

SOUTHEAST ALASKA CLUSTER INITIATIVE

Impacts and Successes

Facilitated by the
Juneau Economic Development Council
July 2011- December 2016



VISITOR
PRODUCTS



OCEAN
PRODUCTS



RENEWABLE
ENERGY



RESEARCH



MINING SERVICES
AND SUPPLY



FOREST
PRODUCTS



ARTS AND CULTURE

*"The foundation of a regional economy is a group of clusters, not a collection of unrelated firms. Firms cluster together within a region because each firm benefits from being located near other similar or related firms. The firms in a cluster have common competitive strengths and needs."*¹

Global Emergence of Cluster Based Economic Development

An "industry cluster" is a set of businesses, in the same or related field and located near one another, which are linked by service or supplier relationships, common customers and supporting institutions or other relationships. They share reliance on regional knowledge and on the regional labor market. They compete with one another but also complement one another. They draw productive advantage from their mutual proximity and connections. The presence of an industry cluster can have a positive impact on regional prosperity and can create more added value, offer more employment opportunities, and achieve higher levels of productivity. However, the existence of a cluster will in itself not strengthen the competitiveness of a region. Constructive collaboration rarely happens spontaneously. For that, there must be facilitated interaction among the participating companies and supporting entities. A cluster organization will enhance the ability of the industry to achieve higher economic performance. Cluster based economic development policy is now deployed world-wide through new organizations or institutions focused on collaboration and collective action that are neither government agencies nor private, for-profit firms.

The Development of the Southeast Alaska Cluster Initiative

Since early 2011, the Juneau Economic Development Council (JEDC) has led an industry cluster based approach to economic development in the Southeast Alaska region. Called the Southeast Alaska Cluster Initiative, this approach brings private sector "industry cluster" firms together with federal, state and local agencies, university faculty, trade association representatives, economic development organizations, community leaders and other stakeholders in facilitated Cluster Working Groups to address industry needs, concerns and opportunities on a cooperative basis. Since its inception, the Southeast Alaska Cluster Initiative has served as a successful catalyst for private-public partnerships.

In its initial phase, JEDC assembled and facilitated startup of four Cluster Working Groups in three established and one emerging industry sectors: a Visitor Products Cluster Working Group, Ocean Products Cluster Working Group, Forest Products Cluster Working Group, and Renewable Energy Cluster Working Group. These four Working Groups developed between 5 and 10 actionable initiatives unique to the needs and opportunities of each industry. A total of 15 meetings with over 200 individual participants were held during the cluster formation and initial initiative development phases.

Subsequently, JEDC facilitated the formation of a Cluster Working Group for Mining Services and Supply industry participants and the Research and Development sector. Each of these two Working Groups initially developed six action initiatives. Since 2014, JEDC also has been working toward the establishment of an Arts and Culture Cluster Working Group.

¹ Joseph Cortright, Making Sense of Clusters: Regional Competitiveness and Economic Development, The Brookings Institution, March 2006.

With the development of actionable initiatives, the focus of activity for all Working Groups transitioned to initiative implementation, leading to the creation of over 30 initiative implementation teams to follow through on action steps, each a team of stakeholders led by a volunteer Champion. Each Cluster Working Group met on a monthly basis to review progress on initiative implementation. Over time, some initiatives gained traction, saw activity and success, others became inactive, and new initiatives were undertaken. The Visitor Products Cluster Working Group, the Renewable Energy Cluster Working Group and the Research and Development Cluster Working Group continue to meet monthly with JEDC facilitation. Ultimately, the Mining Services and Supply Cluster Working Group and the Ocean Products Cluster Working Group did not survive as active working groups and activity stopped in 2014 and 2015, respectively.

Southeast Alaska Innovation Summit

In December 2011, JEDC convened the first Southeast Alaska Economic Summit which brought all Cluster Working Groups active at that time together to advance the work of the clusters, share best practices and



connect cluster participants with local community, government and business leaders. In 2013, JEDC worked to improve the cluster-specific business environment in Southeast Alaska by organizing a regional Innovation Summit early in the year to focus on the role of shared value in fostering industry innovation. "Shared value" is the achievement of economic success for business through products and/or services that also create value for society. This event brought together over 180 leaders in business, government and education to cultivate ideas and collaborate for economic success in the region. The two-day summit included an agenda packed with professional development and networking opportunities, as well as sessions focused on key industries and challenges specific to Southeast Alaska. JEDC's well-attended Summit

won a Silver level award for innovation from the International Economic Development Council in the special event category.

The event grew in attendance and impact with the January 2014 Innovation Summit. Keynote speakers included Thor Sigfussen from the Iceland Ocean Cluster, who spoke on the success of Economic Clusters in Iceland and how they have dramatically increased the value of cod by diversification and innovation; Mary Jo Waits, Director of the Economic and Workforce Development Division at the National Governors Association, talking about the role of Government in Innovation, sharing success stories from state governments around the nation; Patrice Kunesh, Deputy Undersecretary of Rural Development at USDA, speaking on innovators in government; and Jamie Bennett, Executive Director of ArtPlace America, speaking on creative placemaking.

At JEDC's 2015 Innovation Summit, one keynote speaker was Dr. Scott Stern, Chair of the Technological Innovation, Entrepreneurship, and Strategic Management Group at MIT Sloan School of Management. Dr. Stern's research in the economics of innovation and entrepreneurship focuses on entrepreneurial strategy, innovation-driven entrepreneurial ecosystems, and innovation. The second keynote was Armelle Solelhac, representing the French Mountain Cluster, which for the past four years has been working to strengthen the mountain tourism (winter and summer) in the French Alps. Ms. Solelhac is founder of SWITCH Consulting, an experiential marketing and digital communication agency specialized in tourism and outdoor sports. Third keynote was Mark Skinner, Vice President and Director of the Regional Innovation



Acceleration Network (RIAN). RIAN strives to grow the impact of public, private and philanthropic investments in science, technology and innovation. This event was selected to receive a NADO (National Association of Development Organizations) Innovation Award for significant impact to the region through innovative program delivery.

The February 2016 Innovation Summit highlighted leveraging innovation, investment and entrepreneurship to drive a competitive, creative economy. Keynote speaker Dr. Christian Ketels of the Harvard Business School discussed how Alaska can draw on the most recent thinking on the competitiveness of locations and the role of clusters to develop and implement an economic strategy applying cluster-based economic policies. Michael Shuman, globally recognized expert on community economics, discussed how innovative, self-financing enterprises can grow jobs and prosperity. Karen Pittman, President and CEO of the Forum for Youth Investment, discussed collective impact and how people from different sectors can come together to address complex issues.

*"Regional industry clusters – synergistic regional concentrations of industry and related activity in particular fields – represents a powerful source of growth, new-firm starts, and quality jobs at a moment of economic uncertainty."*²

Examples of Impacts and Successes

An example of successful industry-government partnership resulting from the Southeast Cluster Initiative was the formation of a new industry led non-profit, The Working Forest Group, formed in June 2012 through cooperative agreements, to take over and continue the initiatives developed by the Forest Products Cluster Working Group. JEDC transitioned facilitation of group meetings at the request of this non-profit, led by Sealaska Timber.

Additional examples of initiatives actively championed by industry with the expectation that they will bring innovative ideas, tools or collaboration include a Visitor Products Working Group initiative to increase guided access to Forest Service land. This work brought a new appreciation to Forest Service management of the need for flexibility to respond to changing market needs in the region and innovative ideas for commercial activity where infrastructure constraints have limited commercial access. The Ocean Products Cluster Working Group supported innovation in industry and government collaboration in the development of a new industry around mariculture. In the Renewable Energy Cluster Working Group, participants have identified electric transportation a nascent industry with high development potential. The Electric Vehicle initiative has accelerated investment in infrastructure needed for bringing this innovative transportation alternative to the region. The biomass initiative contributed to local renewable resource utilization through diverse biomass infrastructure installments throughout Southeast Alaska. The Research and Development Cluster Working Group has successfully increased collaboration among

² Mark Muro and Kenan Fikri, Job Creation on a Budget: How Regional Industry Clusters Can Add Jobs, Bolster Entrepreneurship, and Spark Innovation. Brookings-Rockefeller, Project on State and Metropolitan Innovation, January 2011

Federal and State agencies, and the University of Alaska. The Working Group achieved formal designation of the region as a Community of Excellence in Research by the State Committee on Research.

One of the central tenets of the cluster-based model of economic development is that the most economically successful regions have managed to knit together companies, teaching and research institutions, and government at multiple levels to create uniquely competitive industries. The success of the Southeast Cluster Initiative has been the forging of new relationships and partnerships in our region between industry, government, the university and other agencies or non-profit entities, the increased understanding of economic development issues in our region, and the advancement of the priorities of our facilitated cluster working groups. The following sections highlight in detail the impacts and success of each Southeast Alaska Cluster Working Group.



VISITOR PRODUCTS CLUSTER WORKING GROUP

Cluster Chair: Kirby Day, Princess Cruises

Highlights

- Since convening in 2012, the Visitor Products Cluster Working Group has achieved greater trust and understanding between Forest Service staff and regional outfitter/guides.
- An initiative to increase guided access to Forest Service land resulted in temporary additional commercial use service days, which led to permanent increased access for outfitter/guides at the Mendenhall Glacier Recreation Area.
- Outreach with a collective voice to policy makers and Forest Service leadership brought back at least \$1 million in previously cut recreation appropriation funds to USFS Region 10 and returned more recreation dollars to USFS Region 10 in the Interior Appropriations Committee 2016 funding bill.
- An initiative to strengthen accountability for Tongass Recreation fees led to a Region 10 decision to return fees to districts through a defined allocation rather than through a fee board, accomplishing the goal of fee transparency and accountability.

A detailed review of Visitor Products Cluster Working Group initiatives is found below.

Visitor Industry Outreach and Engagement

The initiative works to improve awareness and understanding among the public—including local, state, and federal officials—of the visitor and recreation industry’s positive impact in local communities, its diverse assets, and the importance of the industry within the regional economy. This initiative will also foster and facilitate a regional network representing the wide array of businesses and individuals within the visitor and recreation industry in order to share public policy and issue information and to

communicate with a collective industry voice with policy makers on matters which affect the industry as a whole.

- At the launch of the initiative in 2014, the initiative team focused on facilitating communication with policy makers about the impacts of the decline in federal investment on the tourism/recreation industry. Specific actions conducted under the outreach/engagement initiative included:
 - Developing and advancing an “open letter” to Congress signed by 50 tourism/recreation businesses and economic organizations which highlights the challenges the industry faces due to declining budgets and emphasizes the importance of the appropriations to the industry. The open letter from tour businesses and supporters was submitted to the Congressional Delegation.
 - Working with the Alaska Travel Industry Association (ATIA) on the development and adoption of resolutions in support of reauthorizing the Federal Lands Recreation Enhancement Act and of reversing the decline in Tongass funding for recreation programs, facilities, and trails. ATIA also collaborated with the Initiative Champion on an Opinion Editorial about the funding decline issue which was published in the Juneau Empire.
 - A team of cluster members met with USDA Under Secretary Robert Bonnie to present the concerns of industry about impacts due to Forest Service budget cuts. Input from the initiative Champion and JEDC also resulted in the Alaska State Chamber of Commerce adopting a policy position supporting Reauthorization of the Federal Lands Recreation Enhancement Act.
 - To further regional networking, a teleconference was organized among remote operators representing small cruise companies, air operators, small charter boats, and hunting guides to discuss common issues and challenges. Concerns included recreation budget cut impacts on special use permitting, capacity challenges, infrastructure deterioration, fragmented Forest Service management and communication in the region, and the need for better private to private, boat to boat dialogue on impacts.
- In 2015, Armelle Solelhac of the French Mountain Cluster was invited to Juneau as featured speaker at that year’s Innovation Summit to share how the Mountain Cluster has had a positive impact on the French region of the Alps with regards to marketing and tourism.
- Testimony was submitted to the Subcommittee on Interior, Environment, and Related Agencies of the U.S. House of Representatives Committee on Appropriations requesting the decline in Forest Service recreation funding be reversed, expressing support for the proposed national priority project funding for the Mendenhall Glacier Visitor Center, and requesting reauthorization of FLREA. Outreach to state legislators resulted in six letters sent to the members of the U.S. Senate and House Appropriations Committee requesting them to increase funding for Tongass National Forest recreation program services. Personalized copies of the open letter with over 50 signatures were sent to the Alaska Congressional delegation and members of the U.S. Senate and House Appropriations Committees. The letter was shared with then Forest Service Chief Tom Tidwell, new TNF Supervisor Earl Stewart, and key USDA officials.

- For the first time, Alaska's Congressional delegation was made aware of the concerns of Southeast Alaska tourism operators in a unified manner. The success of this was the inclusion of more recreation dollars to USFS Region 10 in the Interior Appropriations Committee 2016 funding bill. Also due to the combined strength of our advocacy and Senator Murkowski's leadership, the Senate Appropriations Committee passed out of Committee an Interior Appropriations bill which included the following non-binding guidance: *The Committee urges the Forest Service to prioritize funding for recreation, trails and facilities in the Tongass National Forest and to bring investments in Region 10 more in-line with funding nationwide.* Successful outreach to Under Secretary Robert Bonnie, Secretary Tom Vilsack and others resulted in a formula fix that brought back at least \$1 million in cut recreation appropriation funds to the USFS Region 10.
- In 2016, Visitor industry members met with Earl Stewart, the new Forest Supervisor, at open houses organized by the Forest Service in several communities. Cluster members also met privately with Mr. Stewart and members of his staff at JEDC offices. A letter was submitted on the Proposed Tongass Land Management Plan DEIS in support of prioritizing management of the Tongass for tourism. This letter was shared with Alaska's Congressional delegation. A letter was sent to the Forest Service in support of the proposed Special Uses Modernization Program, also shared with the Congressional delegation. A letter was then sent to Senator Murkowski to thank her for introducing legislation to fix wildfire funding that currently depletes funding from recreation programs. In response to these comments, along with others, Senator Murkowski introduced additional recreation funding in her Interior Appropriation's bill (S3068) to address USFS permitting issues in Region 10, directing the Forest Service to "increase the pace and scale of evaluation of special-use permits, particularly in Region 10..." A Thank You letter was sent from the Chair of the Visitor Products Cluster Working Group and JEDC.
- The City and Borough of Sitka passed a resolution regarding the importance of Recreation and Tourism activities in the Tongass National Forest. The letter from the Visitor Products Cluster that demonstrated support for recreation was a factor in the Sitka Assembly decision. JEDC and cluster members participated in a 2.5-hour breakfast meeting with a delegation from Norway in Juneau (and Skagway and Glacier Bay) to learn about tourism management and working with the cruise industry. JEDC and members also participated in a meeting to present regional concerns to Senator Murkowski when she made a campaign stop in Juneau.
- Also during 2016 small cruise industry businesses continued to meet to discuss common issues and shared concerns. This discussion led to drafting a follow up open letter from the industry to elected representatives and Forest Service leadership which proposes specific solutions for issues with current management practices and budget shortfalls in the Tongass National Forest. This letter will be submitted to the Congressional Delegation in early 2017.

Develop Land and Water Trails and Support Facilities

The goal of this initiative was to develop and maintain a safe, accessible and diverse land and water trail system that allows for optimum outdoor recreational use of the region by residents and visitors, promotes increased visitation to local communities, and provides opportunities for entrepreneurs to cooperate in developing regional commercial trail packages, while protecting the region's natural and cultural resources.

- In 2012, the initiative team held a regional trails teleconference with participation from the business community, the US Forest Service, the National Park Service, Sitka and Juneau non-profit environmental and trail building organizations, the Klondike Gold Rush National Historic Park, the State of Alaska Division of Community and Economic Development, and regional economic development organizations. This teleconference was the first sharing of information between trail groups in the region. The initiative team next convened a group of industry entrepreneurs to get input on challenges to commercial trail development and use and to generate ideas for land and water trail- based commercial products and packages. Infrastructure needs, regulation issues and marketing needs were identified.



- In 2013, the team held a question and answer session with the Juneau Ranger District to discuss hut-to-hut options on the Juneau trail system, trail access to the ice field and trail improvements for commercial activity.

- In 2014, the initiative focused on creating a model for developing a trail as an economic driver. The team made contact with the NPS Rivers, Trails and Conservation Assistance Program to learn about trail development help available from this group. With this information, the team determined that two different models for trail development were needed. Trails in a

high capacity area such as the Mendenhall Glacier Recreation Area (MGRA) can be supported by fees, but trails in low capacity areas of the Tongass with limited visitation need a different sustainability model.

- As a solution to the need for a new trail funding model for remote trails, and consequent to reductions in Forest Service recreation funding which has led to cuts in trail maintenance and development and the loss of use of some trails, in 2015, this initiative was redirected to address the sustainability of remote trails and infrastructure. The initiative was renamed and refocused to establishing a permanent foundation or trust fund for receiving private donations to be used for sustaining regional land and water trails, cabins and support facilities in Southeast Alaska.

Sustained Funding for Land and Water Trails and Support Facilities

This initiative resulted from work done by the Develop Land and Water Trails and Support Facilities initiative team. The goal of this initiative is to establish a permanent foundation dedicated to providing sustained funding for land and water trails and support facilities in Southeast Alaska.

- In 2015, the initiative team explored alternative vehicles for establishing a dedicated fund for the planning, development and maintenance of trails and cabins in the Tongass. After exploratory meetings with the Executive Director, the Juneau Community Foundation (JCF) was selected to house a donor advised endowment fund. Next steps will be to establish an advisory board, create a fundraising plan that includes who to target for funds, a target fund size and a timeline to reach target, and to submit the JCF application. However, in late 2015, attention focused on this issue

led to a partnership between the District 10 Forest Service and the National Forest Foundation (NFF) to create an Alaska Forest Fund. This partnership will conduct forest health projects and recreational enhancement projects on the Tongass and Chugach National Forests with the help of local partners. The fund received a commitment of \$100,000 from NFF to match private donations given for recreation, restoration and conservation projects.

- In 2016, the Alaska Forest Fund raised \$160,000 through corporate and private donations for three projects, exceeding its goal of raising \$100,000 in matching funds. The Forest Service has committed \$100,000 again for next year. With the NFF partnership moving forward, the Sustainable Trails initiative team has made the decision to slow down creation of the endowment fund in deference to NFF fund raising, so as not to go after the same money. Instead, support will be provided to the NFF fund raising effort.

Increase Guided Access to Land

Agency permitting processes are limiting economic opportunity in the tourism industry in the Tongass National Forest and other public lands. Demand exceeds permitted access levels. This initiative addresses the lack of permitting flexibility to make quick changes in response to market conditions.

- This initiative was launched in 2012 and successfully led to the allocation of 15,400 additional temporary commercial use service days at the Mendenhall Glacier Recreation Area (MGRA) for the summer of 2012. Although the additional time was off peak, the increase worked well for commercial operators. Another initial outcome of this initiative was the identification of a timing discrepancy between USFS allocation decisions and private industry commitments to the cruise ship season, which was reviewed and addressed going forward.
- In 2013, the Forest Service renewed the 15,400 additional temporary use day pilot program begun in 2012 and made it less restrictive. The operators could use the service days without restriction to off peak times. The Forest Service made the decision in February to offer these additional use days, and operators requested that the decision be made in the fall so that the timing better matched the industry needs. As a result, the USFS renewed the 15,400 additional temporary use days for the summer of 2014 in November of this year. New operators were included.
- In 2014, the group followed the progress of the update to the Mendenhall Glacier Recreation Area Commercial Use Plan in order to formalize an increase in commercial use allocations. The cluster process has made the Forest Service aware of the need to design flexibility into capacity allocations in the new plan that can accommodate future infrastructure changes. The strategy in the plan is to acknowledge that the area is congested and visitor volume cannot increase without structural changes. Some increase in visitor volume could occur on the lake surface and on trails around the facilities. The idea of putting visitor volume onto the lake surface because of capacity constraints on land is a success of the cluster process.
- In 2015, the Forest Service again made 15,400 additional temporary commercial use days available. With the completion of the MGRA Commercial Use Plan in 2016, a new prospectus was issued which incorporated the 15,400 service days. In total, this initiative resulted in additional revenue of about \$5.3 million to Outfitter/Guides, \$264,000 tax revenue to the City and Borough of Juneau, and \$236,000 additional fee revenue to the MGRA. Also, in response to the cluster's request for a more frequent prospectus, the MGRA made a decision to issue a new prospectus every five years.



- In 2016, the Mendenhall Glacier Recreation Area received planning funds from the Federal Highway Administration for a two-year project to prepare a Conceptual Development Plan for the expansion and improvements to its facilities and roadways. Going forwards, this initiative will follow the development of the MGRA planning effort for input to the process where possible. As a direct result of this initiative, the visitor Industry and the MGRA management opened lines of communication, resulting in a working relationship with better understanding of industry needs and Forest Service processes.

Strengthen Accountability for Tongass Recreation Fees

This initiative addressed the development of a mechanism for more private sector input to decide where recreation fees are allocated. The industry worked with the Forest Service to establish more affordable access, local control of fee structure and more accountability.

- As a direct success of the launch of this initiative in 2012, the Mendenhall Glacier Recreation Area received reinstated funding of \$57,000 and additional trail maintenance funding of \$79,000 from District 10 leadership. In November, for the first time, outfitter/guides and tourism companies were invited to attend the Tongass Fee Board meeting in an organized fashion. A recommendation came down from the Fee Board to shift the fee allocation formula to put more money into enhancement and less into planning and administration.
- In 2013, in response to this initiative, the Forest Service created a new regional recreation fee information web page. Also, a change was made as to how enhancement funds from Outfitter/Guide fees are distributed back to the districts. For the first time, the Fee Board distributed half of the enhancement funds (\$350,000) using a non-competitive formula. Outfitter/guides were invited again to attend the fee board meeting. A change was made to when the fee board looks at projects in 2014: in March/April instead of October. The team began to follow the status of the Federal Lands Recreation Enhancement Act (FLREA) and sent a letter to Alaska's Congressional delegation to request support for reauthorization of the FLREA. The act has since been extended to 2017.
- In 2014, the Fee Board again distributed half of the enhancement funds (\$350,000) using a non-competitive formula. Outfitter/guides were invited again to attend the fee board meeting. Discussions were held with Forest Service leadership concerning the recreation budget allocation, both fee and non-fee, and how the outfitter/guides could strengthen their involvement in the fee board process throughout the year and give feedback on projects coming up.
- In 2015, the Juneau Ranger District found a policy solution that resulted in an industry acceptable fee increase for the MGVC. The fee allocation formula was shifted again to put more money into enhancement and less into planning and administration. Subsequently, Forest Service leadership decided to return Outfitter and Guide fees to districts through a defined allocation rather than through a fee board. This is seen as a successful resolution for this initiative, accomplishing the goal of fee transparency and accountability.

Integrate Tourism Courses with University of Alaska Southeast Existing Degree Programs

This initiative explored the creation of a tourism management program at the University of Alaska Southeast (UAS). The initiative had the dual goal to create more employment and educational opportunities for Alaskans and to provide an opportunity for UAS to attract and retain quality four year students.

- In 2012 the initiative team and University of Alaska Southeast opened discussions to develop tourism management coursework. As an indirect result, the School of Arts and Sciences created a new four-year Bachelor of Liberal Arts degree with an emphasis in Outdoor Studies. The initiative team began to work with the Dean of the School of Management toward adding a two-year Tourism Emphasis area to the Associate of Applied Science degree program. UAS and the team developed a survey to determine level of interest among visitor industry summer employees. This initial survey was distributed to summer employees in August 2012. Based on the results, the survey was then revised to be distributed to job applicants in the winter of 2013. In addition, discussions were begun to change the semester start date to early October to accommodate the summer tourism work season. As an indirect outcome of this initiative, UAS and the Mendenhall Glacier Visitor Center jointly developed an Environmental Interpretation class.

- In 2013, the University of Alaska Southeast, JEDC and the initiative team finalized an on-line survey to gauge the interest among seasonal summer employees in tourism for enrolling in a 2 year associates degree program with an emphasis in tourism. Eleven local firms participated in distributing the survey by linking it to their recruitment pages. 172 responses were received and showed overall positive results. As an outcome of the survey, the UAS business program refocused its student recruitment efforts to target tourism and seafood, with a successful enrollment of 42 students, a big uptick from prior years.

- Based on the encouraging results of the survey conducted in 2013, in the spring two core business courses were added to the 2014 fall UAS schedule, *Introduction to Business* and *Computer Literacy*. Both classes were scheduled to start on October 1st and end in early

December, and both were available online. Over the summer, tourism businesses promoted the seasonal courses to employees through presentations, print collateral distributed in break rooms, and an industry/UAS recruitment reception held for summer employees. Despite the summer recruitment effort, no new students enrolled for the two classes. Team members felt that because the courses were promoted over the summer, the effort was too late to reach students prior to making fall commitments. They requested that the courses be offered one more time, with the launch of marketing in the winter rather than the summer. However, a new Dean at the UAS School of Management declined, deciding this program was not a fit with their focus on programs delivered to adults with full time jobs. No further action is planned for this initiative.



RENEWABLE ENERGY CLUSTER WORKING GROUP

Cluster Co-Chairs: Alec Mesdag, AEL&P and Bill Leighty, The Leighty Foundation/Alaska Applied Sciences

Highlights

- Since convening in 2012, the Renewable Energy Cluster Working Group has facilitated adoption of electric transportation at an accelerated pace in Juneau.
- A grant award was secured for the purchase and installation of electric vehicle (EV) charging stations, promotions of EVs, and to provide servicing support.
- An electric vehicle club was launched and affiliated with the national Electric Automobile Association.
- A local business put into service the first plug-in hybrid electric tour bus, and a new business formed to develop a first of its kind electric tour boat.
- A local company began to evaluate the feasibility of providing district heat to the downtown core. Juneau community members were invited on a study tour of district heating and sea-water heat pumps in Norway and Denmark.
- Grant funds were secured for a feasibility study for a locally sourced biomass district energy system in Kake, AK. This project has now moved into the design phase.

A detailed review of Renewable Energy Cluster Working Group initiatives is found below.

Expand Adoption of Electric Vehicles

The goal of this initiative is to increase adoption of electric vehicles (EV) by residents and businesses through education and awareness outreach, and development of services, policy and infrastructure such as charging stations, EV mechanics and incentive programs. The combination of Juneau's closed road system and short average commute provides a unique opportunity for the use of electric vehicles. Since the launch of this initiative in 2013, Juneau has gone from having less than 5 electric cars, to at least 80 confirmed in December of 2016.

- In 2013, this initiative applied for, and was awarded, a grant from the Funder's Network, in partnership with the Juneau Community Foundation, to install EV charging stations, promote EVs, and provide servicing support in Juneau.
- In 2014, the grant to install EV charging stations, promote EVs, and provide servicing support was implemented with great success. The grant brought \$25,000 in funding to the region which was matched by more than \$25,000 in funds from local businesses (Juneau Hydropower, Stanley Ford, IBEW, AELP, The Leighty Foundation), the Juneau Community Foundation, and in-kind labor donations by JEDC and CBJ. It accomplished the following:
 - Purchased and installed fourteen electric vehicle charging ports.
 - Assisted one additional mechanic in getting certified to service electric vehicles in Juneau.

- Held four public events including over 50 electric car test drives outside of Juneau in Southeast Alaska.



- Generated news articles in print media, radio and internet that raised awareness about the benefits of electric vehicles in Southeast Alaska and raised awareness of Juneau's EV initiative on a national level.
- Increased EVs in Juneau from less than 5 to more than 20 in less than one year.
- Increased the number of car dealerships selling EV's in Juneau from 1 to 2.

• While focused initially on Juneau, the experience gained through this initiative was shared with other communities in Southeast. In 2014 we took an electric car to Wrangell where over 50 test drives were given. Also in 2014, this initiative team expanded to developing and increasing all types of electric transportation in Juneau. Tongass Rain Electric Cruise, a private company, formed in 2014 after being inspired at the 2014 Innovation Summit. This company has commissioned an electric boat that will provide whale watching tours.

- In 2015, the initiative team developed a resolution adopted by the CBJ Assembly in support of electric transportation development in Juneau. A team of six from Juneau was one of twelve teams around the nation invited to attend an E-lab Accelerator Workshop put on by the Rocky Mountain Institute for community electric innovation and began work on a broader EV roadmap to develop and increase all types of electric transportation in Juneau. Charging stations were installed at the Mendenhall Valley Public Library, Eaglecrest Ski Area, Kootznoowoo Plaza, and at the State Library, Archives and Museum parking garage. Alaska Coach Tours brought the BYD



electric bus up for the ATIA conference. The cluster advertised that visit widely, pushing up the number of test rides. While the BYD bus was here, Capital Transit was able to take a test drive. Based on the comfort with this technology gained through this visit, Capital Transit prepared a grant application, with the help of the cluster, to the Federal Transportation Administration for two electric buses to add to the

Capital Transit fleet. This application was turned down. The team applied for CBJ passenger fee funds to install an electric bus charging station near the cruise berths downtown and for funds for a revolving loan fund for commercial electric vehicle purchases and conversions. Both were turned down. A proposal was submitted in coordination with the Funders Network and the Juneau Community Foundation to continue support for electric vehicle adoption (not just cars) in Juneau. This was also turned down. The group made contact with the Quebec Ground Transportation Cluster by teleconference.

- As a result of attention focused on this initiative, a local business, Gastineau Guiding, purchased and put into service a plug-in hybrid electric shuttle bus in the summer of 2016. The entrepreneur

developing the first electric tour boat forged new ground with the Coast Guard to be certified for tours. This is the first of its kind in the United States.

- In 2016, an electric vehicle club, the Juneau Electric Vehicle Association, was launched and affiliated with the national Electric Auto Association. Nearly 30 people attended the first EV club meeting. The RE cluster partnered with the CBJ, the Juneau Commission on Sustainability and REAP to sponsor an EV educational event for the community, *The Case for Electric Vehicles in Juneau*. With the number of electric cars in Juneau now surpassing 80, the launch of the EV club, and establishment of 12 public charging station locations with 17 total charge ports, the cluster will focus on electrifying Juneau's commercial transportation sector.

Conceive and Model an Alaskan District Heating System

The goal of this initiative was to research and model what a district heating system in Southeast Alaska would look like and what would be required to get there, and then take steps to move it forward and make it a reality. This initiative was successfully concluded in 2016 with the announcement of plans to bring district heating to Juneau.

- In 2013, the initiative team developed a white paper to use for education and outreach purposes, and received a report from the National Renewable Energy Labs (NREL) on basic energy load of key buildings in Juneau's downtown area.
- USDA RBEG funds were used to complete a feasibility study for a locally sourced biomass district energy system in Kake, AK. This project has now moved into the design phase.
- In 2014, two district energy workshops were held, bringing to Juneau energy experts from Vermont and Minnesota, Jesse Baker, Assistant City Manager for Montpelier, VT and Michael Ahern, Senior Vice President of Product Development for Evergreen Energy from Minneapolis, MN. These visitors gave a presentation to a group of local, state and federal government managers and one open to the general public. Both presentations were well attended and provided information about district heat concepts, benefits and challenges, and specific examples from the district heat system currently in operation in Montpelier. The visit resulted in Juneau's city manager visiting Montpelier, VT.



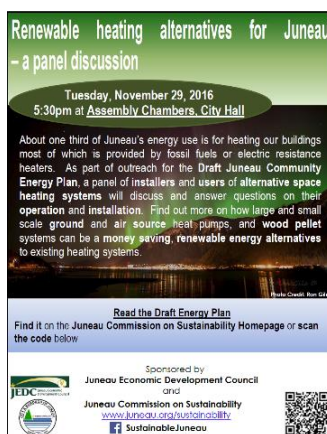
- As a result of attention focused on the issue of district heat, Juneau Hydropower began to evaluate the feasibility of providing district heat to the downtown core. In February 2016 they unveiled their plans to go forward with the project at the JEDC Innovation Summit. News of this announcement was picked up by national media and came to the attention of the Danish Embassy. There was a meeting in April, 2016 organized by the Juneau Hydropower with representatives of the Danish Embassy, Danfoss, a Danish firm, the CBJ and JEDC to talk about the support the Danes can provide to projects using Danish firms (potential loan guarantees). They focused more generally on the growth and benefits of district heating systems in Denmark. As a next step, JEDC and other community members received an invitation from the

Government of Denmark and attended a District Heat study tour in Copenhagen, Denmark and Drameen, Norway. In addition to seeing first-hand the application of district heating as a way to utilize energy more efficiently, with significant cost benefits to homes and commercial clients, the group also saw a sea-water heat pump being used a source of energy for a district heating system in Norway. The widespread use of district heating systems and the plethora of vendors and expertise certainly make this ambitious Juneau project seem very much within the realm of the possible.

Develop Renewable Energy Heating Demand

The goal of this initiative is to promote adoption of renewable space heating alternatives. The initiative initially focused on development of biomass energy to complement the region's hydroelectric energy supply. With attention focused on this issue, the US Forest Service saw a need for, and hired, a full-time state-wide renewable energy coordinator to support the development of biomass energy demand in the state. With the creation of this Forest Service position, the RE Cluster chose to provide support, as needed, to the wood energy coordinator.

- In 2012, JEDC facilitated two "Wood 2 Energy Initiative" kickoff meetings. These were followed by a series of sector focus group meetings as part of the process of developing an implementation roadmap. In 2013, presentations and a workshop were held with Austrian Biomass Cluster representative, Bernard Holzer, and Andrew Haden of Wisewood, Inc. Hiring of the wood the energy coordinator helped triple the commercial biomass boiler installments throughout Southeast Alaska, including Ketchikan Airport.



- In 2016, cluster members looked at the need for support for the sales and installation of ground and air source heat pumps. In discussions with members of the industry, consumer education emerged as the primary need. The group partnered with the CBJ and the Juneau Commission on Sustainability to sponsor a very successful educational event for the community, *Renewable Heating Alternatives for Juneau*, that consisted of a panel of installers and users discussing and answering questions on operation and installation of alternative space heating systems.

Conduct Market-driven Renewable Energy Economic Modeling for Southeast Alaska

The goal of this initiative was to develop credible business cases for profitably harvesting and delivering to market diverse renewable energy resources in Southeast Alaska. In 2012, JEDC commissioned a study of the aggregate demand for energy in our region, including all energy types, broken down by energy type and by community. This data was identified as a valuable piece of information that has not yet been compiled for our region. In 2014, the study, Southeast Alaska Energy Demand, was completed and shared widely. This initiative was successfully concluded with this first of its kind itemization of the aggregate demand for energy in our region now available to the public.



RESEARCH & DEVELOPMENT CLUSTER WORKING GROUP

Cluster Co-Chairs: Dave D'Amore, USFS, and Shannon Atkinson, UAF/UAS

Highlights

- Convening since 2013, The Research and Development Cluster Working Group has achieved improved lines of communication between research entities in the region, resulting in integrated collaborative programs that have advanced research work.
- The Cluster Working Group established recognition for Southeast Alaska as a Community of Excellence in Research.
- The Cluster Working Group published a report highlighting research needs in rural Southeast communities.

A detailed review of Research and Development Cluster Working Group initiatives is found below.

Become State Committee on Research (SCoR) Area of Excellence



To Build a Fire: The Alaska Science and Technology Plan, developed by the State Committee on Research (SCoR), is an important step in giving direction to the critical research effort needed for science and technology innovation that will insure Alaska's continued prosperity. Key to the plan's ultimate success is cooperation between government, academia, research groups, businesses, and nonprofit organizations in implementing the policy directives outlined in the Report. The purpose of this initiative was to establish recognition for Southeast Alaska, through the Research and Development Cluster Working

Group, as a model for coordination of research entities and engagement of industry and educational leaders in promoting research and innovative development in the region.

- In 2014 the champion for this initiative and JEDC staff met with the State Co-Chair of SCoR and requested guidance on how to have Southeast Alaska officially designated as a Community of Excellence in Research. The R&D working group Co-chairs submitted a formal request to SCoR and received notification of recognition as Alaska's first "Community of Excellence in Research" on September 2, 2015. At the 2016 Innovation Summit Dr. Dan White from the Statewide Committee on Research presented the Research & Development Cluster Working Group co-chairs, Dave D'Amore and Shannon Atkinson, with a certificate that recognizes the designation of Southeast Alaska as a Community of Excellence in Research. The Juneau Economic Development Council

along with Sitka Sound Science Center shared this news to regional press. A picture and write-up was featured in the Juneau Empire's Neighbors section, along with letters in Sitka, Ketchikan and Skagway. A story on the designation and presentation was run in the Juneau Empire on March 13, 2016.

- The Statewide Committee on Research co-chairs, Dr. Daniel M. White and Lt. Governor Byron Mallott, signed multiple copies of the designation certificate. The framed certificates were delivered to the Sitka Sound Science Center, UAF School of Fisheries and Ocean Sciences at Lena Point, UAS Juneau campus, USFS Juneau Forestry Sciences Laboratory, and the Ted Stevens Marine Research Institute facility, to be put on display in a public location.



Dr. Daniel M. White from the Statewide Committee for Research, presents the Southeast Research & Development Cluster Working Group co-chairs, Dave D'Amore and Shannon Atkinson, with the certificate that recognizes Southeast Alaska as a Community of Excellence in Research.

- In 2016, the group worked to bring statewide attention to innovators in Southeast Alaska through nominations to the Alaska Innovators Hall of Fame. Three Southeast nominations were successfully submitted.

- JEDC, in collaboration with the Fairbanks Economic Development Corporation, wrote a letter to the media to encourage support for investing in education and research at the University of Alaska, which was picked up by papers in Fairbanks, Juneau, Anchorage and Kenai. The commentary appeared in the Alaska Dispatch News on March 6, 2016.

- Brian Holst, JEDC Executive Director, was invited to serve on the State Committee on Research. He began his three-year term of service in February 2016. JEDC's Executive Director also serves on the Alaska Coastal Rainforest Center steering committee.

Connect Research to Communities

A short survey was conducted in Southeast Alaska communities to provide some insight into what types of research are being conducted in the Eastern Gulf of Alaska and what research could benefit communities in the region. The survey was intended to also strengthen awareness of community research needs and create baseline information for connecting researchers with community issues.

- In 2013, a draft survey was developed and piloted to determine what types of research was being conducted in communities across Southeast Alaska, where research is being collected, community capacity for conducting research, and ultimately to determine what research is needed in Southeast Alaska. Informed by the pilot survey, in early 2014 the survey was revised and a strategy for conducting the survey was developed.
- Survey responses were collected in 2014 from 42 respondents with 18 of 33 communities represented. The final report was released in 2016. There are several findings regarding research areas that are of interest to communities. The top three community research interests are

fisheries, alternative energy, and economy. Communities reported several research areas including: timber, alternative energy, agriculture, tourism, and the ferry systems. Communities reported a lack of adequate research facilities, workforce, and accommodations. This initiative has been retired with the release of the report.

Develop a Collaborative Research Network Focused on Key Themes in Southeast Alaska

The goal of this initiative was to improve regional communication and coordination regarding research and development opportunities and needs in Southeast Alaska. The initiative achieved improved lines of communication between research entities in the region, resulting in integrated collaborative efforts among Federal and State agencies, the University of Alaska, and centers at both UAS and UAF, leading to collaborative research programs that have advanced research work in climate change, carbon cycle science, fisheries, and wood products. Some key collaborations are:

- 2013 and 2014 saw the creation and continuation of a first of its kind bi-weekly seminar series to highlight regional research, bringing scientists, students, resource managers and industry representatives together for collaborative discussions and brainstorming. The program has since been put on hold.
- The USFS PNW Research Station, the Alaska Coastal Rainforest Center and the BC Ministry of Forests and Natural Resource Operations have jointly undertaken a hydrologic study to model snow and streamflow across the entire region.
- The USGS Climate Science Center, the UAF Scenarios Network for Alaska and Arctic Planning and the PNW Research Station have a collaborative agreement to model soil hydrologic conditions in the region. This project has a close link with Yellow-cedar decline related research and will provide information on soil conditions that influence productivity and health of vegetation communities.
- The PNW Research Station is hiring a new fisheries biologist to address the important restoration and management of salmonids in Southeast Alaska. This new position will enhance the research capacity of the region.
- The PNW Research Station is leading the regional carbon accounting for coastal forest region in collaboration with the USGS Landcarbon program and UAF. This study is providing the stock and flux of carbon in the region for reporting to the UN to monitor greenhouse gas emissions and mitigation around the world.
- The Alaska Coastal Rainforest Center (ACRC) was awarded a five-year, \$500,000 Coastal Rainforest Margins Research Network grant from the National Science Foundation to facilitate scientists and stakeholders to study the interface between land and ocean, where fresh water and nutrients flow downstream from coastal watersheds into the nearshore marine environment. The goal is to leverage the research network into other collaboration opportunities.
- In 2015, the Cluster Working Group developed an outline of the services needed by the Research and Development community. The cluster group identified as a priority the need to expand research capacity in the region. In response, JEDC subscribed to the SSTI (State Science and Technology Institute) Funding Supplement Newsletter and distributes this weekly publication to the Cluster Working Group members. This publication lists nation-wide funding opportunities

with a technology transfer focus. As a result of this information, the Cluster Working Group Co-Chair (and researcher at UAF's SFOS Juneau campus) became aware of availability of a Cooperative Science Centers at Minority Serving Institutions Focused on Issues Related to Oceanic and Atmospheric Research grant. Upon exploring the possibility of submitting a grant request for the UAF School of Fisheries and Ocean Sciences (SFOS), it was determined that the UAF had not solicited federal designation as a Minority Serving Institution and thus was ineligible for these, and other similar, grant funds. Consequently, the SFOS partnered with UC Riverside to submit a grant request to establish a Pacific Coast Cooperative Science Center for Coastal and Marine Ecosystems. If awarded, approximately \$2.2 million would come to the University of Alaska from a total \$15 million grant.

Market the Unique Geographic, Natural and Infrastructure Features of our Region

The objective of this initiative is to strengthen relationships within the existing regional network of research facilities in Southeast Alaska, elevate network visibility and profiles, make improvements in local infrastructure, and adopt institutional practices that allow sharing of facilities and logistics support.

- In 2014 the initiative team embarked on a targeted marketing campaign with networking and research trips to Fairbanks, Anchorage, Vancouver, Seattle, Portland, and Washington DC.
- In 2016 the Cluster Working Group networked with research field stations and other research entities operating in Southeast Alaska. The group connected with the Director of the Inian Islands Institute and the Alaska Whale Foundation's Center for Coastal Conservation to see how they could further the research and outreach agenda for these newly developed field stations. The group connected with the Chair of the research subcommittee of the Governor's Mariculture Task Force, and had a sharing of information with the State of Alaska's Chief Fisheries Scientist for ADF&G and the Regional Supervisor, Sport Fish Division. Bob Janes and Linda Micklin gave a presentation on plans for a Juneau Ocean Center on Juneau's waterfront. Exhibits will focus on interpreting Alaska's oceans for tourists, with a marine mammal focus.

Promote STEM Education in our Region

The goal of this initiative is to augment STEM literacy in the regional education system by expanding STEM out-of-school learning opportunities for K-12 and post-secondary students. The vision is for more local research scientists to play a role in delivering STEM education.

- In 2013 the initiative attempted to integrate STEM professionals into school programs, first the RALLY program, and subsequently into classrooms through an Engineering is Elementary (EiE) curriculum. The RALLY program was determined to not be an effective starting point for the integration of STEM professionals.
- In 2014 work continued to integrate STEM professionals into school programs and into classrooms through an Engineering is Elementary (EiE) curriculum and after-school through a 21st Century grant with support of JEDC and the Juneau School District. STEM efforts also included activities through the middle-school After School Coalition in Juneau.

- In 2016 the group connected with and received an update on the STEM resources community database for the Juneau School district. There are now 40 people in the database. The goal is to facilitate a match between community volunteers and teacher needs. Harborview and Riverbend are piloting its use.

Link industry needs to local researchers in Southeast Alaska

The goal of this initiative was to leverage existing networks and create new ones in order to raise awareness among community stakeholders of the diverse capabilities and availability of research in our region. This initiative focused on the small-scale timber industry in Southeast Alaska, investigating the potential for local mills to create value-added products from yellow-cedar trees killed by long-term changes in weather patterns.

- With the PNW Research Station, Alaska Coastal Rainforest Center, the State of Alaska Division of Forestry and DCCED now collaborating on a project to explore the feasibility of utilizing dead yellow-cedar in Southeast Alaskan forests as a source of highly valuable wood, this initiative has been put on hold.



OCEAN PRODUCTS CLUSTER WORKING GROUP

Facilitation ended in 2015

Highlights

- The Ocean Products Cluster Working Group convened in 2012 to bring added attention to emerging regional issues and opportunities.
- The Cluster Working Group partnered with other organizations to launch a coastal mariculture industry.
- Work with the US Fish and Wildlife Service led to clarification of language in reference to the sea otter pelts being used to make and sell native handicrafts. This is helpful to local small businesses that produce items for sale made from sea otter pelts.
- After bringing the director of the Iceland Oceans Cluster to speak in Juneau, JEDC and the Alaska Department of Economic Development partnered to take a group from the Alaska seafood industry to Iceland to visit the Iceland Oceans Cluster and learn about Iceland's success in fish full utilization.

A detailed review of Ocean Products Cluster Working Group initiatives is found below.

Support the Regional Mariculture Industry

The goal of this initiative was to create a strong and sustainable mariculture industry that supports vibrant coastal communities in Southeast Alaska.

- In 2012, the initiative team participated in the Alaska Shellfish Growers Association (ASGA) meeting. The team, together with other ASGA meeting attendees, pared down the number of activities for this initiative to concentrate efforts on addressing the problem of seed security and trying to attract more qualified personnel to the field of mariculture.
- In 2013, a meeting was held with Director of NOAA's Office of Aquaculture along with six other stakeholders from the state about the Mariculture Initiative.
- In 2014, a statewide strategic planning process was led by Alaska Fisheries Development Foundation (AFDF) with resources from a NOAA grant. Phase I results were presented in 2015. With assistance from JEDC, the cluster worked with the Alaska Chamber of Commerce and other groups to adopt a policy priority to support the mariculture industry development in Alaska. Cluster members supported restructuring the OceansAlaska Board and business plan to be a shellfish hatchery, which resulted in approval of a long-term \$600,000 loan from KGB. JEDC staff visited a NOAA aquaculture and shellfish hatchery facility in Seattle to inspect it as a potential model for a Juneau shellfish hatchery. Finding ways to align USDA resources with the needs of the mariculture industry was also a priority in 2014.
- The 2014 and 2015 Innovation Summits included a showcase of Alaskan oysters and mussel.
- With the creation by Governor Walker of the Alaska Mariculture Taskforce in February this initiative went dormant; however, communicating the magnitude of mariculture economic opportunity for Alaska to the general public, politicians and potential investors will continue to be a priority, as is providing any assistance needed to the organizations working in mariculture in Alaska.

Develop a Sea Otter Management Program in Southeast Alaska

The goal of this initiative was to analyze realistic management approaches to protect important shellfish species and to allow a less restrictive harvest of sea otters by Alaska Natives.

- In 2012, members of the team met with the Alaska Board of Fisheries, the Marine Mammal Commission and the Federal Subsistence Board to discuss the sea otter issue. The team also wrote and sent out a letter of support for the Sea Otter Traditional Use Revitalization Project. In September 2012, Dan Ashe, Director of US Fish and Wildlife Service, met with members of the team via teleconference and committed to working out the definition of sea otter use regarding what "significantly altered" means for products created by people from native tribes.
- In 2013, US Fish and Wildlife Service came out with what is likely the final definition of "significantly altered" in reference to the sea otter pelts being used to make and sell native handicrafts. This definition is helpful to local small businesses that produce items for sale made from sea otter pelts. Also in 2013, a State working group was created with participation from the Governor's office and other state and federal elected officials' offices. With the creation of the state working group, this initiative team made the decision to focus its energy in a new initiative aimed at helping local Native sea otter hunters/artists with the business of making and selling sea otter products.

Develop Sea Otter Garment Making Businesses

The goal of this initiative was to support garment makers, tanners and hunters in developing high revenue businesses in remote communities in Southeast that export high value products made and sourced locally.

- In 2014, JEDC began working with makers of high end sea otter garments in the region to assess ways the cluster working group could assist them in developing their cottage industry. In late 2014, Sealaska Heritage Institute began working with JEDC to develop a strategy and work plan. Areas identified for effort were developing marketing and distribution channels for high end Alaskan sea otter garments with quality control; developing the capacity, consistency and timeliness of local fur tanneries; professional level training and/or apprenticeships for garment makers and tanners in the state. In 2015, a proposal was submitted by Sealaska Heritage Institute to develop the sea otter garment making (skin sewing) industry in Southeast Alaska. JEDC and the Initiative Team collaborated on this proposal, which was not funded.

Value Added Seafood By-Product Development

The objective of this initiative was to increase total revenue of existing commercial fisheries catch in the region by developing new, higher value products and markets for seafood by-product.

- The 2014 Innovation Summit featured as keynote speaker Thor Sigfusson of the Iceland Oceans Cluster. Following up on Thor's visit, the Alaska Department of Economic Development partnered with JEDC to take a group of 12 delegates from the Alaska seafood industry to Iceland to visit the Iceland Oceans Cluster and learn about Iceland's success in fish full utilization.



- The Alaska Fisheries Development Foundation's 2015 Symphony of Seafood included a new category called "Beyond the Plate" featuring consumer ready products made with parts of Alaska seafood that would typically be deemed fish waste. This was a big win for this initiative since it not only promoted and supported businesses achieving this goal, it also helped the cluster in identifying businesses that are working in this area, or hope to be working in this area and can use assistance.
- JEDC worked with Southeast Conference to include Full Utilization of Ocean Products in their five year CEDS (Comprehensive Economic Development Strategy).

Refinement of USDA Programs Applicable to the Seafood Industry

The objective of this initiative was to creatively refine and better market those US Department of Agriculture (USDA) programs that apply to the seafood industry.

- In 2012, the team determined that the USDA is not receptive to completing an analysis of how it might creatively include the seafood industry in more of its programs. The team acquired a matrix that outlines the programs of USDA Rural Development and distributed this matrix to the Cluster

Working Group. As an indirect outcome of this initiative, a member of the team completed grant proposals for three of the USDA's interest areas that apply to ocean products.

- An initiative was put forth to explicitly add fisherman and shellfish farmers and producers to Senator Murkowski's Farm Bill Amendment. Twenty-one entities signed on to a letter in support to Senator Murkowski. There were also at least five independent letters of support sent as a result of this effort. Ultimately the cluster gained support from eight US Senators on the amendment.
- This initiative was refocused in 2013 to evaluate how USDA programs might be refined and better marketed. A workshop was held at the Innovation Summit in February, 2013, about USDA opportunities that are applicable to the seafood industry. During the course of 2013, two grant applications were submitted to the USDA for fisheries related projects. Both were declined. At the end of 2013 this initiative team hoped to arrange a meeting with USDA rural development leaders in Alaska about ways for fisheries related projects to benefit from USDA programs. This initiative went dormant in 2014.

Ensure Southeast's Fishing Future through Education and Training

The goal of this initiative was to provide residents with the necessary skills to acquire and operate successful fishing businesses in the region.

- In 2013, Juneau Fisheries Development Committee, after consultation with the Ocean Products Cluster, recommended a resolution supporting Fisheries Job Education to the CBJ.
- In 2014, a survey was completed of fishermen who live outside Alaska to learn why they choose to live elsewhere while making a living commercial fishing in Alaska. Results, show that the non-resident permit holder demographic is an older population, most of whom are settled and have put their roots down in a community outside this region. They consider Southeast Alaska as remote and far from family and friends. A targeted marketing plan to attract non-resident permit holders to reside in the region may be effective if aimed at a younger demographic, who may not yet have developed ties to any community. To reach out to this population, JEDC recommends that the factors which would attract younger (under age 45) fishers to this region be better determined. No further direct action for this initiative was planned.

Establish a Marine Industry Technology and Workforce Improvement Consortium

The maritime industry sector cuts across nearly all of Southeast Alaska's industries. The focus of this initiative was to gain recognition for this unrecognized industry sector and set the groundwork for preparing an economic development plan.

- In 2013, a statewide effort was begun with facilitation by the University of Alaska to write an Alaska Fisheries, Seafood and Maritime Workforce Development Plan. The plan was completed in 2015. Members of this cluster initiative were involved in the development of that plan. In 2015, the focus of this initiative became to support the larger statewide plan. No further direct action for this initiative was planned.



MINING SERVICES & SUPPLY CLUSTER WORKING GROUP

Facilitation ended in 2014

Highlights

- A mining procurement event was held at the Alaska Miners Association conference.
- A local firm received two contracts from local mines for equipment rebuilds.
- A better understanding of the needs and requirements for industrial land has been established.

A detailed review of Mining Services and Supply Cluster Working Group initiatives is found below.

Hold Mining Procurement Event

The goal of this initiative was to expand the quantity and quality of services and supplies provided to the mining industry from firms in Southeast Alaska through a mining procurement event.

- An event was held on February 15, 2013 at the Alaska Miners Association (AMA) conference.

Develop Juneau as a Regional Rebuild Service Center

This initiative explored the opportunity for Juneau to become the preferred rebuild service center for current and future mining companies in Southeast.

- In 2012, the team held conversations with CBJ sales tax director and determined that the CBJ Assembly is not likely to support treating the purchase of parts for a rebuild favorably regarding sales tax or open to a sales tax revision. The team also contacted several helicopter rebuild firms in Vancouver, Canada, to try to determine the potential value and feasibility of helicopter rebuilds in Juneau.
- In 2013, several obstacles to achieving this outcome were identified. They included a willing and able entrepreneur to start a rebuild business, CBJ sales tax structure, availability of a suitable and affordable shop space to complete the work, and availability of qualified workers (workforce development). A connection was made with one local entrepreneur who expressed interest in taking on small rebuild projects to receive delivery of a rebuild that would have otherwise gone out of region.
- In 2014, a local firm received two contracts from local mines for equipment rebuilds that would have left Southeast Alaska.

Identify, Develop and Market Services and Products for Mines

This initiative explored a mechanism for developing a sustainable line of communication between mines and local service providers and suppliers so that they may be more effective and efficient in working together.

- In 2012, the initiative team explored distributing information online about the services of mining support firms to mining companies on the Alaska Miners Association's website. They initiated outreach to the AMA about this but determined that the AMA was not ready to take this step. No further action was planned.

Promote Vocation/Trades Training Opportunities and Career Building in Environmental Science and Engineering

This initiative identified specific needs for trades occupations in the region.

- In 2012, a gap analysis was determined to be the first step in determining regional demand for skilled trade workers and environmental technicians and engineers. The initiative team developed a survey to determine the needs of mines and support firms that asked about the need for and availability of skilled trades workers, the need for and availability of environmental scientists and engineers, and the need for and availability of industrial land.
- The survey was distributed at the 2013 Innovation Summit and through the contact lists for the Juneau and Ketchikan chapters of AMA. The survey link could be scanned with a QR code reader on a smart phone, or accessed directly with a short-link on the survey card. The number of responses to the survey from that effort was limited (29), but the responses indicated that the greatest need was for mechanics. It was also determined that the demand for environmental scientists and engineers is not enough to initiate a program at UAS. UAS began to map existing programs and services to document the supply side.

Develop Industrial Land within CBJ

The goal of this initiative was to identify and set aside new parcels of low-cost land to be zoned industrial for future development.

- In 2012, the team determined through discussions with commercial realtors that the central issue associated with industrial land in Juneau is not cost but is associated with the features of the land: the need is for well-drained land with better access to infrastructure (e.g. various parcel sizes that are relatively flat, have road access, utilities, and proximity to the airport). In 2013, the survey distributed through the AMA and Innovation Summit confirmed that the lack of attractive features is the main issue with finding suitable industrial land in Juneau. No further action is planned, but attention focused on the issue has resulted in a better understanding of needs and requirements for industrial land in Juneau.



PROSPECTIVE ARTS AND CULTURE CLUSTER WORKING GROUP

Ongoing foundational work to form an Arts and Culture Cluster Working Group

Highlights

- JEDC was awarded grant funds for foundational work in the creation of an Arts and Culture Cluster Working Group, leading to a better understanding of regional and local concerns and opportunities.
- JEDC facilitated a well-attended workshop on *Regional Collaboration on the Arts*.
- The Executive Director of ArtPlace America visited Juneau to promote creative place-making.

A detailed review of activities is found below.

Strengthen Regional Arts industry through formation of a Cluster Working Group

Foundational work to launch an Arts and Culture Cluster Working Group for Southeast Alaska was undertaken with available funding.

- JEDC received a Tier 1 grant from the Rasmuson Foundation in 2014 to explore the development of an Arts and Culture Industry Cluster Working Group in Southeast Alaska. Work accomplished included identification of potential cluster members, outreach to industry and other key stakeholders, and four community workshops with prospective stakeholders for preliminary discussions and education about clusters. Workshops were held in Juneau at the 2014 Innovation Summit with members of the Alaska State Council on the Arts and community members; in Sitka with arts organizations; a follow-up meeting in Juneau with arts organizations, and in Ketchikan with arts organizations. This work led to a better understanding of regional and local concerns and opportunities for the Arts and Culture community in Juneau, Sitka and Ketchikan.
- The grant also funded the *Arts and the Creative Economy* component of the 2014 Innovation Summit, where keynote **Jamie Bennett, Executive Director of ArtPlace America**, spoke on creative placemaking. Mr. Bennett also led a question and answer session with community, business, non-profit and government leaders engaged in the arts sector of the regional economy regarding the inclusion of the arts in community development.

Support Recognition of Southeast as the Capital of Northwest Coast Native Arts

Vital to the Arts and Culture economy of Southeast Alaska are the many individual Northwest Coast native artists. This initiative seeks opportunities to partner with Sealaska Heritage Institute and others to support the work of these artists and expand recognition and markets, consistent with the vision of Southeast as the capital of Northwest Coast Native Arts.

- A well-attended workshop on *Regional Collaboration on the Arts*, with guest speaker Rosita Worl, President of Sealaska Heritage Institute, was held at the 2015 Innovation Summit. One result of

this workshop was a closer partnership with the University of Alaska Southeast and a shift at UAS to focus more on Northwest Coastal Arts.



FOREST PRODUCTS CLUSTER WORKING GROUP

Facilitation was transferred in 2012 to *The Working Forest Group*, a newly created non-profit entity

Highlights

- Changes were achieved within the US Forest Service's Tongass timber management program to benefit small mills: the USFS broadened the size of small sales from 500,000 to 1,000,000 board feet (1 mmbf) and stopped grading red cedar.
- A timber base analysis was accomplished and published.
- A non-profit, the Working Forest Group, was created to promote inter-industry development of working forests in Alaska.

A detailed review of Forest Products Cluster Working Group initiatives is found below.

Simplify the Small Timber Sale Process

The goal of this initiative was to help the small mills on Prince of Wales Island to operate more efficiently, economically, and with more supply certainty.

- This initiative reviewed the problems of small timber mills and identified several steps that could be taken by the USFS to simplify the system to bring small sales up for bid in order to improve access to a consistent supply of timber for small mills. The steps identified included:
 - Develop criteria and policies that allow for some small sales to be put out for bid with a "no export" clause.
 - Extend the time frame to access units that have recently been harvested to provide for access to resources such as personal and commercial firewood, salvage timber sales and subsistence opportunities such as hunting.
 - Broaden the size of small sales from 500,000 to 1,000,000 board feet (1 mmbf) and extend timeframe for harvest of small sales.
 - Evaluate opportunities to increase the milling of Red and Yellow Cedar logs locally that may otherwise be exported in the round, and develop local processing to the greatest extent possible.
- Attention focused on this issue prompted the USFS to stop grading red cedar. It appeared that most purchasers did not use or rely on this information and discontinuing this aspect of sale preparation would decrease time and costs of getting a sale out the door.

- The USFS also broadened the size of small sales from 500,000 to 1,000,000 board feet (1 mmbf), and the timeframe was extended for harvest of small sales.

Conduct a Timber Base Analysis to Determine the Volume of Young Growth and Old Growth Supply for Sustaining and Strengthening the Forest Industry in Southeast Alaska

This initiative's goal was to prepare a report on how quickly a sustainable young growth harvest can commence in the Tongass based on current harvest information with respect to available acreage, growth, yield, harvesting costs, markets and rotation age.

- The report concluded that unless multiple variables change in the Tongass, such as land use designation, riparian and other buffers and timber land reductions, there is not enough old growth volume available to serve as a bridge for implementation of the forest plan. The transition from an old growth harvest is more than 30 years away. Until then, it will continue to be necessary to mix in old growth volume to build economy of scale for harvest.



- Members of this initiative team formed a non-profit, The Working Forest Group, to promote and support responsible resource development in Alaska through alignment of multiple industries seeking sustainability across environmental, social and economic sectors. The Working Forest Group was incorporated in June 2012 as an industry led organization promoting inter-industry development of working forests in Alaska, and cooperative agreements were established to continue analysis work on young growth and old growth. JEDC ended facilitation of the Forest Products Cluster Working Group and passed along the facilitation of Forest Products resource management at the request of this non-profit.