 2009	Avg. SE wage 2009
Forestry and Logging		**510**	**238**	**32**	**$11,759,446**	**$49,375**
Logging	1133	371	158	17	$8,261,299	$52,149
Support activities for forestry	1153	20	24	6	$1,374,076	$56,858
Wood product manufacturing	321	119	56	9	$2,124,071	$38,214

It should be noted that some forest restoration jobs are not counted in the forestry and logging cluster above. Forest restoration jobs at this time are primarily in forest thinning, stream restoration, and road storage or maintenance. Those engaged in the latter two activities are primarily heavy equipment operators. That type of employment is a NAICS code that falls under Construction, so this direct employment in forest restoration is likely not represented in the forestry and logging cluster.

Forest Products as an Economic Force in the Regional Economy

The decline of the timber industry has been well documented. Once one of the main economic foundations of the region, the timber industry was decimated by a combination of forces, the most significant being the changing of federal government forest management policies and practices; but also including declining private timber harvests, and changing market conditions.

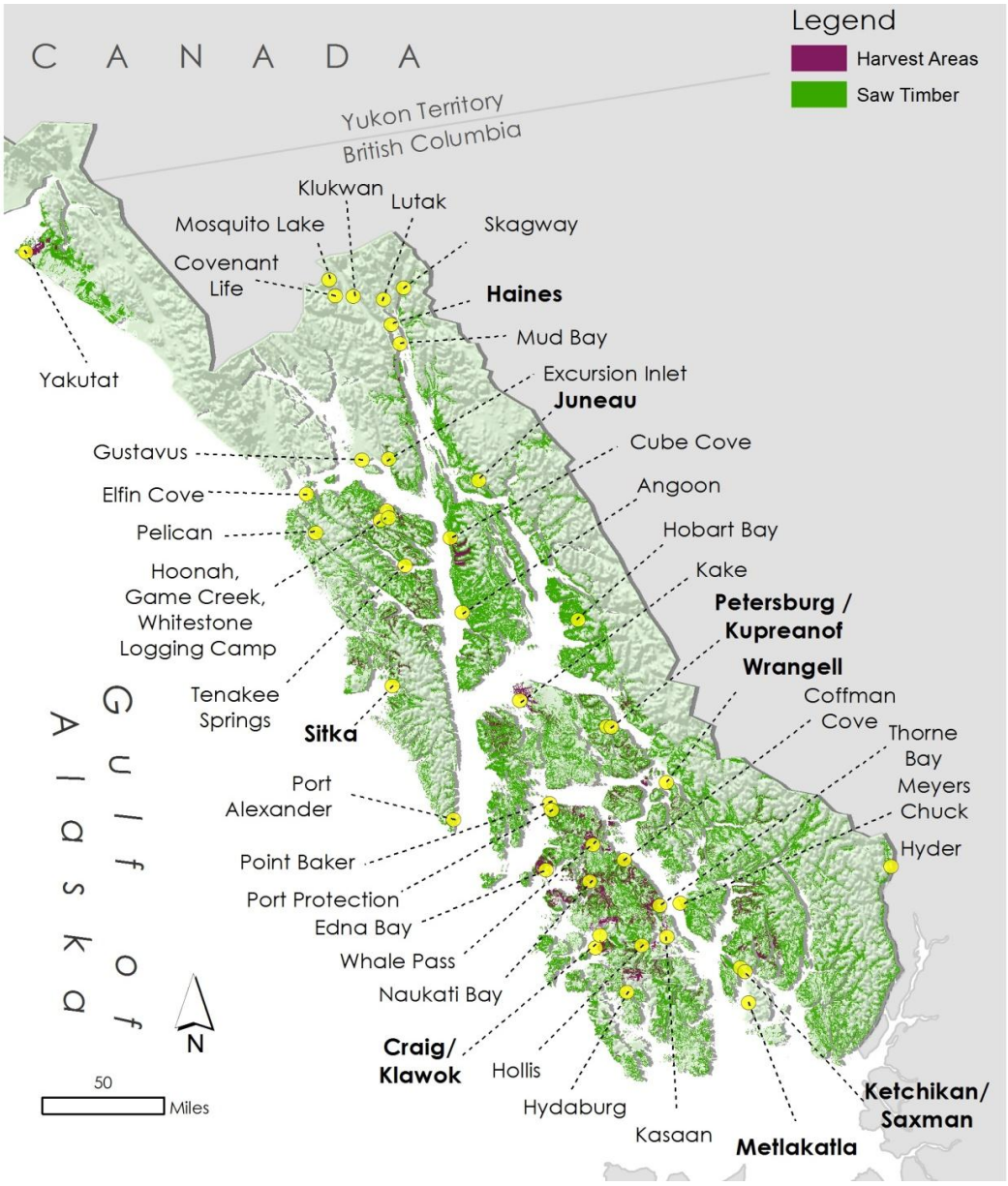
The decline of the timber industry cost Southeast Alaska 3,300 direct industry jobs and over $100 million in annual payroll. The indirect and induced impacts are on an order of magnitude higher – likely a loss of 6,000 jobs and $160 million loss of annual payroll in Southeast. Significant timber mill closures in Ketchikan, Sitka, and Wrangell eliminated the major private sector source of year round employment in those communities and substantially impacted other communities that depended on the timber industry. While once there were 12 large saw mills operating in Southeast Alaska, today there are none, only one mid-size sawmill—and a handful of very small ones—remain.

The USFS has substantial holdings of timber suitable for harvest (see map on following page); however, the current political climate has hindered sales of many USFS timber stands, and few mills have been able to operate without a predictable, economically viable 10-year timber supply. Mills would prefer to have three years' worth of timber on contract at a minimum, but even that has been difficult to obtain because nearly every timber sale has been subject to litigation, and any timber in litigation is not available to local

purchasers and mill operators. The end result is considerable expense and delay, and this pattern, as it repeats itself will likely lead to further mill closures.

Moreover, the Transition plan for the Tongass calls for the industry to shift from a timber supply primarily based on old growth timber from roadless areas of the Tongass National Forest to small diameter logs from second growth stands and from roaded areas. This proposed switch in raw material supply from old growth timber in roaded and roadless areas to young growth timber limited to roaded areas will require significant investment in new equipment that Southeast timber operators will have to finance themselves. Such investments will be difficult to finance without the assurance of a reliable supply of economic timber from the Forest Service.

Location of Harvested Areas and Available Saw Timber



In 2009, the total Southeast Alaska timber harvest was 114 million board feet (mmbf). This includes 51 mmbf from Sealaska land; 15 mmbf from Alaska Mental Health timber operations; 43 mmbf from the Tongass; and 6 mmbf from State timberlands. The total 2009 harvest is a 3.5 percent decrease from 2008, and represents a 77% decrease from the 1997 Southeast harvest of 495 mmbf.

Forest Products Cluster Strategy Development Process

In February, March, April and May of 2011, the Juneau Economic Development Council convened a 33 member Forest Products Cluster Working Group with representation from private industry, including medium and small local mills and a retail establishment; federal, state and local government agency representatives; tribal corporation representatives; regional economic development entities; trade associations and environmental organizations. A full roster of the Working Group membership is below.

Southeast Alaska Forest Products Cluster Working Group Membership*

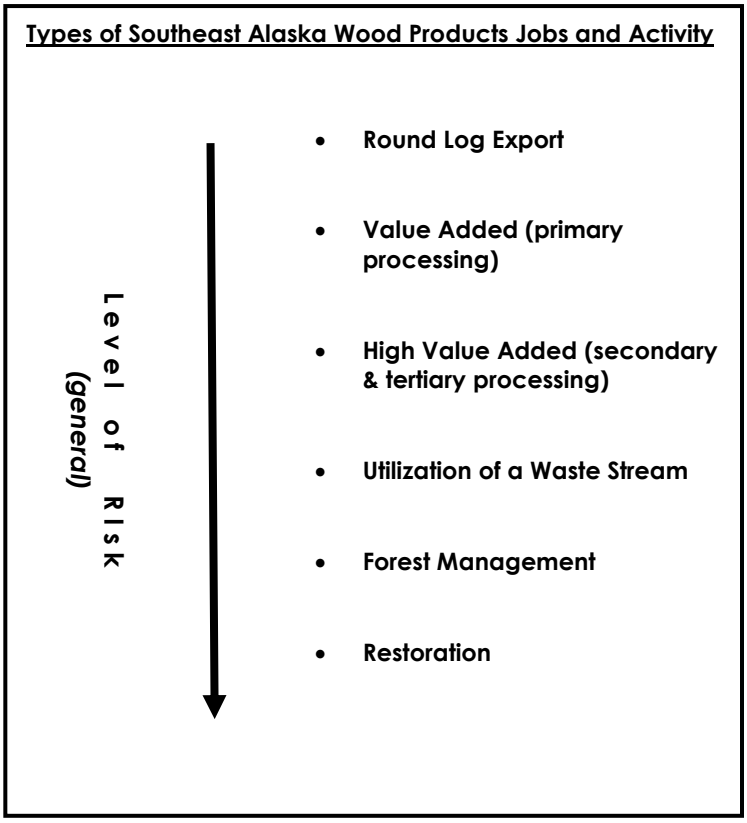
Name	Affiliation	Position
Allen Brackley	USDA Forest Service	Research Forester
Andrew Thoms	Sitka Conservation Soc	Executive Director
Bill Thomason	Wood Cuts	Owner
Bob Deering	USCG - Civil Engineering Unit Juneau	Environmental & Energy Branch Chief
Bruce Abel	Don Abel	Owner
Bryce Dahlstrom	Viking Lumber Company	Owner
Carol Rushmore	City of Wrangell	Economic Development Director
Carolyn Thomason	Wood Cuts	Owner
Chris Maisch	DNR	Director
Clarence Clark	Div of Forestry	Forester
Dan Parrent	USDA Forest Service	Biomass/Forest Stewardship Coordinator, R10
Dave Harris	USDA Forest Service	Director, Forest Management
Ernie Eads	Thuja Plicata Lumber Co	Owner
George Woodbury	Alaska Forest Assn	President
Greg Erickson	Erickson Economics/SEACC	Economic consultant
Jackie Durette	Durette Construction	President
John Sisk	The Nature Conservancy	
Jon Martin	USDA Forest Service	Tongass Transition Framework Coordiantor
Karen Petersen	UAF Cooperative Extension Service	Program Assistant/Land Resources
Keith Rush	The Nature Conservancy	
Kent Nicholson	Timber Sale Program Manager, Tongass National Forest	Ketchikan-Misty Fiords Acting District Ranger

Attended one or more meetings

Name	Affiliation	Position
Larry Jackson	Tongass Forest Enterprises	Owner
Lindsey Ketchel	SEACC	Executive Director
Marie Messing	USDA Forest Service	Highway Engineer
Merrill Sanford	SEC Board	CBJ Assembly
Michael Kampnich	The Nature Conservancy	
Mike Goldstein	Alaska Coastal Rainforest Center	Director
Owen Graham	Alaska Forest Assn	Executive Director
Paul Slenkamp	The Trust Land Office	Trust Resource Manager
Richard Stubbe	Alaska Wood Products	
Shelly Wright	Southeast Conference	Executive Director
Wade Zammit	Sealaska	President, Sealaska Timber
Wes Tyler	Icy Strait Lumber	Owner

Over the course of four facilitated meetings and numerous between meeting teleconferences, this diverse group worked collaboratively to identify areas where opportunity for job creation and industry development may exist within this sector. In addition, the group identified opportunities for collaboration and partnership to overcome current constraints that stand in the way of business growth.

Group discussion produced the graphic to the right to show the types of forest product jobs and activity in Southeast Alaska.



Southeast Alaska Forest Products Industry Opportunities and Challenges

The cluster working group was asked to develop a list of the opportunities and challenges offered by the Southeast Alaska Forest Products industry. The group developed the following list:

Round Log Export

- Round log export has the highest return on invested capital of all wood product sectors. This is where the profit is made to support all other types of commercial wood product activity. This market also supports the basic industry infrastructure.
- Sealaska facilitates all Federal timber sale exports for the region because they support the infrastructure, but need the volume of all players.

- Markets: China, Korea, Canada, Washington. China has growing supply constraints in face of fast growing demands. This means increasing potential that they will buy more raw materials from Southeast Alaska. China buys round logs of 8- 22", and Southeast has a competitive advantage here in its 2nd growth timber. However, second growth is commodity priced, but need 10-20 times amount of capital investment.
- Logs are used to make concrete forms and pallets. Do we know much about changing demands from the fastest growing market in the world (Asia)? Can we identify small, niche opportunities in the China economy?
- Round log export market is highly dependent on 50% exemption that allows export to maximize price, rather than all domestic sales.
- Alaskan domestic market is very small and stagnant with slowdown in construction; other domestic markets are in US and Canada.
- The I-5 Corridor has many advantages; it is our major competition in the West, however, there is a mountain beetle infestation in Canada which may lead to lumber supply shortages.
- Infrastructure is aging.

Value Added (primary processing) and High Value Added (secondary and tertiary processing)

- Size and economies of scale are issues. Many products can only be sold locally because the selling price in the global market is not high enough to cover freight costs to export (to other parts of Southeast, Alaska or outside). However, the volume of forest products that meet the need within the region cannot support the capital investment needed to produce them.
- The increasing cost of oil increases freight costs and production costs making the forest products business increasingly difficult. Freight costs make Southeast value added products too expensive to compete in global markets where there is no perceived product advantage. Global markets don't know about the superior products we make here. We could brand and market Tongass high value wood to increase product price. Sell a branded product worldwide, in very small quantities at high prices. Premium priced, promoted and marketed just like craft beer, Copper River reds. Is Sealaska, University, Alaska Rainforest Institute, or any other entity doing applied research or product development for forest products?
- Products include (or could) the following: Dimension lumber (various grades/various markets, green lumber, dried & planed lumber), treated beams, pre-cut molding, fiberboard, specialized cuts for furniture, furniture wood, mooring buoys, poles for local markets, Shingles and shakes (cedar), house kits, posts, fencing, hot tubs (cedar), totem pole and other art, carving, pulp, veneer, chips, specialty wood (music wood, carving wood, furniture wood)
- In the future many sales will be second growth. All this wood will be commodity priced so the products have to be niche-sized. Smaller items that people want to buy as a product that is

"special." This is so because there will be too little profit in large scale cutting of second growth for the investments needed for large scale production. So, work with second growth, 30-35 year old trees and produce the wood for specialized products and niche markets.

- POW has a cluster of high value added small mills. Money to develop this cluster came from Ted Stevens. Many of these are very small entrepreneurial efforts, are they being supported in anyway?
- Forest service cannot do more than a 10 year timber sale contract. Would like to see more wood supply privately provided.

Utilization of a Waste Stream

- Chips or hog fuel for school (and other) heat.
- Bio-mass to sustain a wood pellet plant (if enough demand can be generated in Southeast Alaska; commonly quoted as 10,000 ton/year demand). Pulp, wood pellets, biomass - these need scale to be successful. A broader market is needed because the market is not large enough in Southeast to make scale. Need to look at the export market.
- Opportunities that combine wood and paper waste.
- Opportunities that combine wood and fish waste.
- Increasing price of oil makes cost of heating with wood (cordwood, chips, and pellets) more attractive.
- Take advantage of the road system on Prince of Wales.
- Ideally, want a 20 year supply of fiber identified.

Forest Management

- USFS wants to hire more local consultants rather than from outside Alaska; wants to be more efficient in offering timber sales. Job/consultant opportunities for foresters, those with technical expertise to prepare EAs, EISs, review them; lay out timber sales, etc., approximately 10-30 jobs, will go to outside firms because there is no local expertise.
- Consistent forest sales needed for transportation planning. Can't keep roads open if we aren't going to use them for timber sales.
- Moral very low at USFS due to endless lawsuits, changing policy, shrinking budgets, have lost expertise and personnel to lay out and put up timber sales, timber sales not a priority-too many policy barriers, too little consensus in the constituency.
- An internal "Gate 3" Committee working to make timber sales easier to accomplish.
- Need to offer a variety of timber sales: e.g., 10 year, small scale, firewood, salvage.

Restoration (stream rebuilding, basal pruning, thinning, road storage, etc.)

- This is a new federal priority with public funding directed to support it.
- Restoration jobs are for those with equipment to move dirt and rock, prune, thin, etc. Also the restored watersheds support fish and wildlife, educational and research jobs, recreation and tourism jobs.
- Restoration should lead to sustained export of 18" logs.
- Restoration is a broad sweep of jobs creation beyond the forest and is available in the near term.

A jobs creation strategy will depend on a combination of initiatives in all five areas:

- Export low grade logs
- Retain higher value wood; process this woods into whatever the highest value added products are. Make money to develop these niches by selling the commodity logs (second growth) on world markets.
- Initiate new efforts in product design, market identification, R&D, technology needs.
- Develop bio-mass and wood waste streams for heat and energy production.
- Take advantage of restoration money for near term while developing niche markets.

By the conclusion of the third meeting, the group developed six initiatives that addressed themes emerging from the Cluster discussions. The primary need identified by the industry was to define the industry objectives for transition from old growth to young growth. To do this, the following questions will require answers:

- Under various assumed volumes of young growth, what does the industry look like when the time has come that Southeast Alaska timber harvest is mostly young growth?
- How much old growth is needed as a bridge during the transition?
- How much old growth is needed on a long term basis?

A cooperative private/public team formed to gather data and perform sustained yield calculations in order to tackle this issue. Legislative changes in forest management were also identified as a means to achieve management changes and land base security. Concerns about the slow internal processes and responsiveness of the USFS led to development of an initiative to improve Forest Service product delivery. The group felt that the inability of the Forest Service to deliver products, permits and partnerships, has contributed to the decline of economic activity in the industry. In-region markets for young growth timber were another issue identified for action by the group. One opportunity area is forest service procurement requirements for timber for regional cabins and recreational structures. A second is to simplify the USFS small sale process and work to create a level playing field between export bidders and domestic processing bidders.

The group felt that increased in-region processing of forest products to capture more value would create economic opportunity. A buy-local program and a Tongass branding and marketing campaign are being explored. Finally, the emerging biomass industry was seen as a potential area for industry growth and job creation. The industry need is to grow local demand large enough to support a regional pellet plant. In addition to creating jobs in harvesting, transportation and processing, growth of this this industry would also contribute to a regional reduction in by-product waste and move the region towards energy diversification.

Forest Products Action Initiatives

The initiatives with full consensus by the Cluster Working Group at this time are:

7. Use Young Growth Wood for Cabin and Recreational Structures on Prince of Wales Island.
8. Simplify Small Timber Sale Process to Allow Small Mills on Prince of Wales Island to Operate More Efficiently, Economically, and with More Supply Certainty.
9. Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries.
10. Continuously Improve Select USFS Processes
11. Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations and Guidelines that Streamline Process and Improve Predictable Delivery of Supply.
12. Substitute Biomass for Diesel to Meet Energy Needs of Southeast Alaska

The initiatives which did not have the full consensus of the Cluster Working Group are:

13. Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska.
14. Create a 1.5 Million Acre State Forest (from Tongass lands) to be Managed by State of Alaska
15. Restore a Viable Timber Industry in Southeast Alaska

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Action Initiative 1: Use Young Growth Wood for Cabin and Recreational Structures on Prince of Wales Island

Cluster Working Group:	Forest Products
Initiative Champion:	Keith Rush, The Nature Conservancy
Initiative Implementation Team:	Michael Kampnich, The Nature ConservancyKaren Petersen, Program Assistant/Land Resources, UAF Cooperative Extension ServicesBill and Carolyn Thomason, Owners, Alaska Wood Cuts Clarence Clark, Forester, Alaska Division of Forestry Forest Service Partners

Description & Motivation:

At present, Forest Service cabins and recreational structures are not being constructed with young growth logs (round and milled) on Prince of Wales (POW) Island. Further, in three such projects in the last year, for construction in other locations in Southeast Alaska, the Forest Service has refused to consider the use of young growth materials in the cabin construction. An inconsistency in approach by the Forest Service has been noted in that two region cabins have been built on other Tongass NF ranger districts (e.g. Sitka and Wrangell). Communications from some FS staff on POW (neither timber nor silviculture staff) has led to a belief that young growth logs may have broader quality issues than other logs. As a result, other POW entities such as school districts have now decided against considering young growth logs for certain projects being conducted in concert with the Forest Service. Likewise, the suitability of young growth has been called into question for use in any type of structure in this region, whether Forest Service construction or private. This unsubstantiated belief of quality issues is limiting local markets for mills that produce or plan to produce young growth cabin logs. POW FS efforts to build two 3 sided shelters with YG milled logs in a contract with SISD, after one has already been constructed with YG, has been postponed due to uncertainties regarding use of YG for FS Projects.

Objectives:

The objective is to work with the Forest Service to develop young growth cabins and structures (round log and/or milled) that meet Forest Service cabin and structure specifications and to ensure that future recreational structure RFPs will consider YG as a legitimate and desired

building material. The Forest Service should specify regionally produced building materials for all of their building projects *(this can be addressed by the In Region Processing AI)*.

The benefits would be the development of a local (POW and regional) value-added industry for utilization of young-growth materials.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
Meet with POW Forest Service staff to discuss the situation, define quality issues, and identify the root of the problem.	Michael Kampnich, Karen Petersen, Jason Anderson		March 31, 2011
Meet with Tongass NF staff to discuss the situation, define quality issues, and identify the root of the problem.	Keith Rush, Tricia O'Connor		March 31, 2011
Contact Val Barber and Al Brackley to propose YG cabin demonstration workshop.	Karen Petersen		April 5, 2011
With the information gathered at the first 2 meetings identify key individuals that the group will need to work with to resolve the quality issue, such as FS architects, engineering staff, forest products testing labs, procurement staff, contracting staff, etc.	Forrest Cole, Tongass Forest Supervisor issued letter and directions to his staff that should put the concerns to rest.		April 12, 2011
Obtain the young growth log and lumber quality information produced by the Ketchikan Wood Quality Lab	Al Brackley		May 4, 2011
Meet with FS procurement specialist and Recreation Staff	John Inman, Hans Von		

Action Initiative 1: Use Young Growth Wood for Cabin and Recreational Structures on Prince of Wales Island

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Officer to address RFPs for FS cabins and recreational structures; so that YG proposals will be accepted on par with OG proposals	Rekowski, Keith Rush, Bill & Carolyn Thomason		May --,2011
Consider grading/stamping of YG wood for construction uses.	Michael Kampnich		Long term
Work with FS to develop young growth cabin (milled and round log) demonstration	Maeve Taylor, Michael Kampnich, Bill & Carolyn Thomason		
Share criteria for acceptable construction with other POW entities.	Michael Kampnich, Karen Petersen	News release to inform the public that young growth logs are acceptable material for the construction of cabins and recreational structures.	At the time of a YG cabin project.

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Aligning recreational staff and procurement staff, so that there is no disconnect between local project specifications and RFPs of the project. Communications with the wider audience that may have received misinformation on YG qualities.	Outreach assistance.

Funding:

Action Initiative 1: Use Young Growth Wood for Cabin and Recreational Structures on Prince of Wales Island

Phase:	Budget:	Funding Source:
Demonstration	$50,000	

Outcome/Results:
Success will be cabins and structures constructed from young growth logs from mills on POW.

Action Initiative 2: Simplify Small Timber Sale Process to Allow Small Mills on Prince of Wales Island to Operate More Efficiently, Economically, and with More Supply Certainty

Cluster Working Group:	Forest Products
Initiative Champions:	Keith Rush, The Nature Conservancy Michael Kampnich, The Nature Conservancy
Initiative Development Team:	Bill and Carolyn Thomason, Owners, Alaska Wood Cuts Keith Landers, Owner, H&L Salvage Mill Larry Jackson, Owner, Tongass Forest Enterprises Kent Nicholson, Timber Sale Program Manager, USFS Dave Harris, Director, Forest Management, USFS FS partners Others – As initiatives are identified or further developed it is likely that new people will contribute in this effort.
Description & Motivation: Small mills on POW are dealing with a variety of issues that are threatening their continued operation and/or prohibiting them from operating as efficiently and as economically as they could.	
Objective: To help the small mills on POW to operate more efficiently, economically, and with more supply certainty.	

Action Initiative 2: Simplify Small Timber Sale Process to Allow Small Mills on Prince of Wales Island to Operate More Efficiently, Economically, and with More Supply Certainty

ACTION PLAN

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Simplify small sale process. This will require more evaluation by operators and FS staff to determine exactly what can/should be done but both FS staff and operators acknowledge a complicated, cumbersome system that is challenging at best.	Michael Kampnich Keith Landers Kent Nicholson Stan McCoy Others		
2. Develop criteria for USFS sales that will promote a level playing field between export bidders and domestic processing bidders. This reduces the likely-hood that small sales will be bid up and out of a range local mill operators can afford to purchase.	Michael Kampnich Dave Harris Kent Nicholson Keith Landers Others		
3. Extend the time frame for access to newly harvested units. Access to newly harvested units is often closed as soon as harvest has been completed. Extending access would provide opportunities for micro sales and firewood harvesting as well as personal use and subsistence opportunities.	Michael Kampnich Jason Anderson Others		

Action Initiative 2: Simplify Small Timber Sale Process to Allow Small Mills on Prince of Wales Island to Operate More Efficiently, Economically, and with More Supply Certainty

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
4. Broaden size of small scale, lump-sum sales to go up to 1,000,000 mmbf. Provide a longer timeframe for harvest of units.	Michael Kampnich Keith Landers Bill & Carolyn Thomason Dave Harris Others		
5. Evaluate opportunities to increase the milling of Red and Yellow Cedar logs locally that may otherwise be exported in the round. Develop local processing to the greatest extent possible.	Michael Kampnich Keith Landers Larry Jackson Appropriate FS staff Others		
6. Evaluate opportunities to develop a sort yard for POW based small mills that would allow mill operators to bid on and work with scaled sales. These sales are easier for the FS to get out the door, they can be done quicker and they can be more cost effective for operators to purchase and work with.	Michael Kampnich Keith Landers Bill & Carolyn Thomson Appropriate FS staff Others		
7. Allow for the continued utilization of dead/down timber, through the micro sale process in non-development LUDS, other than wilderness.	Michael Kampnich Dave Harris Others		

Action Initiative 2: Simplify Small Timber Sale Process to Allow Small Mills on Prince of Wales Island to Operate More Efficiently, Economically, and with More Supply Certainty

Obstacles and Impediments Likely to Affect Implementation:

STEP:	**Help needed:**
FS policy	FS partners to address the listed issues
FS rules and regulations	

Funding:

Phase:	**Budget:**	**Funding Source:**

Outcome/Results:
The small mills on POW will have a steady supply timber and will be able to operate more efficiently and economically than at present.

Action Initiative 3: Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries

Cluster Working Group:	Forest Products
Initiative Champions:	Bill and Carolyn Thomason, Owners, Alaska Wood Cuts alaskawoodcuts@earthlink.net 254-7653
Initiative Development Team:	Allen Brackley, Research Forester, USFS Daniel Parrent, Biomass/Forest Stewardship Coordinator, USFS Lindsey Ketchel, Executive Director, Southeast Alaska Conservation Council Marie Messing, Highway Engineer, USFS Michael Kampnich, The Nature Conservancy Shelly Wright, Executive Director, Southeast Conference Wade Zammit, President, Sealaska Timber, Sealaska

Description & Motivation:

The Southeast Alaska timber industry is struggling to maintain its existence. It is caught in the crossfire between national interest groups, Federal politics, processes and policies that are squeezing the life out of the local economies and the people that are drawn to local values and opportunities in what would otherwise be a rich timber resource area. These basic tensions make it difficult to sustain business and tackle the true challenges that exist to operating a successful business in Southeast. Alaska. Many traditionally timber-dependent Southeast communities struggle to maintain schools, employment, housing and essential public services.

This initiative aims to influence attitudes toward Alaskan wood and Southeast Alaska woodworking industries and to increase knowledge about building with Alaskan woods. Particular emphasis will be placed upon the increase of in-region processing of forest products while capturing higher economic value from those products. The important role of wood for the environment and society will be highlighted with the message that wood can offer one solution to climate change since it binds carbon dioxide and is a renewable raw material.

Objective:

The aims of the initiative are three-fold:

1. Support existing local forest industries by creating demand for local timber and wood products through improved common marketing of Alaska forest products in cooperation with the sawmill industry, building materials and timber suppliers, and wood

products manufacturers;
2. Support the development of in-region, sustainable new industry-oriented products, processes and activities; and
3. Develop solutions to major barriers inhibiting the start-up or relocation of value-added processing facilities in Southeast Alaska.

ACTION PLAN

Describe the specific steps/tasks	**Key People: Who needs to be involved to accomplish step**	**Resources needed to accomplish step**	**Timeline to accomplish step**
Establish a marketing association (e.g. "Alaskan Sustainable Forest Industries Association") to increase the positive awareness of Alaska timber regionally, nationally, and globally: Develop long-term common marketing plan following review/update of existing literature and studies. (See Al Brackley's attached notes) Educate public on the technical analysis of Alaska timber, quality of Alaska timber, uses of Alaska timber Educate public on the existing Alaska timber products (i.e. Initial marketing efforts could be focused on the cluster of existing log and timber home manufacturing business in SE Alaska) With the cooperation and support of the FS, construct a marketing program to attract investment in new products and value-added processing from available forest resources Advocate the use of Alaska timber for national, state, regional, and local "government" agency construction projects Align Alaska timber usage within the wood products industry (i.e. use of Alaska red cedar for decks instead of composite woods, use Alaska timber in glulam beam or Alaska large timbers instead of	Forest Service, State Forestry, Southeast Conference, JEDC, wood products industry representatives	Initial funding from USDA grant source	Six months to establish the marketing association, recognizing that some items in this step are ongoing.

Action Initiative 3: Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
glulam beams) Use efficient and effective fiscal and time management to minimize marketing costs Develop brand awareness of Alaska timber			
Enhance in-region processing by identification of and development of solutions to major barriers (as identified in JEDC's Southeast Alaska Economic Asset Map, December, 2010) inhibiting the start-up or relocation of value-added processing facilities in SE Alaska: Capital – for example, re-establish USDA's direct lending authority or provide additional funding through intermediary lenders such as JEDC High cost of land – for example, support the 'State Forest from Tongass Lands' initiative specifically with regard to the state match transferred to cities from federal lands surrounding the cities, as well as transfers to Alaska Boroughs and unincorporated communities for commercial development High cost of power – for example, develop/increase hydro-electric, cogeneration of power sources Shipping costs to/from SE Alaska – for example, work with the shipping industry to lower costs by improving their economy of scale Skilled labor force – for example: Develop "wood shop" classes within local schools; do feasible, tangible, finished projects by coordinating and combining projects	a, b, and c: Forest Service, USDA, State Forestry, State of Alaska, communities d: Forest Service,, State Forestry, native forestry, shipping industry, forest products industry representatives e: Forest Service, State Forestry, native		

Action Initiative 3: Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
and students from different schools School classes work with local businesses to learn skills needed to secure a job in value-added processing Develop curriculum (allowing study credits) Develop apprenticeship program with AVTEC Alaska's Technical Institute, construction/builders association, wood products processing companies, logging companies	forestry, forest products industry representatives, SE Alaska School Districts, University of Alaska, Forestry Department, AVTEC Technical Institute		

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
In regards to both steps 1 and 2: Propensity to "study, research, review" *ad nauseam* rather than "do" something Funding Prejudice regarding "mom and pop" businesses	Limit size of committees Cooperation from interested parties to develop "strength in numbers" without sacrificing independence. Also see suggestion below.

Funding:

Phase:	Budget:	Funding Source:

Action Initiative 3: Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries

Phase:	Budget:	Funding Source:
Step # 1	Develop information for start- up funding through study of similar entities for other industries such as the Alaska Seafood Marketing Institute.	See above for initial funding source. The marketing association could have ongoing revenues (dues) from the following sources: Implement a 5% "buyers' premium" on value of timber purchases from all timber sales on state and federal lands; Similar proportional percentage related to the value of timber exported from native lands (since there is no stumpage upon which to base the value); Contribution from Forest Service and State Forestry of 25% of all stewardship revenues (based upon the contract value of the "goods for services") derived from restoration/transition activities; Contribution from participating conservation groups of 5% of environmental litigation costs.
Step # 2		Re-establish USDA's direct lending authority or provide additional funding through intermediary lenders such as JEDC

Action Initiative 3: Increase Knowledge about Building with Alaskan Wood and Influence Attitudes about Southeast Alaska Woodworking Industries

Phase:	Budget:	Funding Source:
		Negotiated discounts from shipping industry in exchange for higher shipping volumes. Funding for school and apprentice programs??

Outcome/Results:

Achievement of the three-fold objectives listed above as measured by:

1. Increased employment and increase in overall employment compensation of SE Alaska residents employed in the timber sector, as measured above the baselines established in JEDC's Southeast Alaska Economic Asset Map, December, 2010.
2. Reversal of population decline as evidenced by increased percentage growth as compared with growth for the rest of the state
3. Increased economic vitality within SE Alaska communities
4. Increased school enrollment in SE Alaska 's school districts
5. Increased alliance and cooperative effort among SE Alaska forest product businesses as measured by anecdotal evidence
6. Increased in-region timber processing - measured by revenue increases reported by member firms

Action Initiative 4: Continuously Improve Select USFS Processes

Cluster Working Group:	Forest Products
Champion:	Kent Nicholson, Timber Sale Program Manager, Tongass National Forest
Initiative Development Team:	Merrill Sanford, CBJ Assembly, SEC Board Bruce Abel, Owner, Don Abel Jon Martin, Tongass Transition Framework Coordinator, USDA Forest Service Bryce Dahlstrom, Owner, Viking Lumber

Description & Motivation:

Slow internal processes, in general, slow responsiveness of the USFS in several areas of customer service. Timber Sale customers are not satisfied with the delivery of timber sales, stating that by the time they get to Gate 5 (Bid) nearly 4 years has transpired. Customers seeking permits, timber related permits and special use permits for non-timber related activities, also have expressed a desire to improve permit delivery. Finally partners have expressed concerns that it is often difficult to work with the Forest Service because some internal processes are difficult for employees to understand, like how to receive partnership funds in cash form.

Objective:

The objective of the initiative is to improve product delivery. The benefits to Southeast Alaska would be improved confidence regarding that the Forest Service could deliver its products/permits/partnerships cooperation timely and reliably. Improved confidence should translate into more activities taking place while ideas and opportunities are still fresh, which should lead to greater economic activity.

Action Initiative 4: Continuously Improve Select USFS Processes

ACTION PLAN

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
Use the Timber Sale Program Schedule, Periodic Timber Sale Announcement, and the Schedule of Proposed NEPA Activities to determine the "products" and delivery dates.	District Planning Staff, District Timber Management Assistants, Forest Supervisors Office, Program Managers Forest Service customers	none	1 Month
Create a tracking spreadsheet that establishes the project deliverables and estimated completion dates assigned in the above referenced documents then shows actual deliverables and actual completion dates.	District Planning Staff, District Timber Management Assistants, Forest Supervisors Office Program Managers	none	1 Month
Establish metrics for evaluating the delivered product based on acceptable deliverable timeframes, rational for changing dates or project deliverables, and determination if a project is successful or not successful in meeting stated product delivery.	Forest Supervisor Staff Officers and District Rangers and Supervisors Officer Program Managers	none	1 Month
Measuring production against the established metrics	Forest Supervisor Program Managers	none	Continuous after metrics are established and production is completed
Where product delivery does not meet planned delivery, initiate a review to determine the reasons for the project(s) variance.	Forest Supervisor Program Managers	none	Continuous after metrics are established and production is

Action Initiative 4: Continuously Improve Select USFS Processes

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
			completed
Categorize the results of the investigation. For example, within the control of the organization, outside the control of the organization, can be corrected through training, process improvements, or may require cultural change.	Forest Supervisor Program Managers	none	Continuous after metrics are established and production is completed
Produce improvement plans that specify how, when, and by whom the changes will be implemented	Forest Supervisor Program Managers	none	Continuous after metrics are established and production is completed
Recognize there will be resistance to the changes in process if they are needed and to accountability and performance measures; develop plans to overcome the resistance to change	Forest Supervisor Staff Officers and District Rangers and Supervisors Officer Program Managers	none	Continuous after metrics are established and production is completed
Implement the changes	Managers and employees		
Put into place controls to hold new levels of performance, and start over at step 1.	Leadership	none	

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Measuring current performance	Once the products are determined and measurements are established, determination of actual performance will require a check and balance system and an objective third party to the performance measurement.

Action Initiative 4: Continuously Improve Select USFS Processes

STEP:	Help needed:
Making the case for change. After the first report from the new tracking report is shared with employees, expect employees to feel stress, possibly shame and other emotional responses. These are normal human response to accountability and measuring performance.	The Forest Service has already undergone and an enormous amount of change. Workforce change, transitioning, transformation, work priorities, travel tools, etc. The key will be to not lose this change in the mix of all the other changes taking place. In addition, making this change a part of our culture instead of a business management cliché will be the challenge. Care must be taken to recognize the normal responses to change and develop methods for dealing with the responses while at the same time not creating a backlash (Phillip E. Tetlock, Advances in Experimental Social Psychology, Vol. 25, Academic Press Inc. 1992)
Admitting there may be a problem with performance or process and that we collectively have the "power" to change.	Getting buy in that there are problems and that we are not total victims of outside forces will require leadership from District Rangers, Staffs, Forest Supervisor and Regional Foresters.
Determining acceptable test solutions will be a challenge as normal human response is a resistance to change. Secondly, most risk management activities naturally gravitate to reducing risk which does not normally reduce steps or increases in product outputs.	Overcoming the "But this is how we have always done it" mentality and understanding risk management may hold the key.
Putting controls into place will be a challenge due to the FS culture and reluctance to hold management/employees responsible to meeting timelines and budgets.	The FS has employee performance ratings, but if talk to employees across the region, you will find that it does not work well, it is not applied reliably and uniformly, employees who appear to be under performing are rated similar to higher productive employees and any number of other issues. Ensuring the current system is used to enhance performance will require training and reviews of the existing system.

Action Initiative 4: Continuously Improve Select USFS Processes

Funding:

Phase:	Budget:	Funding Source:
All phases	Normal allocation	Normal Source

Outcome/Results:

An increase in productively will mark the successful completion of this initiative. However, like all continuous improvement activities, once an improvement is achieved, continuous monitoring will be necessary to insure any new circumstances are quickly adopted and more productive ways to do the business of the Forest Service.

If the USFS is able to improve their processes of doing what they say they are going to do through the SOPA, 5-Year Plan, and PTSA, the volume of offered timber sales should increase. This year demand is 110 MMBF, for the Limited Lumber. The USFS should plan on offering 110 MMBF this year and adjusting their offer to match the demand each year over the next 5-years. It is estimated, based on tables from Forest Project Environmental Impact Statements in the economic sections, that on a 50 MMBF offer (current situation) there will be about 115 logging jobs. If the USFS offer increases by 60 MMBF (110 MMBF demand) there should be an increase of 138 logging jobs, assuming all logging production is running at capacity now. In addition there would be an increase in sawmill jobs as well of about 340 jobs depending again on current capacity.

As the USFS gets better at achieving demand, the number of potential jobs should increase, and the volume of harvest should increase as well as mill production in response to more NEPA cleared inventory. At the present harvest level of 40 MMBF a 110 MBF offer would create close to a 3 year supply of NEPA ready volume. By having a 3 year supply of NEPA cleared volume, the USFS should be able to be more responsive to economic changes by offering less economic sales is good markets and better economic sales in poor markets. This will create a more stable inventory supply of volume that the industry can match to market changes. It will also create a buffer between lawsuits, budget fluctuation, or other slow intermittent slowdowns during NEPA and project implementation.

Action Initiative 5: Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations and Guidelines that Streamline Process and Improve Predictable Delivery of Supply

Cluster Working Group:	Forest Products
Initiative Champions:	Wade Zammit, President, Sealaska Timber, Sealaska Bryce Dahlstrom, Owner, Viking Lumber
Initiative Development Team:	Clarence Clark, Forester, Division of Forestry Dave Harris, Director, Forest Management, US Forest Service Allen Brackley, Research Forester, US Forest Service

Description & Motivation:

Following our discussion relative to the different options that are available to secure a working land base that can be dedicated to timber harvesting in the Tongass that will sustain and attract economic investment, two options are available:

- The Legislative Approach
- The Regulatory Approach

The regulatory option provides short term relief to allow for time to generate a more long term solution, but given the political climate using the TFR process as a baseline, the success of a short term option appears to have low probability of achieving economic sustainability goals. As a result we recommend moving to a legislative solution that not only incorporates the land base security element but also the management changes required to optimize and sustain positive economic harvesting activity to support and attract an industry base in SE Alaska.

As a result of our considerations, we propose the establishment of the "Tongass National Forest - Congressionally Designated Timberlands."

This would be a mechanism in legislation that would designate a timberland production economic zone within the Tongass National Forest. The legislation would identify the area for timber management and set out the regulations that would apply to managing this forest incorporating the assumptions in our supply exercise.

Action Initiative 5: Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations and Guidelines that Streamline Process and Improve Predictable Delivery of Supply

Objective:

To sustain a Forest Products Industry in Southeast Alaska it is essential for transitional purposes that there is access to an old growth supply as well as a definitive, predictable and growing volume of 2nd growth timber. A fixed land base is essential, protected from encroachment of other uses is essential. The land base requires management under predominantly even aged harvesting with an overhaul of the process to bring sales to market: This solution benefits the current and future investors, creates sustainable employment, creates positive stumpage values to further invest in forest management and provides continuity of supply to our customers, potential for growth and diversification of the industry.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Define the specific Elements of change	Working Group	Draft is completed	Complete
2. Define the authorization level required to implement the Elements of Change	Working Group/ George or Owen	First draft in; needs to be circulated	End of first week of May
3. Draft a Land Base Security Proposal	Working Group George or Owen	Time	Late May/early June
4. Draft a Management Proposal for the Land Base	Working Group George or Owen		Late May/early June
5. Draft an action plan for implementation Steps	Working Group George or Owen		Late May/early June

Action Initiative 5: Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations and Guidelines that Streamline Process and Improve Predictable Delivery of Supply

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
6. Draft a proposal for Legislation	Working Group Owen/Rick Harris	Legal counsel	Late May/early June
7. Draft and implement a support process for the proposal	Working Group, Rick Harris, Owen Graham, Lindsey Ketchel		Late May/early June
8. Implementation of the action to create the legislation and the support to create the "Tongass Working Forest"			Late May/ early June

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
USFS will not buy into the concept of creating a working forest within the Tongass National Forest without more universal support for the concept	Gathering support from multiple users and stakeholders in the Tongass to support the concept
Having a clear implementation plan that outlines the steps that can be taken and changes made without legislation and having those steps supported and action taken	Clearly defining the regulatory and legislative changes to present a clear implementation strategy to the USFS
Legislative priorities will likely be taken up by election issues in 2012 and so 2011 implementation may be a challenge. Given this a 2 step strategy with implementation of all non-legislative initiatives followed by the legislative piece that would then support the initial actions may be a good plan to develop	Task force to build the options for implementation with a cross section of interests
Understanding all the legislative hurdles in the process from the	Mapping of the internal process to implement within the USFS

Action Initiative 5: Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations and Guidelines that Streamline Process and Improve Predictable Delivery of Supply

STEP:	Help needed:
Secretary of Agriculture to the Tongass USFS management will be critical to building consensus and support within the FS system to move this initiative forward	organization

Funding:

Phase:	Budget:	Funding Source:
Analysis of impact of changes by item to both the USFS operations, harvest and management organization c/w current.	$100,000	USDA
Establishment of a multi faceted Task Force to review the change options and make a recommendation to integrate into the USFS Five Year Strategic Plan.	Included in above	

Outcome/Results:

The establishment of a "Tongass National Forest – Congressionally Designated Economic Timberland Development Zone" to achieve the following objectives:

Provide a secure supply base for SE Alaska wood products industry

Provide stability for economic activity and jobs in SE Alaska

Provide continued support for Old Growth wood products and future growth in development of 2nd growth wood products

Provide a positive climate for continued investment in the forest products industry

Provide positive stumpage values from Federal lands to re-invest in multiple land use opportunities, and long term security to investments in timberland development and enhancements

Provide a model forest example for federal policy that incorporates multiple values within the National Forests.

Action Initiative 5: Establish the "Tongass National Forest – Congressionally Designated Timberlands" to Provide a Secure and Perpetual Working Forest Land Base Managed Under Forest Regulations and Guidelines that Streamline Process and Improve Predictable Delivery of Supply

Provide efficient, timely and cost effective forest management for timber production on Federal lands in SE Alaska.
Provide a well-defined base to transition the current industry into a more concentrated 2nd growth raw material
Provide transition projects in the creation, management and development of this Timberland entity

Action Initiative 6: Substitute Biomass for Diesel to Meet Energy Needs of Southeast Alaska

Cluster Working Group:	Forest Products
Initiative Champions:	R.C. Deering, Environmental & Energy Branch Chief, USCG and D.J. Parrent, Biomass/Forest Stewardship Coordinator, R10, US Forest Service
Initiative Development Team:	Mike Goldstein, Director, Alaska Coastal Rainforest Center Karen Hardigg, Alaska Deputy Regional Director, The Wilderness Society Karen Petersen, Program Assistant/Land Resources, UAF Cooperative Extension Servicemailto:khpetersen@alaska.edu Shelly Wright, Executive Director, Southeast Conference Kent Nicholson, Timber Sale Program Manager, USFS Others Needed for Successful Implementation: USDA Forest Service, USDA Rural Development, USDA Farm Services Agency, US DOC Economic Development Administration (Shirley Kelly, 271-2272, skelly@eda.doc.gov), Alaska Energy Authority, Southeast Conference, Sealaska Corp., US Coast Guard, regional sawmill owners & operators, various regional electric utilities

Description & Motivation:

Biomass is an abundant and largely unutilized energy resource in the region. Southeast Alaska is highly dependent on oil for facility heating, and with rapidly rising and fluctuating oil costs, this dependency presents a financial hardship to residents and a headwind to regional economic prosperity.

Additionally, as oil prices rise, energy consumers are shifting to electric heat, which is quickly straining the capacity of the region's hydroelectric utilities, resulting in higher electrical energy costs for the ratepayers. Hydropower is the other abundant source of energy in the region, but the cost (hundreds of millions) and timeframe (decades) to bring new capacity online means that it will not be capable of meeting the region's space heating needs at the cost and timeframe needed.

Biomass can be sourced from, and add value to, many forest products operations. Sawmill wastes and residues are among the least expensive, and most accessible sources of feedstock, but other promising sources result from pre-commercial thinning and restoration logging activities, land clearing, and road and power line maintenance. Given the right price points, even whole-tree conversion of

young growth to biomass fuel may prove economically feasible, as it currently is for the Tok School District.

The most universally usable form of biomass is pellet fuel. Manufactured to consistent size and quality standards, pellets are used in a wide variety of heating units, from small residential fireplace inserts to large commercial boilers. State-of-the-art pellet boilers are highly efficient, with efficiencies approaching 90%. Pellets are a densified fuel media which is economical to transport, store, and handle. Because of their uniform size and consistent characteristics, they are attractive from the end-user standpoint due to the low level of required 'care and feeding' for storage, handling, and combustion equipment. Pellet burners typically have very low air emissions, often lower than oil and natural gas in some key pollutant categories.

Currently there is no regional mill to produce pellets for regional consumption and export. The regional demand at this point does not justify the construction of a mill, though that picture is changing with the installation of the Sealaska HQ pellet boiler, as well as pellet boilers being installed in the Federal Building and the USFS Discovery Center in Ketchikan, and pending conversions of Coast Guard facilities in Sitka, Ketchikan, and possibly Juneau. Other facility conversions are currently being considered as well. A pellet demand of roughly 30,000 tons per year is considered to be necessary to justify a regional mill. Juneau alone has a potential demand of 66,000 tons.

Pellets are not the only form that biomass fuel can take. Cordwood is the most recognizable, and there is still a strong demand for it. But cordwood burns far less efficiently than pellets, has greater air emissions, and does not lend itself to automated handling and metering. It is strictly a residential fuel with a limited application. Other forms are in chips and hog (ground) fuel. These forms of fuel work well in larger commercial boilers which are more tolerant of fuel size irregularity, contaminants, and varying moisture content. The central boiler plant operated by the City of Craig is a good example of a chip boiler, and probably represents the lower end of the feasible size scale. Chips and hog fuel are not densified fuels so shipping economics become limiting factors, especially at smaller scales.

Biomass can also be dried and densified in a variety of fashions, into cubes, pucks, or 'bio-bricks'. These products can be used in appropriate commercial burners or even residential applications.

Wood isn't the only biomass feedstock in the region. Fish waste, sewage sludge, and densified paper can also be utilized as fuels, which helps address troublesome and expensive waste streams.

Local biomass fuel utilization will reduce economic leakage and generate local jobs. Juneau alone imports over 10 million gallons of heating oil per year which means about $30 million leaves the region. Conversion of fossil fuel heating usage to biomass would keep most of that $30 million in the region, funding local jobs and building a local biomass industry. These numbers can be easily extrapolated to the rest of the region.

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Burning biomass generates greenhouse gasses, with all of the attendant negative consequences. But so does burning oil. The difference between the two is that biomass comes from a renewable resource. When a tree is harvested, a new tree grows in its place (assuming that the land use it came from is still designated as forest), and that tree reabsorbs a comparable amount of CO2 from the air. It may take decades for that absorption to take place, but it does occur. In the case of burning a fossil fuel, the reabsorption is many orders of magnitude longer. Additionally, if sawmill residues or forest thinning remnants can't be economically utilized, they decay and generate CO2 during that process. Using those residues to offset the burning of fossil fuels has a significant positive impact on GHG emissions.

As discussed earlier, increasing heating oil prices have the effect of shifting heating demand to our hydroelectric utilities, thereby consuming their available capacity. Juneau's current fossil fuel heating demand by itself exceeds the entire generation capacity of the local utility, and the other regional utilities are in a similar circumstance. In Juneau's case, as more capacity is used up offsetting heating oil, the interruptible loads of Greens Creek and Princess Cruises get cut off. From a GHG perspective this is disastrous. A diesel generator such as on a cruise ship or at the mine operates at approximately 30% efficiency, meaning that enormous amounts of CO2 are generated for comparatively small benefit. A far better result would be obtained if biomass, burning at 85% efficiency, offset heating oil usage so that diesel generators could remain idle.

On a similar note, electric cars, both plug-in hybrids and full electric, are projected to make significant inroads into the gasoline car market. The extent of that penetration is not clear yet, but SE Alaska, with its relatively cheap and clean electricity and limited roads system, is a perfect location for electrics. These cars will bring additional load on our hydro capacity. Juneau's potential load is roughly 20% of AEL&P's generation capacity. A gasoline car runs at about 20% efficiency, meaning that 80% of the energy contained in the gasoline is wasted as heat. Burning biomass at 85% efficiency to enable our hydroelectric system to displace 20% efficient cars with electrics is a winner from a GHG perspective.

Biomass is a very viable solution to a multitude of the region's energy needs. The potential demand is adequate to drive a thriving industry. The existing barriers appear to be largely surmountable.

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Objectives:

To develop a vision and roadmap to the development of a vibrant and thriving biomass energy industry which economically meets the energy needs of the region's residents, while creating local jobs.

The development of this underutilized fuel supply faces several challenges which range from culture to economic to policy. These are hurdles faced by many emerging industries. The solution largely rests in generating critical mass. Once the technologies have proven themselves and the supply infrastructure has demonstrated that it's reliable, the rest of the pieces will fall into place.

Many of the economic challenges are due to a lack of scale. Transporting small quantities at a time is highly inefficient, as is milling small amounts of fuel. And because the quantities are small, the motivation to change culture and policies is limited as well. One of the key goals of this initiative needs to be to reach critical mass as quickly as possible.

The public sector (Federal, State, local and tribal governments) and corporate stakeholders (Native corporations, transportation providers, utilities) play a key role in developing that critical mass. With limited risk they can make significant initial investments into this sector. Education and encouragement of these players will be essential. Once critical mass is reached, the industry must remain sustainable. This will require careful investments and policies, and long term strategies.

Securing a reliable, economical supply of biomass feedstock will also be essential. A second key goal of this initiative, in the near term, is to transform Southeast mill by-product residues into a usable bio-mass stream. In the long run, a thorough, out-of-the-box analysis needs to be conducted of every possible source including mill residues, thinning byproducts, young growth, and non-wood sources (fish waste, sewage sludge, recycled paper, etc.). Seeking innovative ways to change the economic and supply paradigm will be essential.

And finally, this transformation of our energy economy will require change agents and leaders. People who can articulate the vision and communicate the benefits to all stakeholders. One objective of this action plan should be to identify, educate, and recruit those individuals.

Identify potential biomass boiler facility conversion projects and seek to install biomass heating systems in public and private commercial, industrial and/or institutional facilities. Grow local demand large enough to support a regional pellet plant (industry?).

Action Initiative 6: Substitute Biomass for Diesel to Meet Energy Needs of Southeast Alaska

ACTION PLAN

Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
1. Develop a VISION for regional pellet production capacity	Everyone; need consensus, shared VISION	Meetings – time & money	
2. Provide detailed biomass (supply) resource assessment including mill by-products, harvestable logging residues, and second-growth volumes over time; also need reliable cost information.	Forest Service (TNF, WUC) Alaska Div. of Forestry Sealaska Corp. Mental Health Trust University of Alaska Other landowners	Time, money, personnel	
3. Perform pellet plant cost, benefit and feasibility analysis and develop model business plans	Funding partners, Administrator, Consultant (Beck Group, Mater Engineering, Paul Janz, etc.)	Funding for contractual services; contract administration & oversight	
4. Review findings of Steps 3 and 4. Assess sufficiency of regional resources (timber supply, energy, labor, capital, transportation, etc.); conduct SWOT analysis; decide Go/No Go.			
5. Identify potential biomass boiler facility conversion projects in Southeast Alaska (schools, hospitals, health clinics, office buildings, district heating projects, etc.)	Funding partners		

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Describe the specific steps/tasks	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
6. Conduct informational meetings to educate facility operators about the potential benefits of biomass energy; identify candidates; conduct facility-specific feasibility assessments			
7. Identify funding sources (public, private, grants, loans, ESCOs)			
8. Design/build biomass heating systems at candidate facilities			
9. Identify supporting logistical needs such as fuel transportation, fuel storage, fuel delivery, technical skill sets not currently present	UAS, existing regional fuel distributors, barge lines, heating companies	Need to invite these entities to the table to participate – does not appear that's happened yet.	In the next six months, to support projects currently coming online.

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
1. Develop a VISION for regional pellet production capacity	What is the desired and appropriate scale of pellet manufacturing in southeast Alaska? What are the limiting factors: biomass resources? demand? transportation? cost? What is the best solution - one large plant or several smaller, distributed plants? What locations have the right "ingredients" (cheap power, industrial site, social license, biomass, transportation infrastructure, labor, etc.) for success?
2. Provide detailed biomass (supply) resource assessment including mill by-products, harvestable logging residues, and second-growth volumes over time; also need reliable cost information.	When it comes to timber, the issue is always Supply, Supply, Supply. This issue must be resolved in a meaningful way and reliable data (volumes and costs) must be provided. In the short term, biomass feedstock will have to come, primarily, from the current old-

Action Initiative 6: Substitute Biomass for Diesel to Meet Energy Needs of Southeast Alaska

STEP:	Help needed:
	growth timber program. This is not likely to change significantly for the next 10 years at a bare minimum; more likely 15 to 20 years. Beyond 20 years, second-growth timber could *begin* to make some significant contributions to biomass harvests. It is essential that the existing industry infrastructure (harvesting transportation, road building, processing) NOT be further eroded, or risk losing it altogether. More ….. ?
3. Perform pellet plant feasibility analysis and develop model business plans (alternatives)	This step is straightforward. It IS however going to require funding -- $50,000 to $100,000 depending on the desired level of detail and precision.
4. Review findings of Steps 3 and 4. Assess sufficiency of regional resources (timber supply, energy, labor, capital, transportation, etc.); conduct SWOT analysis; decide Go/No Go.	Steps 3 and 4 only provide data. It is not until that data is thoroughly analyzed that a Go/No Go business decision can be made to proceed. Are there factors beyond the scope of a resource assessment and feasibility analysis that must be considered, such as intra-regional transportation? Others?
5. Identify potential biomass boiler facility conversion projects in Southeast Alaska (schools, hospitals, health clinics, office buildings, district heating projects, etc.)	The Alaska Department of Labor maintains a database of all commercial boilers in the State. The list may be able to be used to identify aging boilers and facilities of sufficient minimum size. This is only the first step; on-site follow ups, region-wide, will be required to make other determinations.
6. Conduct informational meetings to educate facility operators about the potential benefits of biomass energy; identify candidates; conduct facility-specific feasibility assessments	Like Step 3, this step is also straightforward. However, due to geography and travel constraints, meetings must be local, not regional. Targeted attendees would include commercial, industrial, public and institutional facility operators and decision makers. Identify potential "early adopter" candidates.
7. Identify funding sources (public, private, grants, loans, ESCOs)	Self explanatory

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STEP:	Help needed:
8. Design/build biomass heating systems at candidate facilities	The initial investment costs of biomass heating systems are significantly higher than conventional oil, gas and electric systems. Most institutional facility operators would struggle to find funding for such installations, even if the payback period was exceptionally short. And while there are various funding opportunities available, they are disconnected and uncoordinated.
9. Lack of logistical support	There are many steps to establishing a successful new energy supply. Establishing a regional pellet mill is a critical step, but transporting, storing, delivering, and marketing that fuel from producers to end users is also critical. All links of the supply chain must be present for it to function. Many possible stakeholders have not been brought to the table including transporters, existing fuel suppliers, etc.

Funding:

Phase:	Budget:	Funding Source:
1. Develop a VISION for regional pellet production capacity		
2. Provide detailed biomass (supply) resource assessment including mill by-products, harvestable logging residues, and second-growth volumes over time; also need reliable cost information.		
3. Perform pellet plant feasibility analysis and develop model business plans (alternatives)		
4. Review findings of Steps 3 and 4. Assess sufficiency of regional resources (timber supply, energy, labor, capital, transportation, etc.); conduct SWOT analysis; decide Go/No Go.		
5. Identify potential biomass boiler facility conversion projects in Southeast Alaska (schools, hospitals, health clinics, office buildings, district heating projects, etc.)		
6. Conduct informational meetings to educate facility operators about the potential benefits of biomass energy; identify candidates; conduct facility-specific feasibility assessments		
7. Identify funding sources (public, private, grants, loans, ESCOs)		

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Phase:	Budget:	Funding Source:
8. Design/build biomass heating systems at candidate facilities		

Outcome/Results:

Achievements will not be difficult to observe, but whether that translates into "success" depends on other outcomes.

Biomass conversions have already taken place (Craig School/Pool, Sealaska Corp. office, Coffman Cove School) and others are in the process to some degree (US Coast Guard facilities in Sitka and Ketchikan with possibilities in Juneau and Kodiak, Forest Service Discovery and Visitor Information Center, Ketchikan Federal Building).

But there is no coordination, and no strategic plan. The Craig School/Pool project burns locally-sourced green wood chips and hog fuel; the Sealaska project burns pellets imported from WA; the Coffman Cove School burns locally-sourced firewood. The Ketchikan Federal Building is projected to burn pellets, while the Discovery Center (a few hundred feet away) is being designed to burn green chips. How will we achieve "critical mass?"

Numerous other facilities in southeast Alaska have already had some preliminary feasibility assessment work conducted (Craig Community Center, Thorne Bay Ranger District, Thorne Bay School and other city buildings, Naukati School, Hames Athletic Center, Mount Edgecumbe High School, SEARHC, Sawmill Cove Administration Bldg., Kake Community Center, Kake School, Hoonah School/Pool/Gym, Hoonah Ranger District, Haines School and other city buildings). All of these were done under the auspices of the Alaska Wood Energy Development Task Group, which has been inactive since 2008. Some of these have applied for funding through the Alaska Energy Authority with very limited success, but most lack leadership.

Eventually, we may reach a point where the demand for pellets in southeast Alaska could warrant the construction of a pellet plant. But without a strategic plan and the resources to implement it, that metric could be a very long time coming. A recognition by all parties that there is an appropriate and valuable role for biomass to play in our regional energy portfolio is essential to developing that strategic plan.

Action Initiative 7: Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska (without full CWG consensus)

Cluster Working Group:	Forest Products
Initiative Champion:	Wade Zammit, President, Sealaska Timber, Sealaska
Initiative Development Team:	Allen Brackley, Research Forester, US Forest Service Dave Harris, Director, Forest Management, US Forest Service Clarence Clark, Forester, Division of Forestry Keith Rush, The Nature Conservancy Bryce Dahlstrom, Owner, Viking Lumber Lindsey Ketchel, Executive Director, SEACC Jon Martin, Tongass Transition Framework Coordinator, US Forest Service Ron Wolfe, Sealaska Corporation

Description & Motivation:

How quickly can a sustainable young growth harvest commence in the Tongass based on current harvest information with respect to available acreage, growth, yield, harvesting costs, markets and rotation age?

Answering this question will fundamentally entail analysis of each individual Tongass forest young growth and old stand in the considered area: i.e. all young growth not in wilderness, LUD II etc., in the roaded land base. The Forest Planning and Projection Software (FPS) is the analytical tool to perform the sustained yield calculations and scheduling. In order to do this each stand will be "grown" from the date of inventory, scheduled for harvest and grown again throughout the planning horizon, which will be at least 100 years.

The team is evaluating the land base and corresponding volumes of YG and OG under minimum (current rules, regulations and exclusions) and Maximum (assumptions in original data set) conditions.

Objective:

Define transition objectives.

Action Initiative 7: Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska (without full CWG consensus)

Define how many acres and volume, what mix of species, and what management practices are needed to achieve transition objectives.

Gather initial or '1st tier' data to discuss and consider answers to the following questions *(note: state assumptions clearly):*

Under various assumed volumes of young growth, what does the industry look like when the time has come in Southeast?

ACTION PLAN

Describe specific steps/tasks.	**Key People: Who needs to be involved to accomplish step**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Complete the Growth Model Validation – FPS uses mathematical algorithms to project timber growth and yield. Current projections are reasonably close but can be improved to increase the precision and accuracy of this analysis. This is commonly done in other projects that are securitized by outside entities.	The Initiative implementation team has been diligently working on all tasks, with many additional parties involved.	Significant time and resources have been provided by all team members and others to conduct this work.	Between early February 2011 and May 31, 2011 all work will be completed.
2. Build Graphic Information System (GIS) Overlays – All spatial data must be organized according to various layers for GIS analysis in a manner that is consistent with the analysis constraints			
3. Complete the Database Assembly and Yield Stream Building – Complete records for each stand must be assembled for the entire data set. Each analytical constraint must be identified for all anticipated analytical iterations. This provides the basis for FPS to "filter" stands suitable for all respective management iterations. The Timber Cluster Team identified the high volume and low volume scenarios and additional alternative scenarios are anticipated so every effort will be made to identify every record necessary to perform these as yet not identified management			

Action Initiative 7: Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska (without full CWG consensus)

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
alternatives.			
4. Complete and deliver FPS Model Sustained Yield Projections – The data set constraints are 'filtered' in order for FPS to calculate and schedule harvest volumes according to the high volume scenarios and low volume scenarios identified by the Timber Cluster Team.			
5. Assemble and generate summary Reporting – Available volumes by species, size and year under high and low scenarios are the key information items. The report will highlight this and explain the methodology and other ancillary key issues.			

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
At this point we do not see any obstacles to completing this data exercise. The resources are adequate and the cooperation from the USFS has been outstanding and now it is a matter of compiling data and running the simulation options.	

Action Initiative 7: Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska (without full CWG consensus)

Funding:

Phase:	Budget:	Funding Source:
This is a preliminary analysis. Additional studies that explore other scenarios and their impact on future economic conditions in the region should be conducted to assess impact of the various proposals	$150,000	USDA
Establishment of a working Task Force to drive the internal recommendations into the USFS 5- year strategic plan	Included in above	

Outcome/Results:

Initial Scenario: Given current Young Growth and Old Growth Structures Resulting from the Roadless Rule what does a feasible (if possible) transition strategy encompass?

Conduct and complete a Young Growth Analysis study to deliver the following objectives:

What inventory information is available and assessment of reliability

What is the age class distribution of the total area

Available site index information and assessment of reliability

When can a sustainable harvest level begin

What level of harvest can the land base support

What rotation age range would be the expectation given average site class

What is the gap between the beginning of the harvest and today

What data set would we need (if positive results) to support changing the necessary elements to achieve this management regime

Conduct and complete an Old Growth Analysis Data Availability with the Roadless Rule in Place as default assumption to meet the

Action Initiative 7: Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply Available for Sustaining and Strengthening the Forest Industry in Southeast Alaska (without full CWG consensus)

following objectives:

What is the harvest level for OG over the transition years and beyond

What is the best estimate of economical harvest using the YG standards and guidelines?

What is the gap between harvest and needs for the period of time that it takes to get a 2nd growth harvest operational

How much old growth is available and what can be done to bridge the difference between this and the needs.

Action Initiative 8: Create a 1.5 Million Acre State Forest (from Tongass lands) to be Managed by State of Alaska (without full CWG consensus)

Cluster Working Group:	Forest Products
Initiative Champion:	George Woodbury, President, Alaska Forest Association
Initiative Development Team:	Owen Graham, Executive Director, Alaska Forest Association Allen Brackley, Research Forester, USFS Others needed to implement this initiative: Governor, State of Alaska; Gary Morrison; Cascade Appraisal; Clarence Clark, Alaska Division of Forestry

Description & Motivation:

Establish a timber supply for and integrated forest products industry in SE Alaska.

The need results from the failure of the USFS to provide and economic reliable supply of timber that will support an integrated industry. The Forest Service timber sale program is subject to the whims of changing federal administrations and as a result, has become unnecessarily costly and mostly dysfunctional.

Other land for cities and boroughs should also be considered because the federal government has developed a disinterest in allowing commercial use of most of these lands even though that was the original intent for establishment of the Tongass National Forest. Further, the State and cities and boroughs would have selected lands from the Tongass had the federal government not alleged that they wanted to retain the lands for their timber sale program which has since been largely discontinued.

This is a strategy that has been on the table for 10-15 years and has not been moved because of the heavy lifting necessary to make it happen. Time has now run out and we are left with only this alternative. To not move this strategy now will mean that all options available to restore an industry were not tried. This is not something that we want to look back on and wonder why it was not tried.

Objective:

Restore a reliable timber based industry that will supply year round well paying jobs and that is a significant contributor to the economy of SE. Reestablish infrastructure lost with the shrinkage of the timber industry brought about by the lack of a reliable timber supply. Equipment suppliers and other vendors that will come with a revised industry will also serve fishing, tourism and other business

by establishing an economy of scale that will make SE competitive again, so that transportation cost and other service costs will go down. Year round reliable jobs will stabilize the education system. These benefits can occur in SE wherever communities support this effort.

ACTION PLAN

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeframe to accomplish step
1. Revise and update selections and maps.	George Woodbury Owen Graham Clarence Clark Gary Morrison	$30,000	One Month
2. Determine best way to accomplish the task. Legislated land selection under Statehood Act, Transfer acres to boroughs from federal lands within the boroughs, Support STC selection finalization, MHT exchange and the Landless Native selections.	Same as above, with addition of: Lawyer; State of Alaska, Governor Office; State of Alaska, Attorney General's Office	$100,000	One Month
3. Depending on results of 2. Prepare the alternative determined to have the greatest chance of success for presentation. Much of this work has already been done by previous State administrations and simply needs to be updated.	Same as 2, with addition of: Congressional delegation representation	$50,000	2 months
4. Put alternatives in a form that can be presented to each person group etc. that will be taking part in the evaluation of the action.	Same as above plus Lobbyist and other expertise necessary to sell the project.	$100,000	3 months
5. Write legislation to accomplish the transfer of	Same as above plus representatives	$50,000	2 months

Action Initiative 8: Create a 1.5 Million Acre State Forest (from Tongass lands) to be Managed by State of Alaska (without full CWG consensus)

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeframe to accomplish step
lands to cities and boroughs	from cities and boroughs		
6. Identify potential lands for the cities and borough lands.	Same as 5	$50,000	2 Months

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
National environmental group interest in locking up more of the Tongass	Political will to provide the people of SE Alaska the environment to be self sufficient
Cultural opposition from the Forest Service	Leadership is needed at the national level to overcome this self-serving attitude.

Funding:

Phase:	Budget:	Funding Source:
State Forest	$280,000	?
Cities and boroughs	$100,000	?

Outcome/Results:
Success will be the existence of a viable integrated forest products industry in SE Alaska

Action Initiative 9: Restore a Viable Timber Industry in Southeast Alaska (without full CWG consensus)

Cluster Working Group:	Forest Products
Initiative Champion:	Wade Zammit, President, Sealaska Timber, Sealaska Corp
Initiative Development Team:	George Woodbury, President, Alaska Forest Assn Owen Graham, Executive Director, Alaska Forest Assn

Description & Motivation:

Motivation is to restore a viable timber industry in Southeast Alaska.

There are four elements to address this effort:

Existing Old Growth Value Add Manufacturing- Large Grade type logs:

Small to medium scale operations in WRC, Hemlock and Sitka value added products e.g lumber products, veneer, shake/shingle and sawn lumber for sale to remanufacturing facilities.

Log Exporting:

Compliment and support the infrastructure of SE Timber Industry provide positive values to timber sales and market options for operators.

Additional Log Manufacturing

Wood products with Old growth characteristics, but potentially more varied products including sawmilling, veneer production, short specialty lumber.

Residual options:

Bio fuels (pellets/chips) for local consumption and for export markets with facilities to process and ship on scale - Wood chip processing and shipping for export markets.

Objective:

To recommend extensions, changes and additions to current USFS timber sale policies and programs and eligibilities that can build a viable and sustainable operation under these 4 pillars. We begin with the current base and we recommend volume needs to stabilize current activities and growth by additional investments into the area, which is predicated on a predictable, stable and sufficient supply of

Action Initiative 9: Restore a Viable Timber Industry in Southeast Alaska (without full CWG consensus)

Old Growth logs from the Tongass and supplemented by young growth as it becomes mature and economically available in the future.

ACTION PLAN

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
1. Re-establishment and implementation of 10 year timber sales, each with a volume target of 50 mmbf to 60 mmbf annually to sustain the current sector of Old Growth Value Add Operations in Southeast: Current capacity in log demand limited to one medium sized operator, one small and 5-6 owner operator plus facilities. All operations are scaled to single shift and log supply is a factor. The single shift is an issue because it does not provide sufficient investment return to plan for capital mill improvements or new investment capital for mills. To address viability the supply should at a minimum provide adequate supply to operate each facility a minimum of two shifts. This would stabilize current operations, provide additional employment and generate more favorable economic conditions. Ensuring health of the current Old Growth industry is an important factor in having an investment base with which to develop additional young-growth acres so there is an adequate timber base in the future. Their health can be improved by operating at higher rates that provide lower operating costs and improve stability while improving economic opportunities for the region.			
2. Continue to extend the current USFS Export policy and the preparation of traditional timber sales program to a level to support timber harvesting infrastructure which supports the processors and log exporting programs. It is recommended that sales totaling 40-60 mmbf/annum in combinations of young growth and old growth directed into the export market. Log exporting is a critical element to the stability of the forest industry in SE AK.			

Action Initiative 9: Restore a Viable Timber Industry in Southeast Alaska (without full CWG consensus)

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
Exports currently provide higher returns, giving operators more options in the market and improve stumpage returns to the timber owners. In this sector, the recommended volume to sustain activity and viability is directly related to the number and financial health of contractors and subcontractors that contribute to a healthy and competitive bidding environment. There are currently 4 medium sized (compared to west coast operators) conventional harvesting/road building companies and one selective (helicopter) harvesting company operating in SE Alaska. In addition there are 1-3 smaller owner operator harvesting operations affiliated with the smaller manufacturing operations in the region. To support them are 2 primary towing and 2-3 subsidiary towing services companies to move products and service infrastructure. This infrastructure is also depends on the security of supply and is currently operating below efficient operating rates. This has impact on rates and capital investment and in the road building services in particular scale and the outlook for future continue to erode the stability of these operators. Although the young growth market exists in log form for export, this product is a commodity and has much more price volatility than old growth products. As a result of this and the need to sustain the old growth manufacturing infrastructure it is critical to continue to supply both OG and, when it is appropriate, to include YG to build and sustain a broad base for the industry and improve market appeal for SE timber by having both products available in an adequate, predictable, sustainable supply. This leveraging opportunity can be a significant strategic advantage for our region.			
3. Development and implementation of 25 year timber sales to attract new investments in Medium/Large Log Manufacturing. This activity will also include a literature search of all the potential wood processing options that have been evaluated in SE and that the SE wood supply would create a specific strategic fiber			

Action Initiative 9: Restore a Viable Timber Industry in Southeast Alaska (without full CWG consensus)

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
advantage. We must consider the logistics of sustaining an industry that is located on separate islands in this region and we must take into account the wide range of timber species, sizes and grades that are available in the mature timber stands. A higher economy of scale will help address the logistic issues and will also provide the opportunity to have several mills that can each concentrate on their own manufacturing and marketing strategy. For instance, committing a supply of logs that fit within the medium to small side of the large log profile would attract new product profile and attract new investment for current and future young growth timber. What is uncertain and will take considerable research is the choice of operation for such small a scale activity to begin, but has the ability to expand when additional volumes of 2nd growth timber become available. Ideas for this type of operation would include veneer (rotary) or slicing veneers and sawmilling operation. In order to properly address the economy of scale issues, the long-term goal should be to restore a timber supply of at least 300 mmbf annually. This requisite volume level has been confirmed through various studies in the past.			
4. Remove the restriction of utilizing old growth timber for residual products applications such as bio-fuels and open up the current USDA incentives to these kind of projects in SE Alaska to support the construction and operation of Residual Operations: This change in policy, along with the summary of the above recommendations to address a viable industry given current state would provide an adequate base to explore and develop contingent on market development a manufacturing and processing facility for residuals and pulp logs.			
5. Summary and Conclusion:			

Action Initiative 9: Restore a Viable Timber Industry in Southeast Alaska (without full CWG consensus)

Describe specific steps/tasks.	Key People: Who needs to be involved to accomplish step	Resources needed to accomplish step	Timeline to accomplish step
In this review of the viability of SE manufacturing operations and the necessary volume to sustain an industry of this scope would be in the 300 to 360 MMBF range.			

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
The primary obstacle to achieving the above is the lack of a reliable economic supply of timber. The only source for the timber to achieve the above is the Tongass NF. In the past 10 years the Forest Service has not been able to fulfill the needs of the industry and the current administration has changed the mission of the FS. And this new mission does not include providing a reliable economic timber supply that will serve the above objectives.	The only certain solution to the problem is to put Tongass timberlands under the control of State and private entities. This must be done through the Statehood Act, Administratively or through Legislation. This will require a strong unified effort from communities, the State and Industry to convince Legislators and other entities that the only certain way to achieve the above is a transfer of ownership of some of the Tongass timber lands to entities that have the desire and wherewithal to provide the required reliable economic supply of timber necessary to achieve the above.

F**unding:**

Phase:	Budget:	Funding Source:
1. Re-establishment of the 10 year timber sale program to sustain current OG log		

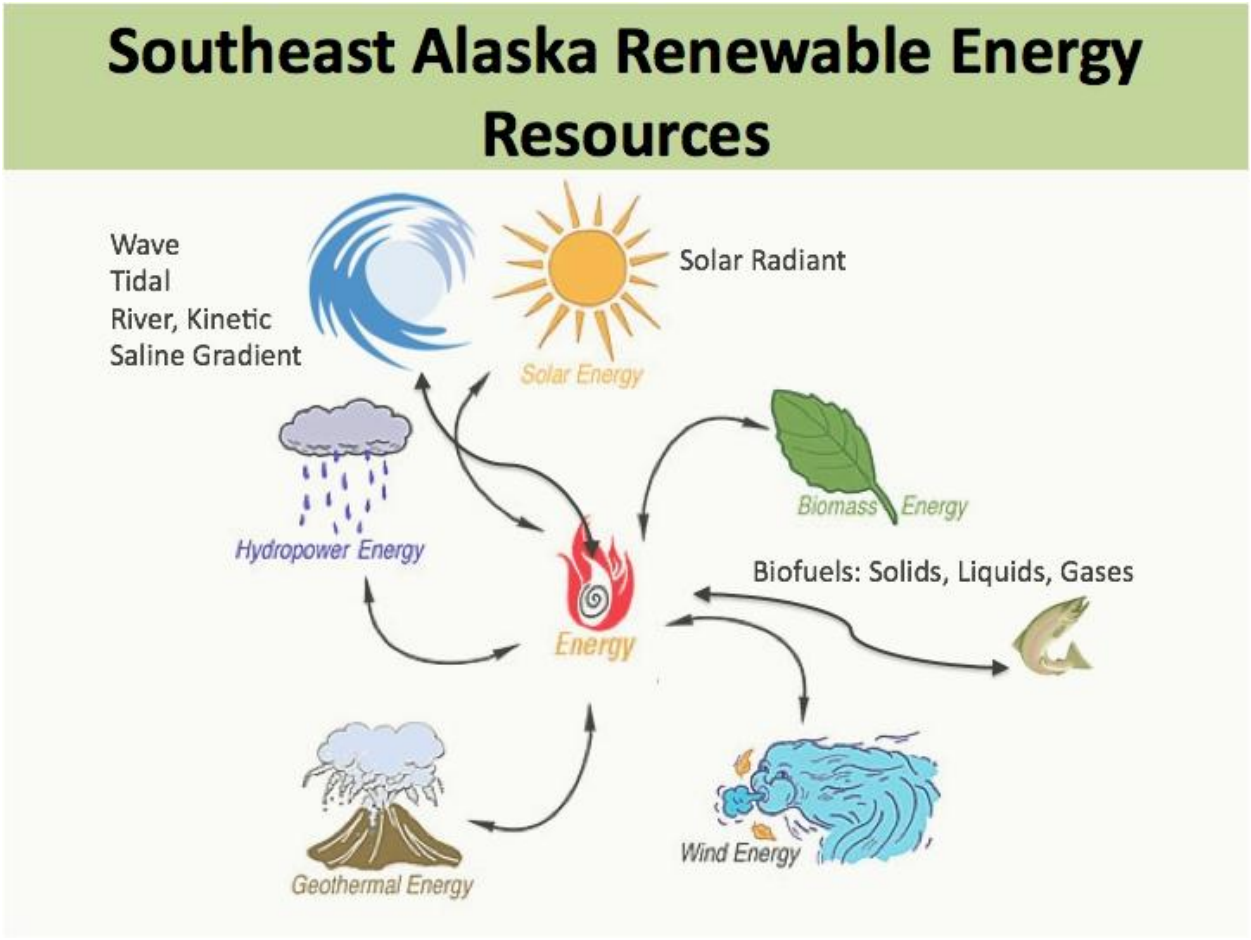
processors		
2. Recommendations to provide continuity to the USFS Export policy and the addition of volume to its normal timber sale program (note: the normal Forest Service timber sales have a term of 3 to 7 years depending upon a number of factors including volume, timing constraints, road construction requirements, etc.)		
3. Establishment of 25 year investment timber sale to attract new investment into the region to generate employment and improve multi mill synergies.		
4. Recommendations to provide either the policy of legislative information to remove OG from use in residual product development and open access to USDA incentives in the region.		

Outcome/Results:

Revise, modify and secure elements of the USFS timber sales program and associated regulations that combined with streamlining the process of implementation can produce 300-360 MMbf of timber /year to sustain a viable forest industry and associated employment in SE Alaska in the 4 integrated components outlined in this initiative.

Action Initiative 9: Restore a Viable Timber Industry in Southeast Alaska (without full CWG consensus)

Southeast Alaska Renewable Energy Seed Cluster



Renewable Energy Seed Cluster Strategy Development Process

The Southeast Alaska Renewable Energy Seed Cluster Working Group (CWG) was organized to determine the conditions under which the Southeast Alaska renewable energy industry could develop, adding more jobs, wealth and prosperity in the region. Unlike the Ocean Products and Visitor Products cluster, which are "mature", renewable energy in the region is a less developed "seed cluster", that is it lags behind other regional industries in terms of employment concentration; however, it has potential to grow and flourish beyond its current form.

Because Renewable Energy does not have an established industry presence in the region, a first meeting of private sector entrepreneurs, public sector agencies, economic development organizations and consultants was convened to gage interest in participating in the formal Cluster Working Group process. It needs to be stressed that the renewable energy cluster approach is not focused exclusively on providing affordable energy to regional communities, but also on supporting the development of a renewable energy industry. The next step was formation of a steering committee to prepare for subsequent CWG

meetings. At the conclusion of a second group meeting, action initiatives were chosen for developing into actions plans in preparation for a third meeting. JEDC has committed to providing one more facilitated large group meeting for the Renewable Energy Seed Cluster Working Group.

A full roster of the Working Group membership is below:

*Southeast Alaska Renewable Energy Seed Cluster Working Group Membership**

Name	Affiliation	Position
Bryan Farrell	AEL&P	Engineer
John Sandor	AK/Can Energy (Self)	Former Commissioner
Brandon Smith	Alaska Brewing	Plant Engineer
Paul Southland	Alaska Canada Energy Coalition	Special Projects Director
Kirk Hardcastle	Alaska Center for Energy and Power	Research Technician
Bart Watson	Armstrong-Keta, Inc	President
Jackie Stewart	Business Works	Entrepreneur
John Hickey	Coast Guard	Commanding Officer of Shore Maintenance Command, Seattle
Ross Good	Elcon Corp	Renewable Energy Project Development
Heather Hardcastle	Fisherman's Daughter Biofuels	Entrepreneur
Nathan Soboleff	Ha'ani/Sealaska	Natural Resource Planner
Ben Haight	Haight & Associates	Principal Electrical Engineer
Duff Mitchell	Juneau Hydropower, Inc.	Business Manager
Peter Naoroz	Kootznoowoo	CEO
Lew Madden	Ma-Su owners representative	Entrepreneur
Brian Hirsch	National Renewable Energy Laboratory	Senior Project Leader-Alaska
Dan Lesh	SEACC	Energy Coordinator
Rob Holman	Self	
Robert Venables	Southeast Conference	Energy Coordinator
Zach Wilkinson	SpringBoard	Technology Transfer Associate

**Attended one or more meetings*

Name	Affiliation	Position
Bill Leighty	The Leighty Foundation/Alaska Applied Sciences, Inc	Consultant/Investor
Bob Deering	USCG	Environmental & Energy Branch Chief
Barbara Stanley	USDA Forest Service	Energy Coordinator
Jon Martin	USDA Forest Service	Tongass Transition Framework Coordinator
Larry Miles	Wind Turbine Company	Co-founder

Renewable Energy Foundations

Why are we looking at Southeast Alaska renewable energy as an industry?

"*clean, local and inexhaustible,*" – definition of Renewable Energy as defined by the CWG

Southeast Alaska has historically been hamstrung economically by the high costs of energy, transportation and labor in this relatively isolated region. However, Southeast is endowed with a bounty of renewable energy resources: hydro, wind, geothermal, wave, tidal, river kinetic, radiant solar, ocean thermal, osmotic, biomass and biodiesel. As fossil fuel prices rise based on increasing demand exceeding limited supply, and as oil price spikes occur due to political instability, fear, speculation, and political crises, Southeast AK will have an inherent competitive advantage by being able to provide hydroelectric energy at stable and relatively low prices. The development of a local renewable energy industry beyond, aside from, and synergistic with large hydroelectricity, would build on the region's natural resource assets and turn its traditional competitive handicap of high energy prices into a competitive advantage.

This is also an industry that could especially benefit rural communities, where unemployment rates remain high with the fading of the timber industry and decreases in government spending. Southeast is currently suffering net population losses, partly due to the high cost of energy in small communities that depend on diesel-fueled electricity and on gasoline and diesel for transportation. Not only would the development of renewable-energy generated electricity help with living and manufacturing costs, but also many of the rural communities are located close to attractive Renewable Energy resources. Putting these resources into production would create planning, construction and maintenance jobs. The skills gained in those projects would tend to spin off in the form of new businesses to market Renewable Energy development to the other areas of the world, those with similar isolation from major power grids or similar affordable Renewable Energy resources to develop.

Many assets critical to an emerging industry are abundant, such as a willing workforce, community support, existing infrastructure, zoned "industrial" sites, deep water ports near many communities, and the legacy of heavy equipment from former industries.

Ultimately, SE Alaska has a unique potential to shift to a 100% Renewable Energy economy, and at the same time build a Renewable Energy industry based on that affordable energy and the skills, technologies

and enterprises developed in building out that capacity. This economic shift could help define a new self-identity for the region, a pride in being at the cutting edge of new sustainable energy technologies to export to the rest of the world, and a confidence that a contribution is being made to better the world.

Working Group Leadership and Meetings

The full working group met twice with additional meetings of a smaller steering group. During the course of these meetings, the participants worked collaboratively and reached consensus on various areas, including the vision, definitions related to Renewable Energy, Purpose of the CWG, meeting objectives and expectations, and finally, the nine draft action initiatives.

The vision is for a Renewable Energy Industry to exist in Southeast Alaska in 2020. Renewable Energy is defined as, "clean, local and inexhaustible," though members of the group pointed out that the renewable sources being talked about are not necessarily local (hydro connected to intertie), not inexhaustible (wood pellets), and not always clean (burning wood, fish waste). The definition of a Renewable Energy Industry in Southeast Alaska is, "a set of firms that meets markets needs for energy and energy services within and outside of Southeast Alaska," which excludes large-scale hydro.

The purpose of the Seed Cluster Working Group is, "to outline a plan that will provide the foundation for a renewable energy industry in our region." The objectives of the first meeting were to introduce participants to the Southeast Cluster Development Initiative, identify critical issues and brainstorm a list of industry challenges to address, which can be found in a separate list below. Furthermore, the objectives of the second meeting of the working group were to identify potential action initiatives that address gaps in the foundation for a renewable energy industry in Southeast Alaska and to suggest potential demonstration projects that would best support this industry.

Through facilitated group exercises, participants were also asked to share their expectations and/or objectives for the second meeting, discuss opportunities for the renewable energy industry in Alaska in terms of business and profit potential, and finally, identify the most critical obstacles for this industry's development in the region.

Expectations of the second meeting ranged from very general ideas to specific issues. The overarching themes were to have a space for dialogue on solutions related to renewable energy, learn from the multi-stakeholder process, provide expertise and input, address social injustices in Alaska, be involved in a network and get to know the key players, think outside the box, identify items not on the radar, create jobs in the renewable energy sector, share knowledge/lack of, understand how to move forward with the current resources in the region, visualize sustainable energy as the new economic engine for Alaska without compromising quality of life, and help people in our communities.

On the other hand, the more specific expectations for the meeting dealt with issues like converting fish waste to biofuel, how different companies already involved in Renewable Energy projects (ie; Alaska Brewing) can contribute to as well as benefit from the cluster process, showcase SE Alaska as an example to the rest of the state, better utilization of the Tongass for renewable resources (ie; sawmill waste to pellets),

interest in developing a transmission line to bring stranded energy to lower 48, bring renewable resources to market, energy efficiency issues, applying for grants, asking industry what they need to further develop, and including projects related to hydro/wind/biomass.

The opportunities, obstacles and discussion projects' summaries that took place at the second meeting are listed in separate sections below.

By the close of the second CWG meeting the group had identified nine action initiatives that addressed themes emerging from the Cluster discussions, and elected Champions that would lead the development and follow through of each initiative.

The group agreed that future meetings and/or the Steering Committee should include more leadership from the university community. In addition, it's important to recognize the pioneering and valuable work of the Renewable Energy Alaska Project (REAP), UAF's Alaska Center for Energy and Power (ACEP), and the potential of projects funded by the Emerging Energy Technology Fund (EETF), and collaborate with them in "new partnerships."

Renewable Energy Industry Challenges, Opportunities and Obstacles

Challenges

"We need the courage and conviction to take advantage of Southeast's obvious and abundant Renewable Energy resources- tidal, wave, wind, geothermal, solar, ocean thermal, osmotic, biomass - Southeast Alaska can become a model, a leading industry outside of this region."

At the first seed cluster working group meeting the following industry challenges were discussed:

- Currently importing Renewable Energy expertise and equipment from outside Southeast Alaska.
- Improve economic foundations of the region to build up the industry.
- Potential of the renewable energy industry to become an economic engine in Southeast Alaska.
- Manufacturing potential in Southeast Alaska.
- Research and Development – R&D, and demonstration sites.
- Solving the transmission and firming storage problems of bringing Renewable Energy from their large, stranded components to distant markets as firm and dispatchable energy at competitive prices.
- Identify the starting point for a more robust energy industry. In order to accelerate it, it has to exist.
- Potential for developing renewable energy firms in the region that could export their skills, expertise, and electricity or "electrofuels" at competitive prices, to outside of Southeast Alaska.
- Conditions to foster increased industry development.

Opportunities

"We are looking ahead to the next economy of the region. While renewable energy is not one of the region's driving engines, we see faint signals for a renewable energy industry other than large-scale hydro in Southeast Alaska for the future."

At the first seed cluster working group meeting the following industry opportunities were discussed:

- Communities as a test bed - take communities with higher energy prices and use those communities as a test bed for new/emerging technologies. Develop unique, decentralized Renewable Energy solutions for individual communities.
- Develop and leverage forest resources as renewable energy resources – work on developing process on Federal lands (FSC) that can be sustainably managed. Use scrap material as a high installation value, densified wood products (pellets) for space heating and woody biomass resources to create jobs.
- Advanced Education Level – Southeast Alaska has one of the highest educated workforces in the United States with professional engineers and economists that could be used as modelers.
- Use of Diesel – convert and promote the conversion of current diesel use to lower-cost electricity to create market demand.
- Abundance of renewable resources – the region has vast natural energy resources like biofuels, fish waste, hydraulics, pyrolysis (burned wood turns into a liquid).
- Hub for research and development – SE Alaska could become a hub for R&D for one or more technologies (i.e., tidal power, wet/dry biomass, etc). There are world class labs at the federal, state and university levels (and should still be further engaged in this process), which could be used to promote and attract more research and development as well as bring in private industry and capital.
- Starting from scratch – the opportunity exists for the region to develop its own renewable energy industry with limited obstacles because there isn't an industry and nothing has to be torn down to start over again. Wind-hydro, HV DC Transmission, Wave Energy Conversation, Marine Hydro-Kinetics and a "Smart Grid" all have the potential to be developed.
- Focus on the market – develop local electric transportation and support legal changes to enable more private industry.
- NH3 Production – anhydrous ammonia production could be exported and used as a transportation fuel from renewable energy produced electricity. It is also a potential way to address the fundamental issues of capturing and transporting the stranded renewable energy produced in remote sites to markets, and for storing the energy from periods of high output to periods of peak demand.

- High cost of imported energy – the high costs of current imported energy in the region represent an economic opportunity to capitalize on money already being spent, as well as a reason to develop new technologies (creates an environment for testing otherwise non-viable technologies).
- Technical resources – there is an opportunity to develop the region's technical resources and know-how. When Juneau was founded it was THE world expert in mining technology and hydro and exported its technology internationally. This could be done again for the renewable energy industry.
- Hydro sites – there are currently 27 hydro projects under consideration by the Forest Service (as well as some geothermal) and therefore additional hydro sites with long distance DC transmission could be developed.
- Recognized need – the population knows how important energy is to the region (and how expensive it is too).
- Waste-to-energy resources – find and develop waste-to energy resources in the Southeast Alaska region.
- District heating – making use of thermal energy from non-fossil fuel sources.

Obstacles

At the first seed cluster working group meeting the following industry obstacles were discussed:

- Public policy deficiencies
- Permitting – can be expensive and time consuming
- Underperforming building environment (inefficient buildings and homes)
- Underdeveloped technologies to produce and store energy
- High transportation cost for fuels – which adds onto project costs
- Lack of energy transport infrastructure
- Competition from low-cost, imported natural gas via "AK Interstate Gas"
- Stranded resources and markets: "transmission costs"
- Lack of RPS (Renewable Portfolio Standard) to push us beyond the easy and obvious. The RPS requires that a certain percentage of resources come from renewable energy
- Culture and Myth: entitlement, last frontier attitude
- Lack of awareness (about viable RE alternatives to the energy problem) in most citizens
- Small businesses have trouble entering market because of large capital costs, economic barriers to entry

- Failure to adequately engage University of Alaska Southeast (UAS) and City & Borough of Juneau (CBJ)
- Financing difficulties for small RE businesses: high initial capital costs, despite low or free fuel costs
- Policy: limitations to market energy at fair value – net metering concept, feed-in tariffs and independent power producer guidelines
- Financing
- Lack of private land in Southeast Alaska, land use and rights
- Developing sufficient market demand for renewable energy to both support fledgling energy industries as well as enable conversion of existing energy use from non-renewable sources.
- Imagination and motivation ("when the pain of not doing it becomes greater than the pain of doing it, we'll get it done!)
- Tendency to preserve status quo in use of diesel fuels
- Hesitancy to "see outside the box"(supporting fledgling UAS engineering department for example) – to continue to do things as we've always done them, which can lead to continuing import knowledge/technology and exporting our resources instead of creating an industry that remains "in-house"
- Lack of incentives – the money available to small enterprises and green entrepreneurs
- Institutional bias towards specific means of generation to accomplish goals

Demonstration Projects

The participants of the Renewable Energy Seed Cluster Working Group discussed many options for potential demonstration projects that would best support a renewable energy industry in SE Alaska, and which included the following ideas: wind, wind/hydro, wave energy conversion (ie; Yakutat) , hydro-kinetic, small hydro, NH3 for transmission storage and fuel, geothermal, marine hydro-kinetic (in prime area), run of the river hydro-kinetic and world class technology at NOAA lab. Further, the group thought it would be important to have a list of criteria for how to decide if a project is viable, and should take into account the following: capital costs of the project, technical readiness, time to readiness, scale, benefits, developing industry/market potential (Return on Investment).

Renewable Energy Draft Action Initiatives

The following pages present the draft action initiatives that are currently under development by the Working Group for inclusion in the regional strategic plan. Work on these initiatives will continue into June to review suggestions for strengthening each initiative and to discuss the final initiatives.

In addition, the group discussed many other possible ideas that were not included in the final draft action initiatives, but had the support of many participants. The following were some of the other proposed initiatives:

- Promote intergovernmental partnerships between fed/state/local governments and with Canada
- Develop a complete/searchable database of industry resources and provide access via a website
- Draft and advance legislation to promote energy efficiency and eliminate utility Renewable Energy disincentives
- Identify public/private partnership projects with model industry impact; develop prospectus for targeted projects; advance prospectus with likely public/private partners
- Document, educate and promote legislative and public understanding of short-term vs. long-term cost of energy generation models
- Draft and advance legislation proposing creation of a State of Alaska Department of Energy
- Identify models for a statewide energy plan, articulate components and advocate for adoption of a comprehensive strategy as an umbrella plan for regional and community energy strategies
- Renewable Portfolio Standard

The initiatives developed by the working group for further refinement at this time are:

1. Propose Net Metering Legislation
2. Establish a Renewable Energy Revolving Loan Fund for Residences and Small Businesses to Promote Local Installation and Fueling Industries
3. Market SE Alaska to the existing and emerging renewable energy industry as a test venue for new technologies and specifically taking advantage of our diverse, unique Renewable Energy Resources and high-cost energy markets
4. Market-driven Renewable Energy Economic Modeling for Southeast Alaska, including Multiple Transmission and Energy Storage Strategies
5. Explore Opportunities for Connecting SE Alaska Intertie to North American Grid to Improve the Economy and Quality of Life throughout the Region
6. Biomass Energy Demand Development
7. Discovering best practices from around the world to overcome barriers & what is being done to incentivize change regarding renewable energy and energy efficiency
8. Streamline Permitting and Schedule Acceleration
9. Renewable Energy Education for SE Alaska Residents, Students and Businesses

Draft Action Initiative 1: Propose Net Metering Legislation

Cluster Working Group:	Renewable Energy
Initiative Champion:	Ben Haight
Initiative Implementation Team:	Kirk Hardcastle, Heather Hardcastle, Bart Watson

Description & Motivation: The requirement for utilities to allow for "net metering", "fee tariff", and independent power production is quite limited by regulation. The regulation generally allows the utilities to limit allowances to quite small power plants with a total connection of less than 1.5 percent of the system demand. As a result, the utilities have not incorporated many renewable energy sources or combined heat & power (CHP) facilities into their systems. The incorporation of small power plants on the utility grid brings technical challenges to the utilities, challenges they have not experienced in the past. The integration may involve implementation of higher level control systems or "smart grid" type applications.

Objective:

Research, understand, and define improved legislation proposed to expedite application of renewable energy and CHP resources. Better understand the technical limitations experienced by the utilities. Foster technical solutions and promote better education of both the utilities and the rate payers. Develop new legislation improving the opportunities for application of renewable energy and CHP resources.

Draft Action Initiative 1: Propose Net Metering Legislation

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Review and understand current Alaska Statutes, as well as those of the other states where regulations for such have been implemented.	RCA Legislative Legal staff. Regulatory commissions from other states that have allowances for "net metering", "fee tariff", and "independent power production"	Legal support required.	12 weeks
2. Determine limitations of current regulations	RCA AEA ACEP	Legal support required.	8 weeks
3. Determine desired modifications to the legislation improving integration of renewable resources and CHP generation.	RCA REAP	Legal support required.	8 weeks
4. Develop an education program and analysis of minimum technical requirements to allow connection to the utility grid.	REAP AEA ACEP	Electrical engineers Educators	12 weeks

Draft Action Initiative 1: Propose Net Metering Legislation

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
5. Develop new legislation for regulation rehabilitation, to promote utility technical support, and to promote education.	REAP RCA Legislative Legal staff.	Legal support required.	6 weeks
6. Develop legislative champions.	Legislative Energy Committees	REAP Lobbyist	4 weeks

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
The greatest obstacle is the utilities. Many of them oppose such regulation. Continue education for both the utilities and the rate payers to provide a better understanding of issues, and to better define common grounds. Find incentives for the utilities to implement "net metering" practices and develop relationships for independent power production.	REAP can be valuable resource for education with assistance from AEA and ACEP. Work with the RCA to find incentives, as well as to refine regulations to permit more allowance for renewable energy.
Technical incompatibilities can be used as the reason to deny connections. Again, this involves education for both the utilities and the rate payers. Define and illustrate minimum practices to	AEA and ACEP can be a valuable resource. This can be supported by engineering consultants familiar with utilities.

safely allow connection of non-utility energy sources to the utility grid.		
Funding:		
Phase:	**Budget:**	**Funding Source:**
Research existing statutes and regulation from other states		State of Alaska
Develop new legislation		State of Alaska
Education and technical support		State of Alaska
Promote new regulation through legislation		State of Alaska

Outcome/Results:

The direct result will be legislation establishing regulations and incentives making allowances to incorporate renewable energy and CHP generation. Allowances for larger plants, greater portions of the system demand including renewable plants, and CHP plants will be addressed. Additionally the fee tariffs will be better defined. Additional legislation to fund technical support and education will be implemented.

Draft Action Initiative 2: Establish a Renewable Energy Revolving Loan Fund for Residences and Small Businesses to Promote Local Installation and Fueling Industries

Cluster Working Group:	Renewable Energy
Initiative Champion:	Bart Watson
Initiative Implementation Team:	Bart Watson and Jackie Stewart

Description & Motivation:

One of the fundamental steps in moving Southeast Alaska to a renewable energy economy is for residences and small businesses to convert from fossil fuels to using renewable energy sources such as heat pumps and pellet stoves. These renewable fuels have many advantages: they can be relatively inexpensive, the supply is local and therefore more reliable, and the consumer is protected against future oil price shocks and supply disruptions. However, despite potential significant savings on fuel costs, the initial equipment installation costs can be high and create a significant impediment to adoption for most potential users. While performance contracting is widely available for large businesses, no similar financing mechanism exists for small businesses and residences. A revolving loan fund would provide a very attractive means for enabling the installation of, or conversion to, renewable energy heating systems, with the savings in utility costs being used to pay back the capital improvement loans. This revolving loan fund could be designed to assist in converting from gas to electric vehicles as well.

Besides promoting the development of a SE renewable energy industry and an energy conversion industry, this initiative would address a major issue confronting electrical utilities throughout the region. Most electric utilities have no current plans on how to cope with sudden surges in demand by consumers plugging in portable electric heaters to cope with sharp increases in oil prices. The jump in demand would inevitably exceed supply and force utilities to ration electricity to the consumers or fire up backup diesel generators to meet the load at exorbitantly high prices, since burning oil to generate electricity is much less efficient than burning the oil for heating buildings directly.

Draft Action Initiative 2: Establish a Renewable Energy Revolving Loan Fund for Residences and Small Businesses to Promote Local Installation and Fueling Industries

Objective:

Transitioning homes and businesses to renewable energy heating and transportation systems represents a major business opportunity for vendors and installers of new equipment (pellet and biofuel stoves; geothermal, water and air heat pumps; electric vehicles) and for providers of the local Renewable Energy fuels (wood pellets and other biofuels; Renewable Energy electricity from wind, small hydro, geothermal, tidal, wave, and hydrokinetic resources). These conversions would involve significant expenditures within the SE Alaska economy and could become the core of a new Renewable Energy industry in this region. A widespread transition to Renewable Energy fuels is capable of supporting many small businesses in several SE Alaska communities.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Research what specific plans other utilities, municipalities, and states have adopted for similar revolving loan funds.	REAP.	Funding for one position with REAP for one month.	I month.
2. Contact potential funders and administrators, including utilities and government agencies, to discuss concepts and structures for the revolving loan funds that would best suit local conditions and statutes.	REAP, SEC, AHFC, Dept of Commerce; local economic development organizations; Interested residents of each town.	Funding for one position with REAP for three months.	3 months.
3. Research whether enabling legislation to establish	REAP, Alaska Department of Law,	Funding for one	1 month.

Draft Action Initiative 2: Establish a Renewable Energy Revolving Loan Fund for Residences and Small Businesses to Promote Local Installation and Fueling Industries

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
appropriate revolving loan funds is required of the Alaska Legislature. If so, draft the legislation and recruit sponsors in the legislature.	AHFC, AEA.	position with REAP for one month.	
4. Formulate specific language to establish appropriate revolving loan funds at the state and/or local level.	REAP, interested residents of each town, municipal governments and utilities, REAP.	Funding for one position with REAP for one month.	1 month.
5. Seek funding from the state legislature, municipal governments, utilities and other potential sources to secure financing for the revolving loan fund(s).	REAP, municipal governments and utilities, legislators.	Funding for one position with REAP for six months.	6 months.
6. Involve public interest groups such as REAP and private special interest groups such as Sealaska along with as many of the utilities as possible to push for adoption of the legislation at the state and local levels.	REAP, Sealaska, utilities, chambers of commerce, SE Conference, et al.	Ongoing involvement of interested parties. . Utilities are a natural ally, in that they must guard against sudden increases in electricity	One year.

Draft Action Initiative 2: Establish a Renewable Energy Revolving Loan Fund for Residences and Small Businesses to Promote Local Installation and Fueling Industries

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
		consumption.	
7. Market the revolving loan fund to homeowners and small businesses to encourage high participation rates; track participation rates.	Revolving loan fund administrators.	Internal resources created by the enabling legislation.	Ongoing.

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Competition for the funding necessary to seed the revolving loan funds is likely to be the biggest obstacle. However, the state of Alaska has enormous cash reserves and income – the political will is really the only missing ingredient to bring such funds into existence. The legislature has demonstrated strong support for moving the state toward greater adoption of renewable energy and for the development of an in-state Renewable Energy industry. With a concerted push from interested parties, the establishment of a renewable energy revolving loan fund should be an achievable goal.	Recruit REAP, utilities, city assemblies, legislators. The creation and funding for 12 months of a full-time position at REAP to promote the establishment and implementation of revolving loan funds in SE Alaska communities would be invaluable. REAP has effectively taken the lead in promoting Southcentral and Western Alaska as well as statewide programs but has been conspicuously absent in Southeast. They have expressed interest in establishing a presence in Southeast but require funding for a position based here.

Draft Action Initiative 2: Establish a Renewable Energy Revolving Loan Fund for Residences and Small Businesses to Promote Local Installation and Fueling Industries

Funding:

Phase:	Budget:	Funding Source:
1. Research other existing programs.	$4,000.	State, Federal or foundation grant.
2. Contact municipal governments and utilities.	$12,000	State, Federal or foundation grant.
3. Research whether state legislation is required.	$4,000.	State, Federal or foundation grant.
4. Formulate specific language	$4,000.	State, Federal or foundation grant.
5. Secure financing	$24,000	State, Federal or foundation grant.
6. Push for state and/or local adoption.	$0	
6. Market the loan fund to potential users.	$0	

Outcome/Results:

The establishment of one or more revolving loan funds available to all Southeast Alaska residents and small businesses will be the primary objective. A broader goal will be to maximize the number of homes and businesses that are able to make use of these programs to convert from fossil fuels to renewable energy. The revolving loan fund administrators should be required to track participation rates and provide statistics to the public on the number of conversions funded.

The ultimate measure of success is to quantify the creation of a home-grown renewable energy industry involved in selling equipment, installing the systems, and providing fuels for their ongoing operation. JDEC and the Southeast Conference as well as the Alaska Department of Commerce and Economic Development should be able to conduct surveys to measure the new economic activity based on this initiative.

Draft Action Initiative 3: Market SE Alaska to the Existing and Emerging Renewable Energy Industry as a Test Venue for New Technologies and Specifically Taking Advantage of Our Diverse, Unique Renewable Energy Resources and High-Cost Energy Markets

Cluster Working Group:	Renewable Energy
Initiative Champion:	Zach Wilkinson
Initiative Implementation Team:	Bill Leighty, Kirk Hardcastle, Jim Rehfeldt

Description & Motivation:

We would like to provide motivation and incentive for entrepreneurs to bring their technologies to southeast Alaska for trials and prototyping. Due to the unique variety and abundance of renewable energy resources in southeast Alaska, coupled with the current high energy costs in SE Alaska, an opportunity exists for projects to be successful here, that would not be economically feasible in most other geographic areas of the United States.

We must provide transmission and, in some cases, firming storage so that they may market their energy product, for cash flow and for authentic testing. This presents valuable additional opportunities for this initiative.

Objectives:

Inform companies and entrepreneurs of this opportunity, and to convince them of its valu;

Bring new renewable energy harvesting, gathering, transmission, and storage technologies to SE Alaska, and beyond;

Build a Southeast Alaska – centric renewables industry;

Build State of AK interest in funding renewable energy systems R&D&Demonstrations, via enhanced funding for Emerging Energy Technology Fund, and other pathways.

We anticipate research and other investment opportunities to follow these investments in demonstration projects.

Draft Action Initiative 3: Market SE Alaska to the Existing and Emerging Renewable Energy Industry as a Test Venue for New Technologies and Specifically Taking Advantage of Our Diverse, Unique Renewable Energy Resources and High-Cost Energy Markets

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Clearly define the opportunities that exist, and the benefits as compared to the opportunities that exist elsewhere geographically. GIS mapping of Southeast Alaska renewable resources: location, type, apparent markets (location and size, including export from SE), potential electricity or other transmission to markets.		JEDC's Asset map, Other research materials?? Meeting	June 1
2. Agree on a set of specific benefits we would like to market, and how we would like to market them, i.e. "what picture do we want to paint, and how will we paint it?" Describe extant Southeast Alaska resources to facilitate this initiative: transport, comm., workforce, support businesses (construction, rental equipment, concrete, etc.)		Meeting	June 1
3. Decide what marketing tools we will use (email, website, paper mailers or flyers, magazine advertising, word of mouth, conventions, brochures, telemarketing, social networking etc.????) Discuss costs/resources required, effectiveness, individual ability to perform the task etc and desired results. Assign responsibility for creating. Determine if funding is needed, if so how much and where from.		Meeting	June 15

Draft Action Initiative 3: Market SE Alaska to the Existing and Emerging Renewable Energy Industry as a Test Venue for New Technologies and Specifically Taking Advantage of Our Diverse, Unique Renewable Energy Resources and High-Cost Energy Markets

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
4. Create some marketing tools and documents based on step 4		Time/possibly money, computers, printing, internet	July 15
5. Distribute marketing material a.k.a actively market the idea.		Time/possibly money, computers, printing, internet, business networks, JEDC, Springboard, state research committee, AEA	July 30
6. Follow up on marketing responses and assist entrepreneurs via existing local networks.		Time, business networks	Undefined…

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Some of these efforts may have some financial cost	Very small amount of funding
Time-We are all very busy, so we will need to make time to accomplish this work	
Actively marketing	Participation from as many resources as possible to distribute and follow up. Funding will likely be required but will be dependent on the SOW determined by the group. Other resources required would be meeting space, computers,

Draft Action Initiative 3: Market SE Alaska to the Existing and Emerging Renewable Energy Industry as a Test Venue for New Technologies and Specifically Taking Advantage of Our Diverse, Unique Renewable Energy Resources and High-Cost Energy Markets

STEP:	Help needed:
	marketing expertise, time, travel, networks.

Funding:

Phase1 : Meetings to define scope of work (steps 1-3 from above)	Budget: $0	Funding Source: No funding required
Phase 2: Actively develop and deploy marketing	Budget: $0	Funding Source: This will likely require funding. Amount depends on what we decide as a SOW. Could include printing, travel, booths at conference, web design etc. Possible sources for funding may include but are not limited to: Private donations, AEA, NOAA, City of Juneau, donated time (in lieu of $$), springboard, ONR

Outcome/Results: We will successfully attract companies who will complete renewable energy projects in southeast Alaska that may not have come otherwise. Could be measured by # of companies that come as a result of our marketing or estimated:

- annual expenditures in SE AK;
- annual and total capital investments in SE AK;
- new employment: jobs, payroll;
- success of products developed via this initiative on world markets
- value of renewable energy exported from SE, via any means of "transmission", electricity or as fuels

Draft Action Initiative 3: Market SE Alaska to the Existing and Emerging Renewable Energy Industry as a Test Venue for New Technologies and Specifically Taking Advantage of Our Diverse, Unique Renewable Energy Resources and High-Cost Energy Markets

Draft Action Initiative 4: Market-driven Renewable Energy Economic Modeling for Southeast Alaska, including Multiple Transmission and Energy Storage Strategies

Cluster Working Group:	Renewable Energy
Initiative Champion:	Bill Leighty, The Leighty Foundation
Initiative Implementation Team:	Zach Wilkinson, Bryan Farrell

Description & Motivation: *What is the nature of the problem the initiative will address?*

-Need for Collab's and P'ships, by which to [Attract + Pool resources, discuss modeling results with them]

-Need for credible modeling: Mktg and Econ

-Immature technology needs R+D+Demo, to discover + demo tech+econ potential powermanes, if any of Southeast Alaska RE

Objective:

-Credible business case(s) to encourage firms to consider investing in nascent Southeast Alaska Renewable Energy industry be able to present and discuss

-Credibly promote Southeast Alaska as an R+D+Demo Site (Region)

-Raise funds for the modeling consulting study (IFS) necessary to accomplish the above

Draft Action Initiative 4: Market-driven Renewable Energy Economic Modeling for Southeast Alaska, including Multiple Transmission and Energy Storage Strategies

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Compose RFT/RFQ for Mktg+Econ Consulting Modeling Study	Zack, Bill, REAP, SEACC, SCS (Sitka Conservation Society) Brian Hirsch, NREL		1-6 Months Concurrent With below
2. Find funding for Step 1.	AK Legis Delegation	Real $: Depends on responses to RFP/RFQ ($10-100K Estim)	6 months
3. Contract for the modeling study; supervise it. Approve and receive the report	Real $: $10-100K		6 months
4. Meet with public + private potential collaborators, to discuss report and form durable collaborators	All RE Cluster Working Group Members join these discussions		3 months
5. Agree on + propose a list of candidate projects, consistent with above			2 months

Draft Action Initiative 4: Market-driven Renewable Energy Economic Modeling for Southeast Alaska, including Multiple Transmission and Energy Storage Strategies

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
R+D+Demo			
6. Fund one or more of above projects		Real $ (-M)	

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Compose RFP/RFQ for modeling	Expert help, various
Funding for (1)	Funders; Funds
Contracts	Responses to RFP/RFQ
Supervise contractor	Experts on JEDC Subcommittee
Proposed project list	Discussions with collaborators
Fund Project(s)	Sponsors, collaborators, investors, funds, supervisors some projects may "cash plow" or be profitable, from energy sales revenue.

Draft Action Initiative 4: Market-driven Renewable Energy Economic Modeling for Southeast Alaska, including Multiple Transmission and Energy Storage Strategies

Funding:

Phase:	Budget:	Funding Source:
1.	Small	
2.	$100k	State of AK, US DOE, US DOD, others
3.		
4. Supervise contract	? work as group volunteer?	JEDC O'HD
5.	?	
6.	Depends on Project cost	

Outcome/Results:

-RFP/RFQ is credible; responses from potential contractors

-Consulting modeling is funded

-durable + capable collaborative formed

-Project(s) are built and work; tech + econ success

Draft Action Initiative 5: Explore Opportunities for Connecting SE Alaska Intertie to North American Grid to Improve the Economy and Quality of Life throughout the Region

Cluster Working Group:	Renewable Energy
Initiative Champion:	Duff Mitchell and John Sandor
Initiative Implementation Team:	Paul Southland

Description & Motivation:

Problem #1. Renewable energy projects are more profitable and economically viable if all the energy resource can be fully utilized. Stand alone projects that leave stranded or underutilized capacity lead to higher Alaskan costs for power.

Problem #2. Low water periods, growing seasonal local demand in winter months combined with water reservoir management issues can lead to supplemental requirements for diesel generation to meet local demand needs.

Problem #3. Continued increases in cost of diesel and fossil fuels leads to consumer substitution of electricity where lower price electricity exists.

Problem #4. Canada, with First Nation participation, has completed their environmental analysis and other plans for bringing more affordable renewable energy to improve the economy and quality of life values of central British Columbia by 2014. Alaska can benefit by understanding how Canada is achieving these objectives.

Problem #5. Intertie disconnected communities in both Alaska and Canada find their economies depressed by the lack of affordable power.

Objectives:

Objective #1. The objective of the initiative is to provide a means to fully utilize the developing and growing renewable energy resource in Southeast Alaska. This is accomplished by providing the opportunity for the sale of 100% project potential capacity as a surplus export. Local cost savings are achieved economies of scale inherent with the full and wise use of resources. The certainty of full utilization of the energy resource significantly increases the viability of energy projects and provides increased incentive for public and private financing of high dollar investment energy projects.

Objective #2. A North America interconnection would fully displace the need for future SE diesel electrification generation because the

intertie could import electrical energy resources in periods that Southeast utilities and hydropower facilities experience high demand or low water periods thereby saving ratepayers of all diesel backed up SE utilities.

Objective #3. Intermittent renewable energy firming options. An integrated intertie provides firming capabilities for small intermittent renewable energy developers to firm their resource with firm energy providers outside their immediate market space and thereby increase the value and economic viability of future wind, solar, and hydrokinetic energy developments.

Objective #4. Water Management assistance to Western USA. Southeast Alaska's resource peak and power needs are inverse to Western USA. Integrating renewable energy from Southeast Alaska provides better conservation of Western USA rivers by allowing utilities to purchase SE Alaska surplus during their periods of low water which occurs at our high water periods. This objective provides unique ecological benefits to Western USA river systems and aquatic species dependent in these systems.

Objective #5. With an Alaska-Canada partnership and transmission line interconnection, we can enable Alaska and British Columbia to explore opportunities to bring more affordable renewable energy to economically depressed communities in both countries. This would resolve a social injustice while also serving small communities paying exorbitant costs for energy, but also serves as a financial means to develop infrastructure through the export of surplus energy generated in Southeast Alaska to the North American Grid.

Draft Action Initiative 5: Explore Opportunities for Connecting SE Alaska Intertie to North American Grid to Improve the Economy and Quality of Life throughout the Region

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Initiate and conduct Economic Feasibility and Benefit Analysis of North American electrical intertie integration with Southeast Alaska for these identified problems and objectives.	State of Alaska Dept. of Commerce; ACE coalition, JEDC.	Authorize and Require already appropriated $650K held by AEA for this very purpose. Study should be conducted by independent energy infrastructure financial institution or brand name firm like KPMG or Lloyds of London as recommended and used in British Columbia study. Budget $225,000	1-3 months
2. Plan and propose an Alaska Canada partnership that will enable Alaska and British Columbia to explore opportunities to bring more affordable renewable energy to economically depressed communities in both countries and develop the means and infrastructure to export surplus energy to the North American Grid.	Alaska Governor, Lt. Governor, Dept. of Commerce, ACE coalition, JEDC.	Authorize and Require already appropriated $650K held by AEA for this very purpose. Budget $125,000	1-12 months

Draft Action Initiative 5: Explore Opportunities for Connecting SE Alaska Intertie to North American Grid to Improve the Economy and Quality of Life throughout the Region

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
3. Upon completion of Economic Feasibility and Benefit Analysis of North American electrical integration with Southeast Alaska, develop business plan and organizational structure for Intertie	State of Alaska Dept. of Commerce, JEDC, ACE Coalition, AIDEA	Budget $125,000	6 -12 months
4. Execute Business plan	ACE Coalition, JEDC	Budget $125,000	12 month +

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Alaska Energy Authority resistance to utilize AKBC funds as legislatively intended.	JEDC recommendation to proceed.
The lack of knowledge within Alaska of the Canadian, British Columbia and local governments in partnership with First Nations have made their goals for economic growth through the development of affordable energy..	JEDC recommendation to proceed.
The resistance to consider possible benefits from an analysis of the experience and renewable energy achievements in British Columbia.	JEDC recommendation to proceed.

Draft Action Initiative 5: Explore Opportunities for Connecting SE Alaska Intertie to North American Grid to Improve the Economy and Quality of Life throughout the Region

STEP:	Help needed:
The lack of appreciation of the potential benefits of an Alaska Canada Renewable Energy partnership.	JEDC recommendation to proceed.

Funding:

Phase:	Budget:	Funding Source:
Economic Feasibility and Benefit Analysis of North American electrical intertie integration with Southeast Alaska	$250,000	AEA AK/BC monies appropriated and held by AEA ($637K balance)
Alaska Canada Energy Partnership	$125,000	AEA AK/BC monies appropriated and held by AEA
Develop Business Plan and Organizational structure.	$125,000	AEA AK/BC monies appropriated and held by AEA
Execute business plan	$125,000	AEA AK/BC monies appropriated and held by AEA and seek additional public and private funding sources based on organizational structure and business plan.

Outcome/Results:

The Economic Feasibility and Analysis (conducted by a qualified and experienced infrastructure financial services/institution) provides factual and objective benefits that outweigh the costs that incorporate the four objectives and considers the identified problems of this AIT in the Economic Feasibility and Analysis study.

The Study will provide objective analysis to evaluate whether or not the next steps should be implemented and a business plan developed.

We will evaluate if we are successful or not by creating a body of knowledge that does not currently exist to determine if this Intertie connection is, in fact, a pathway and a means to assist Southeast Alaska citizens and help spur a renewable energy development industry

Draft Action Initiative 5: Explore Opportunities for Connecting SE Alaska Intertie to North American Grid to Improve the Economy and Quality of Life throughout the Region

in Southeast Alaska by providing:

Firm power alternatives for all renewable energy developers;

A full utilization of energy resources by providing a 100% market access for excess surplus power;

Providing a revenue stream to bond intertie segments between southeast communities by having excess surplus power sales contribute to paying off bond debt through wheeling fees;

Providing access and opportunity to justify expansion and continued build out of the Southeast Intertie which can connect diesel dependent communities along the routes (Angoon, Kake, Hoonah).

Draft Action Initiative 6: Biomass Energy Demand Development

Cluster Working Group:	Renewable Energy
Initiative Champion:	Bob Deering
Initiative Implementation Team:	Bob Deering, Ross Good, Nate Sobolef

Description & Motivation:

Biomass energy has tremendous potential to meet the region's energy needs with a local renewable energy source. Hydroelectricity, the other major energy supply in the region, is approaching its practical capacity limits – the 'easy' hydro has been tapped, and future sites are expensive and risky to develop. Transmission lines are cost prohibitive, running ~$1.5M per mile, and ~$5M per mile of undersea cable, and are constrained by geographic and land use limitations.

Oil, which provides about ¾ of the region's energy, is expensive and suffers unpredictable price spikes which make energy budgeting a guessing game for consumers. As oil prices rise, residents in the region have demonstrated that they can rapidly shift to other energy sources for building heating – and that source is mainly electricity. As discussed above, hydro capacity cannot easily respond in a timely manner, and even a relatively percentage small shift from oil heating to electrical heating (even using heat pump technology) can quickly consume the utility's reservoir capacity, causing higher rates and supply issues.

Electric cars are an emerging mainstream technology with the potential to demand an additional 20% of AELP's capacity. SE Alaska, with its limited road infrastructure, represents an excellent location for electric cars because 'range anxiety' isn't a factor. If oil prices remain high, and go higher, the shift to electric cars could proceed faster than anticipated, and faster than our hydro capacity can keep up.

Objectives:

The objective of this initiative is to identify a transition strategy to biomass energy to complement our hydroelectric energy supply, with the ultimate goal to wean the region off of oil to the maximum extent possible.

If successful, this region could shift from one of the most oil-dependent regions in the country to one of the least. We could be a model for the rest of the nation, and possibly the world. We have world class resources at our fingertips.

What this initiative will NOT be focusing on is the biomass supply side of the equation. That is a key aspect to making biomass a successful energy player in the region, but this issue will be addressed by the biomass energy team in the Forest Products Cluster Working Group. The Supply and Demand teams will coordinate their efforts to grow this 'new' industry from the ground up, approaching it from both directions.

Draft Action Initiative 6: Biomass Energy Demand Development

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. 1. Identify the scope of the challenge. Get a clear handle on our current energy usage and available hydroelectric capacity.	Regional electric utilities, State and city policy makers and planners, key local engineers/experts, local heating contractors/suppliers, UAS	Data gathering and analysis – need smart people with access to the data.	3 months
2. Educate key decision makers in the region – governments, utilities, major facility owners, property developers. Help them understand the scope of the problem and the range of possible solutions	Same as above	Smart, articulate people. Access to the ears that need to hear this.	3 months
3. Identify opportunities to 'move the needle'. The Willoughby Development district heating concept is one such possibility which could displace well over 500,000 gallons of annual heating oil consumption. Integrate this energy source with other energy efficiency and planning efforts in a complementary fashion.	Community planners, engineers, government decision makers	Pretty much the same as above.	1 year
4. Seek out financing opportunities. There are numerous federal and state grant and loan programs out there to help turn these projects into reality. There may also be venture capital to finance startups. And there are the traditional federal, state, and city appropriation processes.	Grant writers, federal and state program managers, financial analysts	Same as the box to the left	1 year

Draft Action Initiative 6: Biomass Energy Demand Development

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
6. Implement biomass projects. Whether federal, state, city, or private. Facilitate the implementation of these projects as much as possible. Add pages as needed.	Designers/engineers, contracting specialists, construction contractors, equipment suppliers	Funding authority and sound project management for starters.	1-10 years, depending on the projects

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
The biggest obstacle will be inertia. Resistance to change.	A concerted effort from a broad spectrum of people, to educate and initiate action. Getting a 'cause to action' campaign kicked off.
Denial of the problem. Many people will maintain that our current energy sources are adequate to meet our needs.	A strong education campaign, from credible sources.
Misperceptions about biomass energy. There will be those who view biomass as a source of pollution, or possibly a threat to the Tongass.	Education by knowledgeable sources. Successful demonstrations of the technology. Thoughtful consultation with resource managers and conservation groups.
Supply worries. If the supply can't be delivered at a (better than) competitive price, in the quantities needed, the initiative will fail.	Success by the biomass team on the Forest Products Cluster Working Group.

Funding:

Phase:	Budget:	Funding Source:
Education and research	3-4 dedicated people, with appropriate skills, for one year	Unknown – could be a variety/combo of sources

Draft Action Initiative 6: Biomass Energy Demand Development

Phase:	Budget:	Funding Source:
Planning/design/implementation	Difficult to say. Depends on the scope and magnitude of the effort.	Varies with the activity

Outcome/Results:

The simplest measures will be to determine what percentage of our overall energy needs is coming from biomass, and how much our usage of heating oil and transportation fuel usage intensity has decreased.

Draft Action Initiative 7: Discover Best Practices From Around the World to Overcome Barriers & What Is Being Done To Incentivize Change Regarding Renewable Energy and Energy Efficiency

Cluster Working Group:	Renewable Energy
Initiative Champion:	Nathan Soboloff, Haa Aaní, LLC/Sealaska
Initiative Implementation Team:	Bob Deering, Duff Mitchell

Description & Motivation:

governmental/regulatory barriers (ex burn ban exemptions for pellets but not densified firelogs)

Price of technology – products are not always made locally (even nationally)

Distribution barriers – heating oil distribution network exists and has a 100+ year head start in development

Some heating technologies (oil) operate on their own without any care whereas even the best pellet boiler needs to have ash removed at least 2x a year or more

Patent barriers may exist

Technology is not being sold or promoted locally… if at all (people don't know about it, people can't get it if they do)

Licensing… ASME and UL listing requirements take money to get and time to approve

Cap and Trade system for CO2 emissions

The cost of heating keeps rising

Objective:

Make renewable energy technologies (and energy efficiency technologies) cheaper and locally available. Technology and industries exists worldwide that are not present in Alaska today. A more aggressive objective would for products to be manufactured locally.

Draft Action Initiative 7: Discover Best Practices From Around the World to Overcome Barriers & What Is Being Done To Incentivize Change Regarding Renewable Energy and Energy Efficiency

ACTION PLAN

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
1. Identify products and technologies that exist today that could help, and identify why those products and technologies are not present in Alaska.	USFS	Time, little $	1 month
2. Analyze the information and conduct an economic analysis comparing the various technologies against one another (in a matrix form?)	USFS	Time, little $	1 month
3. Make the technology affordable by creating US industries to manufacture the goods here. Example some pellet boilers must be imported from Austria which adds cost.	Some US company…	Time, relationship building	Long term
4. Streamline licensing and engineering process to make existing products legal for sales and installation in the US that are currently deployed through out the rest of the world. (ASME approval and UL licensing).	US Federal Government	Time, internal government $	1 year
5. Incentivize people/businesses, public facilities to convert to Renewable Energy and EE technology. (Tax credits, or change out programs etc)	Someone in the US Govt that deals with Tax credits. Maybe JEDC, who runs the Fairbanks wood stove changeout program?	Time, $Millions depending on how big you want the program to be for a changeout Tax credits?	1 year
6. Encourage & help local businesses to sell and service the	Maybe JEDC?	Time relationship building… maybe no	Long term

Draft Action Initiative 7: Discover Best Practices From Around the World to Overcome Barriers & What Is Being Done To Incentivize Change Regarding Renewable Energy and Energy Efficiency

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
technology.		cost	continuous

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
The biggest obstacle will be locating good products and technologies and cultivating relationships to make those items legal for sale within the US AND to bring economies of scale to the project such that the cost/unit decreases to become cost competitive with a fossil fuel based heating device	Time and a Champion on a product by product basis
Look at the OkoFEN wood pellet boiler (Austrian) and what Maine Energy Systems has done to license and approve the technology what was once a cost competitive product in Austria (affordable to many) is now more expensive than the most expensive condensing oil fired boiler. We need to make products a lot less expensive.	

Draft Action Initiative 7: Discover Best Practices From Around the World to Overcome Barriers & What Is Being Done To Incentivize Change Regarding Renewable Energy and Energy Efficiency

Funding: ***What is the estimated cost of this initiative, in phases beginning with design, the 'ramping up' phase, and then for ongoing annual costs? Note potential sources of funding for each phase if possible.***

Phase:	Budget:	Funding Source:
1) Investigate	.5 Million	USFS
2) Legalize technology for US consumers (ASME approval and UL listing)	Maybe 1 Million per technology	USFS?
3) Continue to create the relationships between technology providers and products and the local companies to sell and install/service them	1-2 FTE	USFS or DOE

Draft Action Initiative 8: Streamline Permitting and Schedule Acceleration

Cluster Working Group:	Renewable Energy
Initiative Champion:	Ross Good, Elcon Corporation
Initiative Implementation Team:	Ross Good, Elcon Corporation

Description & Motivation: Citizens in SE Alaska are all aware of projects and initiatives gaining traction to address the high cost of energy. The people expect these projects to accumulate measurable progress on a daily basis. They regard this progress as a method to determine whether or not their elected state officials are spending their time efficiently. Needless to say, the constituents of SE Alaska are growing increasingly impatient with the influx of interest groups, government bureaucracy and the countless layers of oversight which have extended project procurement periods out 10 to 20 years. While citizens are forced to address a $1,000 electrical bill, a policy maker in Washington DC, an individual who's never once visited the great state of Alaska, is voting on policies which will never have an impact on his way of life. It's this layer of nonsensical oversight and bureaucracy that has branded the term 'progress' as nothing more than sales pitch for politicians. The people have lost faith in their government to hone in on the true needs of their people; means for survival, growth and prosperity. To sustain any one of these basic needs, one must have access to affordable energy. Something must be done to win back the people's faith in their government.

Objective:

A central authority must be established to consolidate all decision making, permitting and licensing associated with small and large scale renewable energy projects. This will allow all vested parties to convene at set times during the planning/permitting phase and discuss concerns and achieve measurable progress. As a mediator, this authority can act as a conduit of communication from the federal (FERC, Army Corp of Engineers) to the communal (owner, citizen) level. Having a central authority will provide and serve as a forum for all topics to be debated. It will also make it easier to execute tasks simultaneously to minimize time for project planning.

At one point in Alaska's history, an organization like this existed and was recognized as a valuable asset. Identified as the Division of Governmental Coordination (DGC), the agency operated out of the office of the Governor and had a broad authority over all complex and multi-level governmental projects. For a state that is fundamentally dependent on resource development, investing in a regulatory procedure which expedites the procurement of resource-related projects would seem logical. Governor Murkowski soon terminated the office in an effort to reduce expenditures, deflating any hope the DGC could continue into the future.

Considering the interest in utilizing the abundant water & wind resources in Alaska to meet the state's energy needs, formation of a similar

office is in the best interest of Alaska. This new assembly must consist of personnel who are highly educated in natural resource control. This will enable projects to reach fruition at a much faster rate in comparison to the current non-linear method. If established, you will see a revitalized interest in both standard and entrepreneurial efforts in addressing the energy needs of SE Alaska. The invigorated interest in the region will be complimented by the formation of new industries and job growth. People will soon come to recognize Alaska as a state which embraces new ideas associated with renewable energy. The state's wiliness to dedicate highly-professional staff to guide entrepreneurs through the arduous permitting process will alleviate much of the stress and pains experienced by today's projects. This movement of thinking outside the box will not only be shared by those in government and public utilities, but also in small isolated communities. These people are in desperate need of immediate action and we must find ways to cut through the bureaucracy and deliver meaningful alternatives.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
Perform Procurement Audit of all SE Alaska Renewable Energy projects. Determine procurement timelines of previous projects.	Consultant, Utility Owners	Computers, Travel Allowance, Consultant	12 weeks
Identify procedures which can be improved upon. Identify steps which were identified as unnecessary.	Pull together Project Representatives from past, current and future scopes of work which could benefit from such a system. Identify their frustrations and utilize this to direct your next objective. Engineering firms, utility owners, members from old DGC office.	Large Conference Room and Free Lunch to lure key members.	4 weeks
2. Confirm the items can be approved upon from old method.	Sit down with past members of Division of Governmental Coordination to discuss issues outlined in first step.	Large Conference Room and Free Lunch to lure key members.	4 weeks

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
3. Write up extensive study on findings.	Present to Governor Parnell and other member of finance staff. Request hearing to debate legitimacy of request.	Miracle	8 weeks
4. If approved, moved to confirm the logistics and function of new office and ensure the method mimics method used from 1988 to 1994 in the Division of Governmental Coordination.	Old staff of Division of Governmental Coordination, other professionals.	Double Miracle	8 months

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Turf War on Authority	Reason & Coordination
No branch of government or authority thinks kindly to reducing	If the government agrees to re-instate the DGC, the DNR must
their role in permitting work. The Department of Natural	willingly release its authority to the DGC. The reasons for this
Resources (DNR) inherited much of the function & power once	must be clear in order for the transition to succeed. Parties from
appointed to the DGC. The DNR has watered down the function	DNR must understand their current system is a far cry to the
the effectiveness once practiced by the DGC due to the sheer	original DGC and the past-time methods must be acknowledged

STEP:	Help needed:
magnitude of thei department. We need an office who's only purpose is to oversee & coordinate Renewable Energy projects.	as superior in efficiency and purpose. All parties must engage to improve functionality of new DGC.

Funding:

Phase:	Budget:	Funding Source:
Procurement Audit	$20,000	State Budget
Approval from State of DGC Office	$30,000	State Budget
Hiring/Appointment of DGC Personnel	$1,500,000	State Budget
Transition of Authority from DNR to DGC	$300,000	State Budget
Annual Operation Costs of Personnel	$1,500,000	State Budget

Outcome/Results: Perform audit of all previous Renewable Energy Projects in State of Alaska. Determine procurement periods for project and analyze durations of procurement while DGC was active and after it was absorbed into DNR. After five years of operation, conduct similar audit of those 5 years and determine if procurement period has been reduced due to new DGC office.

List of Individuals Contacted for History of DGC – Division of Governmental Coordination:

Sydney Mitchell - 907-586-1055

Jacky Timothy - Alaska Fish & Game - 907-465-4275

Carry Howard - Department of Natural Resources - 907-465-3176

Randy Bates - Coastal Management Program - 907-465-8797

Glenn Gray - Glenn Gray Associates - 907-789-7822

Diane Mayor - Executive Director of SE Land Trust - 907-586-3100

Lorraine Marshall - Retired, unable to contact but residing in Juneau

Lisa Weissler - Division of Project Management and Procurement 907-465-6720

Draft Action Initiative 9: Renewable Energy Education for SE Alaska Residents, Students and Businesses

Cluster Working Group:	Renewable Energy
Initiative Champion:	Brandon Smith and Heather Hardcastle
Initiative Implementation Team:	Brandon Smith, Alaska Brewing Company Heather Hardcastle, Fishermen's Daughters Ecofuels Kirk Hardcastle, Alaska Center for Energy and Power Ron Holman

Description & Motivation:

Lack of clear understanding among Southeast Alaska's general public of what renewable energy is and how renewable energy projects and products in the region do and/or could relate to them.

Insufficient resources at educational levels (pre-K through university level) for teaching the next generation about renewable energy, including the current and potential renewable energy research and development efforts occurring in Southeast Alaska.

Lack of credible, immediate information for Southeast Alaska businesses [on the demand side of a renewable energy industry] that would allow them to make informed decisions about renewable energy.

Objective:

Increase the awareness of the public—including municipal and State leadership--of renewable energy through fact-driven informational campaigns. This education will increase public support for renewable energy issues and projects, which is especially important when public policy changes (regulations, etc.) will be required for the successful development of a renewable energy industry in Southeast Alaska.

Develop renewable energy education programs targeted to different age groups within the State educational system (pre-K through university level), and work with the appropriate entities to implement these programs on an ongoing basis. This will help develop a base of future—and local—renewable energy planners, innovators, and decision makers.

Develop renewable energy informational programs that can be presented to Southeast ALaska businesses, showing the advantages of

investing in and supporting renewable energy in the region. This would create critical demand-side support for the emerging industry.

WE RECOGNIZE THIS ACTION INTIATIVE IS VERY BROAD AND ACTUALLY COMPRISES A MULTITUDE OF INDIVIDUAL ACTION INITIATIVES. WE'VE ATTEMPTED TO OUTLINE SOME BROAD DIRECTIONS TO GO WITH A RENEWABLE ENERGY EDUCATION EFFORT AND HAVE LISTED SOME POSSIBLE SPECIFIC TASKS/NEXT STEPS. WE HOPE THE SOUTHEAST ALASKA RENEWABLE ENERGY STEERING COMMITTEE CAN TAKE THESE GENERAL IDEAS AND CHOOSE TO FOCUS ON JUST ONE OR TWO TASKS THAT THEY DEEM TO BE MOST "ACTIONABLE" IN THE NEAR TERM.

ACTION PLAN

Describe the specific steps/tasks.	**Key People: Who needs to be involved to accomplish step (ID business, agency, or people)**	**Resources needed to accomplish step**	**Timeline to accomplish step**
1. Research existing programs that can be used as sources of ideas, resources and/or models for the development and implementation of renewable energy education programs for Southeast Alaska residents, students and businesses. **We don't have to look too far to find a successful renewable energy education model; REAP has been done tremendous work based in the Interior for many years. We see great value in REAP opening a Southeast Alaska office so that their current efforts [focused more on the Railbelt] could take on a Southeast Alaska focus from their "branch" in this region—that has a different lifestyle and different resources and issues than does Southcentral Alaska.	RE Seed Cluster Steering Committee, REAP personnel, NREL (Brian Hirsch) and ACEP personnel	Personnel, funding, time, energy and passion!	
2. Develop and implement renewable energy public awareness campaign for Southeast Alaska:	RE Seed Cluster Steering Committee, REAP personnel (including Stephanie Nowers who	Personnel, funding, time, energy and passion!	

Draft Action Initiative 9: Renewable Energy Education for SE Alaska Residents, Students and Businesses

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
a. Develop a media campaign to introduce renewable energy to the region in an organized/targeted way through a webpage/website, newspaper articles [that highlight individual stories of Southeast residents, in particular], radio PSAs, a simple DVD to distribute for free (such as Sitka Conservation Society's "Rain Power"), etc. b. Identify regional renewable energy project(s) that demonstrate the value and potential of renewable energy (i.e. TSMRI saltwater pump, Juneau's new swimming pool ground-source heat pumps, Sealaska Corp.'s pellet boiler, etc.). Develop education pieces around these projects, including guided field trips and presentations for municipal and State leaders, business leaders, students and members of the public-at-large. c. Incorporate renewable energy education pieces into displays at key USFS sites used by tourists AND locals (i.e. Mendenhall Glacier Visitor Center and Ketchikan's Southeast Alaska Discovery Center). d. Incorporate discussions of regional renewable energy research, development and ongoing projects into conference presentations that are *open to the public* (i.e. ACEP's Rural Energy Conference in Juneau Sept. 2011). Specifically invite municipal, State and	maintains a thorough website and frequent newsletter for REAP and whose husband is videographer), ACEP personnel, NREL (Brian Hirsch), Southeast Conference and USFS employees		

Draft Action Initiative 9: Renewable Energy Education for SE Alaska Residents, Students and Businesses

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
business leaders to these presentations. e. Coordinate renewable energy entrepreneurs, researchers, engineers, policy experts, etc. to deliver "Lunch & Learn" presentations in key venues (Capitol, ADEC, ADNR, USFS and ADF&G offices, etc.).			
3. Develop and implement multi-level education programs for the State educational system: a. Create a series of hands-on, interactive curricula that can be implemented at several education levels, pre-K through university. The STEM program would ideally serve to assist in curricula development and implementation. b. Encourage UAS to support programs that focus on renewable energy R & D (including the fledgling engineering department). c. Foster connections between UAS students and educators with NMFS and USFS research stations with regard to potential renewable energy R & D work that could be accomplished over the long-term in	RE Seed Cluster Steering Committee, REAP personnel (including Hannah Gustafson who is involved with renewable energy curriculum development), ACEP personnel and Alaska Housing and Finance Corporation (may have funding for Renewable Energy curriculum development), State science curriculum specialists, interested Renewable Energy "tinkerers" and entrepreneurs, JEDC STEM educators, UAS administration and educators, NREL (Brian Hirsch) and NMFS and USFS research stations	Personnel, funding, time, energy and passion!	

Draft Action Initiative 9: Renewable Energy Education for SE Alaska Residents, Students and Businesses

Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
Southeast Alaska. d. Host a "Southeast Alaska Renewable Energy Design Fair" for high school and UAS students to get students excited about helping to create a new "industry of the future" for this region. Students could be mentored by local "tinkerers," entrepreneurs and scientists, much like the mentorship program in the annual Science Fair [which may have just had its last event in 2011].			
4. Develop and utilize business-focused renewable energy educational materials: a. Survey (and/or host focus groups with) a sample of business owners from across the region to determine where their Renewable Energy understanding is currently at, how/if Renewable Energy currently impacts their business and how/if they envision Renewable Energy assisting their business in the future. b. Coordinate renewable energy entrepreneurs, researchers, engineers, policy experts, etc. to deliver "Lunch & Learn" presentations in key venues (i.e. Rotary International Club and Chamber of Commerce luncheons, as well as Southeast Conference Summits	RE Seed Cluster Steering Committee, REAP personnel, ACEP personnel, Rotary International clubs and Chambers of Commerce in Southeast Alaska communities, businesses that can extol virtues and potential of Renewable Energy (Alaska Brewing Company, AEL&P, Sealaska Corp., etc.), Southeast Conference	Personnel, funding, time, energy and passion!	

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Describe the specific steps/tasks.	Key People: Who needs to be involved to accomplish step (ID business, agency, or people)	Resources needed to accomplish step	Timeline to accomplish step
and Mid-Session Summits). c. Include articles that discuss renewable energy successes and potential in the region in publications like Alaska Business Monthly, Alaska Journal of Commerce and other trade publications.			

Obstacles and Impediments Likely to Affect Implementation:

STEP:	Help needed:
Public awareness campaign: Overcoming opposition to specific renewable energy issues (i.e. use of forest products for energy).	Emulate successful campaigns mounted in other places (network within the global renewable energy industry).
Educational system implementation: Finding the right pathways within local school systems (i.e. High-level entry? Individual sites?).	Need someone well versed in navigating local school system bureaucracies.
Business campaign: Lack of an "in" to local businesses.	Need a champion at local Chambers of Commerce, and at other business groups. Southeast Conference will be an important partner (and possibly REAP—see below) in this effort.
All three subsets of renewable energy education: Numerous, broad tasks are daunting, and it's difficult to know where to begin.	It's important that Renewable Energy Seed Cluster members continually remind one another that work toward accomplishing any one of the suggested tasks is additive, and a step closer toward creating a mature renewable energy industry in Southeast Alaska.
	Additionally, an ideal Renewable Energy SEED Cluster "partner" in this vast education/marketing effort is REAP. It would be ideal if REAP could open a Southeast Alaska office to help in the research, development and implementation of renewable energy education

Draft Action Initiative 9: Renewable Energy Education for SE Alaska Residents, Students and Businesses

STEP:	Help needed:
	programs in Southeast Alaska.

Funding:

Phase:	Budget:	Funding Source:
1 – Research/record/analyze successful renewable energy education/PR efforts in other areas		
2 – Develop/implement renewable energy public awareness campaign		
3 – Develop/implement renewable energy programs in State educational system		
4 – Develop/utilize renewable energy educational programs for businesses that are on demand side of emerging industry		

Outcome/Results:

Given the broad focus of the initiative, the results can be hard to measure. The success of a PR campaign could be measured with before-and-after opinion polls. Implementation in the educational system is ongoing. In the short term, if the program can be integrated into curricula (such as science), teachers and administrators can be asked if they felt that the program was useful in a general sense within the subject area. In the long term, the objective is to ingrain renewable energy into the minds of young people; the success of that is harder to measure. On the business side, a before-and-after assessment might be useful there, as well.