North Pacific Marine Education and Training Program Workshop

Building the Framework for Providing Pathways to Careers in Fisheries and Marine Sciences

Coordinated by the Alaska Marine Science and Fisheries Career Coalition and the University of Alaska Fairbanks Alaska Sea Grant Marine Advisory Program on behalf of the National Marine Fisheries Service, Alaska Region

Anchorage, Alaska
October 14-15, 2010
Contents

Workshop Report.......................................................................................................................... 1
Agenda ........................................................................................................................................... 7
Focus Groups.................................................................................................................................. 13
Bulleted Summary Recommendations ............................................................................................... 14
Pre-Workshop Survey Results – Background Information ............................................................... 18
Pre-Workshop Survey Results – Priorities for Meeting ................................................................... 32
Participant List................................................................................................................................. 37
Post-Workshop Evaluation – Question 8 ............................................................................................ 39
Magnuson Stevens Fishery Conservation and Management Act – Sec. 109 ......................... 40
Background

The North Pacific Marine Education and Training Program Workshop was held October 14-15 at the University of Alaska Anchorage. This working-meeting was sponsored by the Alaska Marine Science and Fisheries Career Coalition and the Alaska Sea Grant Marine Advisory Program through a contract with the Alaska Region of the National Marine Fisheries Service. The objective of this workshop was to develop the framework for implementation of the North Pacific Marine Education and Training Program as identified in the Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 305(j) through consultation from Alaskan educators, stakeholders and employers. Participants were asked to identify programs or projects that will improve communication, education and training in marine resource related careers and develop an integrated education program to attract and prepare rural and under-represented populations for these jobs. The Act also mandates that marine resource management programs better incorporate local and traditional knowledge. The Act specifically identifies coastal community residents of Alaska and Hawaii and also targets Indigenous Pacific Islanders, Native Hawaiians, Alaskan Natives, and other underrepresented groups in these regions. A copy of the language of the Act is attached at the end of this report.

The Alaska Marine Science and Fisheries Career Coalition is a partnership of Alaskan stakeholders, educational groups and employers who share the vision of Alaska Natives and rural Alaskans pursuing education toward professional careers in marine-related fields. The Coalition worked together to develop a workshop that would involve a diverse statewide stakeholder group representing communities, agencies, industry, and education.

Preparations for the workshop began in June. A draft agenda was developed and potential invitees were suggested and considered by Coalition members.

Once a participant list was finalized, an online survey was conducted to gather background information on the organizations represented by the participants. This information was compiled and distributed at the workshop. Nine participants stated that K-12 educational programs were available through their organizations statewide. Fourteen participants noted that over 400 students received scholarships through their organizations and over 240 internships were available as well. Four university campuses offer undergraduate and graduate training, 2 units offer certificates, and 5 organizations offer technical training. A compilation of the survey input is attached at the end of this report.

Participants were also asked what they felt were the educational or training priorities to be considered in the development of NOAA’s North Pacific Marine Education and Training Program. Responses included support for mentors, working with students, scholarships and subsidized employments for Alaska Natives, K-12 educational programs, associate degree programs and TEK certifications. Participants also suggested basic courses in science,
engineering, project management, regulations, safety and other job specific training areas. Curriculum design, access to labs and library resources, student recruitment and educational equity, and coordinated research and community development projects were also listed as priorities.

**Workshop Summary**

The workshop was held at the University of Alaska Anchorage on October 14 -15, 2010. Fifty-nine participants from 16 Alaskan communities and 2 Hawaiian cities attended the workshop representing university, vocational and K-12 educators, CDQ groups, tribal organizations, federal, state and local agencies, communities, and industry. A complete list of attendees is attached.

Participants were welcomed to the meeting by Dorothy Cook, President of the Native Village of Eklutna. An introduction to the Alaska Marine Science and Fisheries Career Coalition (the Coalition) was given by co-chairs Debbie Hart and Paula Cullenberg. Bill Dann, meeting facilitator, with Professional Growth was introduced. Doug Mecum, Deputy Regional Administrator for the National Marine Fisheries Service, Alaska Region and Chris Oliver, Executive Director for the North Pacific Fishery Management Council provided context on the purpose and anticipated outcomes of the workshop. Bob King, legislative aide to U.S. Senator Mark Begich recognized the commitment of Sen. Begich in support of the efforts of NMFS to implement this section of the MSA. Bob also offered his observations on the role of local traditional knowledge and marine-related research and industry practices.

Bernice Joseph, Vice Chancellor for Rural and Native Education at UAF gave the keynote address. She provided the group with an overview of the impact of the UAF rural campuses and how pathways in education can accommodate a wide range of lifestyles among coastal residents.

Four members of the Coalition discussed their personal pathways toward careers in marine resources and fisheries. Rose Fosdick, Vice President of Natural Resources from Kawerak, Inc. spoke about growing up in the small tight-knit community of Nome. Ida Hildebrand from Chugach Regional Resources Commission gave a lively recount of her strong desire for education and the somewhat disheartening reality of attending school with unsupportive and stereotypically biased educators. Mike Miller from the Sitka Tribe of Alaska described his thoughts on working in a marine field as owner/operator of a tugboat company. Barbara Morgan with University of Alaska Southeast Fisheries Technology Program described her unique experience of growing up on a family-owned fishing boat and her desire to work in a marine-related field in some non-regulatory capacity. The four Coalition members’ recollections, while decisively different, shared the common experience of education, and training from a variety of sources including families, elders, and educators.

Scott Bloom from the National Marine Fisheries Service, Pacific Region, gave a short explanation of the NMFS Marine Education and Training Program in Hawaii and the Pacific...
Islands and the steps they took to get their plan into action. Shawn Carey from NMFS Alaska Region spoke to the group detailing the funding mechanisms and timelines for this project.

A lunch-time presentation on the State of Alaska’s Perspective on Rural Education and Workforce Development in the Marine/Fisheries/Seafood industries was given by Deborah Hart, Alaska Department of Fish and Game, Phyllis Carlson, Alaska Department of Education and Early Development, and Greg Cashen, Alaska Department of Labor and Workforce Development.

A dinner reception was held at the Alaska Native Science and Engineering Program (ANSEP) Building. Presentations were given by UAA’s Alaska Native Science and Engineering Program (ANSEP), UAF’s School of Fisheries and Ocean Sciences, UAS’ Fishery Technology and Marine Transportation Program, and the State of Alaska’s Vocational Technical Education Center (AVTEC).

**Workshop Focus Groups**

Participants spent the next day and a half of the workshop in four discussion groups focusing on the range of provisions in Section 305 of the MSA. The workshop participants were divided into four separate focus groups: (1) Marine education, K-12, (2) Marine education, pre-college, college and graduate degree, (3) Seafood/marine technology training, and (4) Incorporating local and traditional knowledge.

Each group was tasked with reviewing current programs that were available and working well, identifying barriers and gaps, and discussing possible solutions while identifying additional tools that would enhance the use of local and traditional knowledge. The groups worked through a ranking process that eventually led them to a list of implementation recommendations for NOAA to consider in the development of a request for proposals (RFP) along with the evaluation criteria that would be used for funding considerations.

Input from workshop participants on the topics of focus groups other than their own was gathered in the first hour of day two. Participants spent that time reviewing written recommendations on wall charts and adding priorities and concerns that they wanted to focus group to consider. These suggestions were then considered by the focus group during the rest of their deliberations.
Marine Education K-12
The Marine Education K-12 focus group determined that teachers needed resources, time and funds to support marine education. The first necessary action would be an inventory of resources currently available. The group suggested using classroom partners to support classroom enhancement and assistance for teachers, who often have frequent turnover in rural schools. Community partnerships could help integrate a hands-on methodology using local materials, possibly developing a closer partnership between schools and industries and other outside resources. The group noted that teachers could benefit from orientation to the local culture and community promoting seasonal cultural events, thus creating a closer tie with parents, teachers and community members. It is important to incorporate Traditional Local Knowledge into the K-12 curriculum and a continuum of marine science should begin early to develop a foundation for future studies. Any K-12 efforts would need to be flexible in order to fit a wide array of student needs, with strategies tailored to different learning styles. Targeted customized student internships and mentors were suggested along with a broader range of extracurricular activities.

The group suggested that proposals for NMFS funding should favor projects that address multiple barriers to K-12 marine education. A high degree of feasibility of success and completion with measurable results must be prioritized. Partnerships and collaborations would be an important element and the proposed project must detail how it fits into a marine or fisheries career pathway. Cultural relevance must also be addressed.

Marine Education Pre-College/College/Graduate level
The Marine Education, College/Pre-College focus group addressed internships and mentorships, improving academic preparation for college, college retention and financial aid. The group determined that internships must be meaningful and challenging, and possibly provide avenues for employment after graduation. Strong mentorship for internships require training and coordination in pairing mentors with students. Pre-college math and science programs could be made available with dual credit and technical preparation opportunities to enhance college readiness. Providing intensive summer classes and bridging between K-12 and college would introduce students to the college format. Improving the first year experience through tutoring, group learning, weekly gatherings and group housing and social activities designed as a healthy distraction could help with college retention. Merit-based or financial support and student support liaisons would also be beneficial. The group supported the proposed Alaska performance-based scholarship and industry/community group partnerships. Students also needed to be encouraged to apply for existing scholarships. Sharing students’ success stories with scholarship sponsors and other students would be helpful and encourage a culture of giving.

The suggested evaluation criteria guidance for proposals to NMFS included leveraging of non-NOAA resources supporting partnerships and collaborative efforts among group. Filling gaps and enhancing existing programs is important. Broader impacts (how this expands beyond what you are doing), performance measures defining success and clearly stated investigator qualifications should be included. The program should provide a broad geographic reach and address priority areas including local and traditional knowledge, K-12, pre-college/college, and seafood/marine technology career paths. The project should be replicable, transportable and sustainable with a stated exit strategy and well developed and defined priorities. Longitudinal programs connecting along pathways should be preferred.
Seafood and Marine Technology Training

More Alaskans filling the many positions in the seafood, fisheries and marine technology workforce was what the Seafood and Marine Technology Training focus group determined was the priority. As the group discussed the existing education and training programs and available employment opportunities, it was evident that an understanding of the nature, scope and location of those positions and how to access them was unclear to most Alaskans, including those in the focus group. The focus group recommended that the first action taken should be an inventory of existing and forecasted workforce opportunities in the marine technology and seafood industries in Alaska detailed down to the regional level. This would lead to a detailed analysis of knowledge and skill sets required for the positions and career paths (training/education) for each job. A complete inventory of existing training and education opportunities is also needed. This list can be used to assess training gaps and make recommendations for needed programs. Following that inventory and assessment is a much needed outreach program to explain the workforce opportunities in these industries to students, educators and communities.

The second point addressed by the group was the need to improve representation of seafood/maritime industries in Alaska’s statewide workforce planning committees. An inventory of committees and boards currently operating in Alaska is needed and possibly the development of a Seafood/Marine Technology Career Consortium.

The evaluation criteria for proposals would include a process to determine baseline data as a tool to measure progress, clear goals for improvement, stakeholder involvement to provide ground-truthing and ensure buy-in, and a process that would be clearly aligned with the Alaska Career and Technical Educational Plan.

Local and Traditional Knowledge

The Local and Traditional Knowledge (LTK) focus group had a productive discussion on some of gaps and barriers to effective use of LTK to “enhance science-based management of fishery resources” as called for in Section 305(j) of the MSA. First, the group felt that the development of Indigenous knowledge was a valid science, and should be referred as Indigenous Science rather than LTK. The groups felt one of the primary barriers was a lack of understanding, trust, and respect for Indigenous Science by Western scientists. Most agencies and funding sources do not require or provide funding for use of Indigenous Science, or make funding available for study Indigenous knowledge and science. More education of the value and use of this knowledge to western scientist is needed. Agency and other science funding sources need to mandate the use of Indigenous Science, and involve the communities in planning or Tribal consultations early in the process. Rural coastal communities need to be more actively involved fisheries research, from the identification of research questions, to participating in the research, and developing the final products. It was also recommended that regional Native groups and Tribes develop protocols for working with those entities, considering the principles for research in the Arctic which have been adopted by both the Alaska Federation of Natives and National Science Foundation.
The group also felt that successful stories of cooperative Western Science/Indigenous Science have not been well documented, publicized, or effective communicated back to the communities and scientists. A review and summary of successful projects should be completed, followed by a workshop for Western and Indigenous scientists, universities, funders, and agencies to further develop recommendations and submit feedback on collaborative research agency leadership and other funding program. Other steps should include funding Indigenous science departments in Alaskan universities and Tribal colleges, and funding regional Indigenous Science forums to transfer science concepts and elder knowledge to community members and youth. Indigenous Science programs for in the public school system should also be funded. The group also suggested funding a program for fluent people/scientific teams to correlate indigenous science concepts with western science.

Workshop Wrap-Up

Each focus group reported their recommendations to the whole group during the afternoon of day two and participants discussed and commented on each area. A short discussion was held on the need to keep NMFS connected with the participants in the room through some sort of advisory group. Doug Mecum, NMFS, thanked the participants and outlined NMFS next steps. He anticipated that an RFP would be released in January of 2011 and that depending on budget, the input from the workshop would be used to develop a longer-term program sponsored by NMFS.

Post-Workshop Evaluation Survey

Thirty participants responded to a post-workshop online survey to evaluate the meeting and collect further thoughts regarding the North Pacific Marine Education and Training Program. All participants stated that the workshop met or exceeded their expectations. Fifteen participants stated that one of the most valuable parts of the workshop was the personal contacts and networking. Others mentioned the focus groups and the ability to discuss issues and share thoughts. Several participants stated the diversity of the group and the involvement of major players was important. Incorporation of local and traditional knowledge as well as the K-12 perspective were also seen as valuable issues.

Participants were asked how the workshop could have been improved. Six participants noted that more time or a longer workshop would have been helpful and four participants suggested separate breakout rooms, or a larger meeting room. Other suggestions included expanding the participant list to include more organizations, more information on how the groups were formed, focusing more time on recommendations and implementation process and more inter-group interactions. The facilitation process received mixed reviews but the majority of participants were satisfied, while 24% were highly satisfied and 17% were not satisfied. The comments shared on the priority ranking process varied from “interesting and valuable,” “…brought integrity to the ranking process” to “time consuming,” “too linear and Western,” and “confusing.”

When asked how the information from the workshop would be used by each participant, the consensus felt they were better connected with current information, aware of statewide issues and had made contacts for improved communication and outreach. Other reflections on the workshop included appreciation that the workshop was by invitation which facilitated rapport and the hope that a concerted effort would be made to incorporate local folks in employment and
training programs. The difference between “consultation” and “incorporating traditional knowledge” was noted and the need for traditional knowledge to be clearly defined. Many participants noted that they were encouraged and hopeful and appreciated the chance to be involved.

Participants were asked if there were other things they would like NOAA Fisheries to consider as they develop their funding priorities for implementing MSA Section 305. Several responses included the request for more funds from additional sources, proactive tribal consultations and collaboration between communities, industry, and education and partnerships with tribal groups. It was also recommended that the group reconvene in two years to assess the program and offer input and ongoing direction for improvement.
North Pacific Marine Education and Training Program Workshop

Building the Framework for Providing Pathways to Fisheries and Marine Careers

Working meeting for NOAA/NPFMC policy makers and Alaskan educators, stakeholders and employers

Thursday, October 14 - Friday, October 15, 2010
University of Alaska Anchorage Commons, Room 107
Coordinated and facilitated by the Alaska Marine Science and Fisheries Career Coalition and the University of Alaska Sea Grant Marine Advisory Program

Expected Outcomes:
1. Increased awareness and understanding of Section 305(j) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) calling for regionally-based marine education and training programs. The workshop will focus on 4 specific areas, including: 1) marine science and technology education, 2) fisheries and seafood-related training programs, 3) means by which local and traditional knowledge can enhance science based management of fishery resources of the region, and 4) partnerships with other agencies and academic institutions and other entities to meet the purposes of these sections.

2. Facilitated discussion among partners of the development and implementation of the North Pacific Marine Education and Training Program, a NOAA-sponsored integrated education program to attract and prepare coastal and under-represented populations for careers in marine resource professions as specified in the MSFCMA.

3. Identification of specific programs and/or projects that will more effectively involve coastal Alaskans in fisheries research and management processes, use local and traditional knowledge to enhance western science in fisheries management decisions, and increase scientific education for marine-related professions among coastal community residents, including Alaska Native and other underrepresented groups in the region.

4. Steps needed to guide National Marine Fisheries Service (NMFS) and the North Pacific Fishery Management Council (NPFMC) in funding and implementing identified programs and projects including a timeline, evaluation of resource needs and measures for evaluating success.

5. Recommendations for a mechanism to continue regular dialog with interested stakeholders.

North Pacific Marine Education and Training Program Workshop
Agenda
Wednesday, October 13

7:30pm Informal Meet and Greet at the Spring Hill Suites, University Lake
North Pacific Marine Education and Training Program Workshop
Agenda

Thursday, October 14
8:00 - 8:30  Coffee, Registration, Meet and Greet, UAA Commons
8:30 – 8:45  Welcome by Local Host, Dorothy Cook, Chief, Eklutna Tribe
8:45 – 9:15  Introduction to the Alaska Marine Science and Fisheries Career Coalition, Debbie Hart and Paula Cullenberg, Co-chairs of the Coalition
  Introductions - Meeting Facilitator, Bill Dann, Professional Growth Systems
9:15-9:30  Welcome, Review of Magnuson Steven Act and Purpose of the Workshop, Doug Mecum, Deputy Regional Administrator, National Marine Fisheries Service, Alaska Region and Chris Oliver, Executive Director North Pacific Fishery Management Council
9:30-9:45  Comments on behalf of Senator Mark Begich - Bob King, Legislative Aide
9:45 – 10:15  Key Note Address, Bernice Joseph, Vice Chancellor for Rural, Community and Native Education, University of Alaska Fairbanks
10:15-10:30  Break
10:30-11:30  Working Together in Alaska to Protect Our Marine and Fisheries Resources
  Four members of the Alaska Marine Science and Fisheries Career Coalition speak about their personal pathways toward work with marine resources and fisheries. They will share thoughts about how to encourage more involvement of coastal Alaskans in ensuring the health of our marine and fisheries resources. Rose Fosdick, Kawerak Natural Resources Division; Ida Hildebrand, Chugach Regional Resource Commission; Mike Miller, Sitka Tribe of Alaska; Barbara Morgan, UAS Fisheries Technology Program
11:30 – 11:45  Hawaii’s MSA Marine Education and Training Program – Scott Bloom, Regional coordinator
11:45 – 12:00  National Marine Fisheries Service Funding Mechanisms – Shawn Carey, NMFS Alaska Region
12:00 – 1:30  Lunch provided.
  Comments: State of Alaska’s Perspective on Rural Education and Workforce Development in the Marine/Fisheries/Seafood Industries
  Deborah Hart, Southeast Alaska Marine Fisheries Program Supervisor, Alaska Department of Fish and Game; Phyllis Carlson, Director of Rural Education, Alaska Department of Education and Early Development; Greg Cashen, Executive Director, Alaska Workforce Investment Board, Alaska Department of Labor and Workforce Development
Programs and Projects – What should the North Pacific Marine Education and Training Program Look Like?

- **Marine Education K-12 Focus Session Focus (Group Facilitator – Bonita Nelson/Group recorder – Barbara Morgan)** - With focus on K-12 marine science and technology education that prepares community residents for employment in marine resource conservation and management, marine science, marine technology, and maritime operations discussion and focus group outcomes will include:
  1) Identify what is currently happening across the state – i.e how and where are coastal community K-12 students, particularly underrepresented groups, accessing educational opportunities in marine science and fisheries?
  2) Identify what current programs/projects are working well that need continued support. What are the best practices?
  3) Identify gaps and develop a recommended list of new programs or projects that need to be developed. What are the barriers to success?
  4) What career realities [urban and rural] do K-12 students need to be aware of?
  5) Are there existing outreach and communication programs that are adequate in getting the word out?

- **Marine Education pre-college, college, graduate degree Focus Session (Facilitator – Debbie Hart/Recorder – Katie Straub)** - With focus on pre-college, college and graduate marine science and technology education that prepares community residents for employment in marine resource conservation and management, marine science, discussion and focus group outcomes will include:
  1) Identify what is currently happening across the state – i.e how and where are coastal community post-secondary students, particularly underrepresented groups, accessing secondary educational opportunities in marine science and fisheries?
  2) Identify what current programs/projects are working well that need continued support. What are the best practices?
  3) Identify gaps and develop a recommended list of new programs or projects that need to be developed.
  4) What career realities [urban and rural] do college students need to be aware of? What are the barriers to success?
  5) Are there existing outreach and communication programs that are adequate in getting the word out?

- **Seafood/Marine Technology Training Focus Session (Facilitator – Paula Cullenberg/Recorder – Beverly Bradley)** - With focus on fisheries, marine technology and seafood-related training programs, including programs for fishery observers, seafood safety and seafood marketing, focused on increasing the involvement of coastal community residents in fishing, fishery management, marine technology and seafood-related operations discussion and outcomes will include:
  1) Identify what is currently happening across the state – i.e how and where are coastal community students, particularly underrepresented groups, accessing education and technical training opportunities in marine science and fisheries related fields?
  2) Identify what current programs/projects are working well that need continued support. What are the best practices?
3) Identify gaps and develop a recommended list of new programs or projects that need to be developed. What are the barriers to success?
4) What career realities [urban and rural] do students need to be aware of?
5) Are there existing outreach and communication programs that are adequate in getting the word out?

• Local and Traditional Knowledge (LTK) Focus Session (Facilitator – Bill Dann/Recorder – Sarah Arntson) – With focus on developing means by which local and traditional knowledge can enhance science-based management of fishery and marine resources of the region and how this may play a role in the other focus sessions or be integrated in the North Pacific Marine Education and Training Program discussion and outcomes will include:
  1) Identify what is currently happening across the state – i.e what are the current means by which the NMFS, NPFMC, and other efforts provide for inclusion of local and traditional knowledge in fisheries management and planning?
  2) Identify what current mechanisms or tools are working well to incorporate local and traditional knowledge that need continued support. What are the best practices or strategies for achieving this?
  3) Identify gaps and develop a recommended list of new programs or projects that need to be developed. What are the barriers to success?
  4) Identify additional tools that need to be developed to enhance the use of local and traditional knowledge in fisheries management.
  5) Are the outreach and communication about LTK widespread and adequate?

3:00-3:15 Break

3:15-4:15 Focus Group Sessions Continue

4:15-5:00 Brief Focus Group Discussion and Plan for Tomorrow
Each session group facilitator tasked with briefly reporting on how the group is progressing. A process for input from other participants will be presented.

6:00 – 8:00 Dinner Reception
Alaska Native Science and Education Program (ANSEP) Building, UAA Campus

Program: Presentation by Four Educational Programs: Alaska Native Science and Engineering Program (Michele Yatchmeneff, ANSEP Deputy Director), UAS Marine and Fishery Programs (UAS Provost Richard Caulfield), UAF School of Fisheries and Ocean Sciences (SFOS Interim Dean Michael Castellini), and the Alaska Vocational Technical Center (Robert Thomas, Maritime Department Head, AVTEC)
Friday, October 15

8:00-8:30am  Coffee, Meet & Greet

8:30-8:45   Whole Group – Planning the Direction for the Day – Bill Dann, Meeting Facilitator

8:30-10:30  Focus Group Work Session Continued  
Reconvene focus groups to discuss:  
Identify and prioritize Programs/Projects that can be supported by the North Pacific Marine Education and Training Program.

10:30-10:45  Break

10:45-12:00  Focus Group Work Session Reports – Focus groups report out to full group.  
1)  Marine Education K-12  
2)  Marine Education pre-college, college, graduate degree  
3)  Seafood/Marine Technology Training  
4)  Local and Traditional Knowledge (LTK)

12:00-1:00  Lunch

1:00-3:00   North Pacific Marine Education and Training Program Implementation Strategy Work Session  Focus groups breakout one more time and develop implementation recommendations including evaluation criteria and funding considerations.

3:00 – 3:15  Break

3:15 – 4:00  Group dialog on Working Advisory Group  
(What value would that type of group add to this process, how could it be structured, who would coordinate, how would it come together, etc... During this time session facilitators work to complete session implementation strategy recommendations.)

4:00 – 4:45  North Pacific Marine Education and Training Program – Draft Implementation Strategy  
(Focus group facilitators report out to group on implementation strategy recommendations.)

4:45 – 5:00  Closing remarks – Doug Mecum, NOAA NMFS
North Pacific Marine Education and Training Program Workshop
Focus Groups

**Group 1 - K-12**
Phyllis Carlson
Izetta Chambers
Alan Dick
Ida Hildebrand
Ruthie Knight
Rena Kudrin
Jim McDiarmid
Linda Robinson
Marilyn Sigman

Bonita Nelson – Facilitator
Barbara Morgan – Recorder

**Group 3 – Marine Tech/Seafood**
Scott Bloom
Greg Cashen
Richard Caulfield
Laura Delgado/John Nickels (10/14)
Adelheid Herrmann
Dawson Hoover
Jerry Ivanoff
Terry Johnson
Jill Klein
Mary McDowell
Kris Norosz
Dawn Salesky
Pearl Strub
Robert Thomas
Rose Wilson

**Group 2 - College/Pre-College**
Michael Castellini
Courtenay Gomez
Bernice Joseph
Debi McLean
Doug Molyneaux
Doug Mecum
Mary Pete
Todd Radenbaugh
Alan Sorum
Beth Spangler/Herb Shroeder (10/15)
Jan Straley
Kate Sullivan
Keith van den Broek

Debbie Hart – Facilitator
Katie Straub – Recorder

**Group 4 – Local / Traditional Knowledge**
Sally Bibb
Shawn Carey
Apela Colorado
Raychelle Daniel
Rose Fosdick
Taqulik Hepa
Nicole Kimball (10/14)
Catherine Moncrieff
Patrick Norman
Tom Okleasik
Glenn Seaman
Lisa Kangas

Bill Dann – Facilitator
Sarah Arnston - Recorder
1. **Teachers need resources, time and funds**
   a. Inventory of resources available currently based on best practices
   b. Classroom “partner” that supports classroom enhancement
   c. Facilitator of partnership for schools (regional or local)
   d. Industry could provide hands on teaching materials to benefit students, and serve as outreach
   e. Provide support and strategies to teachers for integrating current hands on materials into their teaching.
   f. Provide continuing education for teachers to learn to use hands on local materials in their teaching.
   g. Remove barriers preventing partnerships between schools and industries, agencies and other outside resources.

2. **Teacher expectations of rural and native students not high enough**
   a. Showcase student abilities with programming (i.e. ANSEP computer build)
   b. Promote science fairs
   c. Orientation of teachers to local culture and community
   d. Incorporate local culture into curriculum, instruction and assessment
   e. Include low expectation reality in teacher mentor program

3. **Lack of community ownership of education system**
   a. Identify and incorporate seasonal cultural tasks that will remove students from classroom
   b. Training for school board and superintendent about importance of these cultural events
   c. Showcase student and alumni successes
   d. Mentor school board and parents relating to education process
   e. Mandate use of Alaska Native Network and other cultural programs
   f. Place based education

4. **Students do not all fit the same parameter set, instruction needs to fit student needs**
   a. Targeted customized student internships and mentors
   b. Use effective teaching strategies tailored to different learning styles
   c. Individual learning plans for each student
   d. Align resources with student interest
   e. Inventory best practices for differentiation of instruction / career pathways
   f. Develop a broader range of extracurricular activities
5. **High turnover of teachers and administrators**
   a. Orientation and welcome to new teachers to community and culture
   b. Need home grown teachers
   c. Teacher training and mentoring
   d. Showcase teacher successes
   e. Incentives for teachers not tied to higher pay
   f. In hiring, give local hire preference

**Evaluation criteria:**
   a. More points given for a proposal that addresses multiple barriers, the more you address, the more points
   b. Feasibility of success and completion
   c. Must have measurable results
   d. Must contain partnerships and or collaborations with written commitments
   e. Must describe how it fits into a marine or fisheries career pathway
   f. Cultural relevancy is addressed

**Group 2 – College/Pre-College**

1. **Internships and Mentorships**
   a. Meaningful and challenging experience; not just busy work
   b. Increase values of internships through strong mentorship
   c. Peer role models act as mentors
   d. Coordination in pairing mentor and student
   e. Deliverables at the end of internship program (ex. Presentations)
   f. Internship offered with academic credit
   g. Internships that provide avenues for employment upon graduation
   h. Training for mentors important

2. **Students not academically prepared for college rigor**
   a. Improve/make available pre-college math and science programs
   b. Increase dual credit and tech prep opportunities
   c. Bridging liaison between k-12 and college
   d. Intensive summer classes – introduce students to college format

3. **College Retention**
   a. Improve first year experience
   b. Tutoring, Group learning environment
   c. Cohort model
   d. Weekly gatherings – community based meetings (program-based)
   e. Group housing
f. Merit-based or financial support  
g. Student support liaison  
h. Fun activities/healthy distraction  

4. **Financial Aid**  
a. Support Alaska performance scholarship  
b. Partnerships  
c. Encourage students to apply for scholarships that exist  
d. Sharing of student’s story, success to scholarship sponsors and other students  
e. Tracking and reporting successes/statistics  
f. Encourage culture of giving  
g. Alumni connections  

**Proposal Criteria:**  
- Leveraging non-NOAA resources  
- Maximizing and Building Partnerships, collaborative efforts among groups  
- Filling gaps and unmet needs, enhancing existing programs  
- Broader Impacts – how does this expand beyond what we are doing  
- Performance measures – how are you defining success  
- Investigator qualifications  
- Broad geographic reach  
- Addresses priority areas (LTK, K-12, pre-college/college, marine/seafood tech)  
- Replicable, transportable  
- Sustainability (exit strategy)  
- Well-developed and defined priorities  
- Openness to “other innovative ideas that haven’t already been expressed”  
- Preference for longitudinal programs – connecting along pathways  

---  

**Group 3 – Seafood and Marine Technology**  

1. **Fill more positions in the wide range of marine technology workforce with Alaskans**  
   a. Inventory existing and forecasted employment opportunities in Alaska down to regional level in marine technology and seafood industry.  
      i. Define skill sets for each job.  
      ii. Define career paths for each job – training/education 7-12th & beyond.  
   b. Complete Inventory of existing training and education opportunities in Alaska  
      i. Assess training gaps – funders and educators  
      ii. Identify obstacles and paths to get over them  
   c. Get the word out to students in a manner that survives teacher turnover.  

2. **Improve representation of seafood/maritime industries in Alaska's workforce committees.**
a. Inventory what is out there (committees, boards, etc.).
b. Consider the development of Seafood/Marine Technology Career Consortium.

**Evaluation Criteria for proposals:**

1. Does the proposal measure baseline data so as to measure progress?
2. Does is set clear goals for improvement?
3. Is there stakeholder involvement to provide ground truthing and also to ensure buy-in?
4. Does it focus on a process that is aligned with State’s Career Educational Plan?

---

**Group 4 – Local Traditional Knowledge**

1. **Mandate inclusion of Indigenous science and community involvement as part of research** was considered by the group the primary leverage point for facilitating use of Indigenous science.

2. **Action items:**
   
a. Use part of 305j funding to pay for the review and documentation of success stories of cooperative research as a means to make the case for this mandate, including follow up workshops for universities, funders, agencies, and Western and Indigenous scientists to develop guidelines and submit recommendations to agencies and funders for inclusion of Indigenous science or knowledge.

b. “Tribal Consultation” is mandated by Executive Order. It is recommended that NOAA consult with tribes on implementation of this provision, to move toward collaboration of Indigenous and Western science being defined as integral to the “consultation process”.

c. Fund Alaska universities, including Tribal universities (Central Council and Ilisagvik), in AK to start Indigenous Science departments or programs.

d. Fund regional Indigenous Science forums in order to train new people in Indigenous science, transfer elder knowledge to community members and youth, and train on how to develop regional/local research protocols (stop the loss of knowledge).

e. Fund collaborative fellowships for: Indigenous scientists to work with agencies and other scientists on fisheries projects to foster collaboration.
   - Youth to work with Indigenous scientists.
   - Western scientists to study with Indigenous scientists.

f. Fund Indigenous language programs in K-12 to promote transfer of Indigenous science and Indigenous science concepts to younger generations.

g. Fund Indigenous science programs in the public school system at middle/high school levels.

h. Fund program for fluent people/scientific teams to translate/correlate Indigenous science concepts with Western science.

i. Change the funding process so it encourages contact with villages and rural communities early in process, and also considers funding for collecting LTK in addition to Western science.
Education, Training, Internships, Scholarships and Employment Opportunities in Alaska in Marine, Fisheries and Seafood

Background information for participants in the North Pacific Marine Training and Education Program Workshop, October 14 and 15, 2010 in Anchorage, Alaska

Note: This information is not complete. It is a compilation of information submitted by participants on behalf of their organization, agency or educational institution. If you have additions to this compilation, please email them to Paula Cullenberg, Alaska Sea Grant Marine Advisory Program at paula.cullenberg@alaska.edu

Marjorie Tahbone, Kawerak high school intern, 2006, UAF ANSEP student 2010
<table>
<thead>
<tr>
<th>Are You Interested in?</th>
<th>Program/Organization</th>
<th>Contact Information</th>
<th>Program/Organization Description</th>
<th>Number of people</th>
<th>Region of State Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12</td>
<td>Alaska Sea Grant, University of Alaska Fairbanks</td>
<td>Marilyn Sigman, Alaska Sea Grant Marine Advisory Program, 1007 W. 3rd Ave, Suite 100, Anchorage, AK, 99501, <a href="mailto:msigman@alaska.edu">msigman@alaska.edu</a>, 274-9612</td>
<td>The new, online Alaska Seas and Rivers marine/aquatic curriculum, developed by Alaska teachers, provides high-quality units for use by teachers and homeschoolers, as well as interpreters, youth groups, nature tour guides, and anyone seeking fascinating content on marine science topics. The units for grades K-8 are complete and ready to use. The curriculum meets Alaska science content standards and grade level expectations.</td>
<td></td>
<td>Statewide</td>
</tr>
<tr>
<td>K-12</td>
<td>Bristol Bay Economic Development Corporation</td>
<td>Pearl Strub, Bristol Bay Economic Development Corporation, P.O. Box 1464, First Avenue East, Dillingham, AK, 99576 <a href="mailto:pearl@bbedc.com">pearl@bbedc.com</a>, 842-4370</td>
<td>Fisheries science camp at the Bristol Bay Campus</td>
<td>20-30 students</td>
<td>Bristol Bay Region</td>
</tr>
<tr>
<td>K-12</td>
<td>Bristol Bay Native Association</td>
<td>Courtenay Gomez, Bristol Bay Native Association, 1500 Kanakanak Road, P.O. Box 310, Dillingham, AK, 99576 <a href="mailto:cgomez@bbna.com">cgomez@bbna.com</a>, 842-6243</td>
<td>The BBNA Fisheries Education Coordinator works with local and regional school districts within Bristol Bay to provide fisheries science educational activities within the classroom and in a field setting. This position will coordinate with other Partners organizations who conduct similar pilot programs in their respective regions to gain insight on the process of establishing similar programs in Bristol Bay. The Fisheries Education Coordinator will work with the UAF Bristol Bay Campus to coordinate activities, curriculum and field studies that are applicable in the Bristol Bay region. Local and regional school districts will also be involved through consultation, planning, curriculum development and classroom implementation.</td>
<td></td>
<td>Bristol Bay communities</td>
</tr>
<tr>
<td>K-12</td>
<td>Chugach Regional Resources Commission</td>
<td>Ida Hildebrand and Hanna Eklund, CRRC, 6200 Lake Otis Parkway, Suite 201, Anchorage, AK 99507, <a href="mailto:idah@ccrcalaska.org">idah@ccrcalaska.org</a>, <a href="mailto:hanna@ccrcalaska.org">hanna@ccrcalaska.org</a>, 562-6647</td>
<td>We are developing a K-12 Science curriculum that incorporates Traditional Knowledge from the Prince William Sound area; and are developing a college-level textbook on Tribal Management of Natural Resources from a Tribal perspective.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-12</td>
<td>COSEE Alaska</td>
<td>Marilyn Sigman, COSEE Alaska, 1007 W. 3rd Ave, Suite 100, Anchorage, AK, 99501, <a href="mailto:msigman@alaska.edu">msigman@alaska.edu</a>, 274-9612</td>
<td>The Alaska Center for Ocean Sciences Education Excellence is a National Science Education-funded project to facilitate and provide training for ocean scientists to improve their communication skills and to engage in effective outreach and education about their research. The Alaska Center is one of 12 nationwide with a geographic focus on Alaska’s seas and themes of climate change and the integration of Alaska Native knowledge and western science as approaches to understanding climate change. Student participate is through ocean science fairs which COSEE Alaska sponsors at local, regional, and statewide levels.</td>
<td>more than 50</td>
<td>primarily rural communities</td>
</tr>
<tr>
<td>K-12</td>
<td>Native Village of Eyak</td>
<td>Keith van den Broek, Native Village of Eyak, PO Box 1388, Cordova, AK, 99574, <a href="mailto:keith@nvseyak.org">keith@nvseyak.org</a>, 424-7738</td>
<td>Collaboration with NVE Youth Services Program, Prince William Sound Science Center, Copper River Watershed Project, Boy Scouts, Girl Scouts, etc- provide education and hands-on experience for youth involved in summer camps and youth groups through various presentations and organized field trips.</td>
<td></td>
<td>Prince William Sound communities</td>
</tr>
<tr>
<td>K-12</td>
<td>UAA Alaska Native Science and Engineering Program</td>
<td>Beth Spangler, ANSEP/ USFWS, 3211 Providence Drive, 200 D1, Anchorage, AK, 99508, <a href="mailto:beth_spangler@fws.gov">beth_spangler@fws.gov</a>, 786-1074</td>
<td>ANSEP is a longitudinal model that works with students from the time they are in middle school all the way through to the PhD. We increase university recruitment and retention rates through hands-on middle and high school outreach initiatives, rigorous su</td>
<td>more than 50</td>
<td>statewide</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>K-12</td>
<td>UAF National Ocean Science Bowl</td>
<td>Mike Castellini, Interim Dean, SFOS</td>
<td>Each winter, Alaska holds a regional ocean sciences competition as part of the National Ocean Sciences Bowl. In the past, the Alaska regional NOSB has consisted of a jeopardy-style quiz and a research project, each of which counted 50 percent toward the winning score. New in 2007 is the quiz-only competition, in which teams of four students each compete against each other in a timed quiz. The winning team competes against other regional teams from across the United States.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-12</td>
<td>UAS Sitka</td>
<td>Jan Straley, UAS, Sitka Sound Science Center, Sitka WhaleFest, Sitka, AK, 99835 <a href="mailto:jmstrale@uas.alaska.edu">jmstrale@uas.alaska.edu</a>,747 7779</td>
<td>Sitka WhaleFest Sitka WhaleFest, a 501(c)3 non profit, was established in 1997 to generate awareness of the North Pacific marine environment, with a focus on Alaska, through educational and community events. Sitka WhaleFest accomplishes this goal through a variety of experiential mediums, including music, art, whale watching excursions, a science symposium, and other events. The backbone of Sitka WhaleFest is the annual science symposium where ten world-renowned scientists communicate their current research findings on North Pacific marine wildlife with local students, teachers, residents, and visitors from throughout the state, the United States and other countries, over a three-day weekend in early November. Each year, nearly two hundred participants enjoyed the symposium, including classes of undergraduates from University of Alaska Southeast. Sitka WhaleFest also provides the scientists a forum in which they can share information and ideas, as well as form relationships for future collaboration. Scientists from different disciplines have developed research projects, exchanged ideas and found graduate students and interns at Sitka WhaleFest over the past 14 years. In addition, the week prior to the weekend symposium, Sitka WhaleFest hosts a significant educational component in the schools: the Scientist in the Schools program. In 2009, there were 60 classroom presentations where 950 Sitka School District students and 120 Mt Edgcumbe High School students benefited from this program.</td>
<td>more than 50</td>
<td>Sitka, students from across the state from Mt. Edgecumbe HS, Tenakee Springs, Juneau, other Southeast Alaska communities</td>
</tr>
<tr>
<td>internships</td>
<td>Alaska Department of Fish and Game</td>
<td>Sarah Arntson, Alaska Department of Fish and Game, 1255 W. 8th Street, Juneau, AK 99801, sarah.arntson@alaska.gov465-6347</td>
<td>The Alaska Department of Fish and Game provides paid internships with levels ranging from high school students to graduate students. Internship positions are available in a variety of fields and are structured with levels so that an intern may build upon the skills learned year after year. Internships may consist of field work, research, laboratory work, administrative tasks, etc...</td>
<td>20-30</td>
<td>statewide</td>
</tr>
<tr>
<td>internships</td>
<td>Alaska Department of Fish and Game</td>
<td>Douglas B. Molyneaux, Alaska Department of Fish and Game, 333 Raspberry Road, Anchorage, AK, 99518, <a href="mailto:doug.molyneaux@alaska.gov">doug.molyneaux@alaska.gov</a>, 267-2397</td>
<td>ADFG/CF/Kuskokwim also works with Tribal groups who have high school and college internship programs. Annually, Kuskokwim Native Association hosts about 24 high school interns and 3 to 4 college interns, and Oursararmuit Native Council hosts 1 or 2 college interns. We try to coordinate the Tribal college interns through the Alaska Native Science and Engineering Program (ANSEP), but are not limited to ANSEP candidates. ADFG/CF/Kuskokwim has also attempted to engage ANSEP summer bridge students (graduated high school and are about to begin college), but the administrative aspect of the program requires some adjustment to make it effective/ attractive option for both students and host biologists. The 20-30 students we use are almost entirely through Tribal organizations</td>
<td>20-30</td>
<td>Kuskokwim region</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>internships</td>
<td>APICDA</td>
<td>Laura Delgado, APICDA, 509 W. 3rd Ave, Suite 101, Anchorage, AK 99501, <a href="mailto:idealgado@apicda.com">idealgado@apicda.com</a>,</td>
<td>We also offer two internship programs, one for college students and one for community residents. Each is 3 months and we work with the employer to assist in paying wages, travel and stipend. Internships are with community agencies, fisheries partners or in house.</td>
<td>0-10</td>
<td>Aleutian communities</td>
</tr>
<tr>
<td>internships</td>
<td>Bristol Bay Native Association</td>
<td>Courtenay Gomez, Bristol Bay Native Association, 1500 Kanakanak Road, P.O. Box 310, Dillingham, AK, 99576 <a href="mailto:cgomez@bbna.com">cgomez@bbna.com</a>, 842-6243</td>
<td>The BBNA summer fisheries internship program provides quality educational internships in fisheries science and natural resources by hiring local students to gain professional experience working on field research projects while earning academic credit for their internship through the UAF Bristol Bay Campus. Throughout the years BBNA has successfully hosted nearly 50 summer internships with partnering organizations including the USFWS Togiak National Wildlife Refuge and fisheries field offices, Lake Clark National Park &amp; Preserve, University of Washington Alaska Salmon Program (more commonly known as UW FRI), the Alaska Department of Fish &amp; Game Division of Commercial Fisheries and Division of Subsistence amongst others. Over time BBNA has earned a positive reputation for having a highly successful internship program, with a majority of our students pursuing degree programs and careers in fisheries, science and natural resource management.</td>
<td>50</td>
<td>Bristol Bay Region</td>
</tr>
<tr>
<td>internships</td>
<td>Icicle Seafoods</td>
<td>Kris Norosz, Icicle Seafoods, Inc, P.O. Box 1147, Petersburg, AK, 99833, <a href="mailto:krist@icicleseafoods.com">krist@icicleseafoods.com</a>, 772-4294, ext. 112</td>
<td>It is still in its infancy. We had 2 fleet/operations interns and 2 quality assurance interns this year. We use an application and interview process to select them. We have targeted past seasonal employees with good work records, UA campuses and a few campuses in Oregon and Washington.</td>
<td>4</td>
<td>statewide</td>
</tr>
<tr>
<td>internships</td>
<td>Kawerak</td>
<td>Rose Fosdick, Kawerak, Inc., Box 948, Nome, AK, 99762 <a href="mailto:rfosdick@kawerak.org">rfosdick@kawerak.org</a>, 443-5231</td>
<td>See Kawerak Education, Employment and Training Division for details about their programs. Programs within Kawerak Natural Resources Division (Fisheries, Social Science, Eskimo Heritage Program, Reindeer Herders Association, Social Science, Land Management Services, Eskimo Walrus Commission) make efforts to hire and train interns. Fisheries interns work with the FB in managing projects, such as &quot;Invasive Plants Identification&quot; and monitoring stream health. Social Science interns will work with a Social Scientist to gather traditional knowledge regarding ice seals and walrus, non-salmon fish, use of ocean currents and mapping resource use.</td>
<td>0-10</td>
<td>1. - 20 communities within the Bering Strait/Norton Sound region from St. Michael to Shishmaref, including communities on St. Lawrence Island and Little Diomede Island.</td>
</tr>
<tr>
<td>internships</td>
<td>Native Village of Eyak</td>
<td>Keith van den Broek, Native Village of Eyak, PO Box 1388, Cordova, AK, 99574, <a href="mailto:keith@nevayak.org">keith@nevayak.org</a>, 424-7738</td>
<td>We are in the process of securing funding to hire interns for college (undergraduate) level students to hire to assist with research related projects thru the summer.</td>
<td>0-10</td>
<td>North Slope Borough</td>
</tr>
<tr>
<td>internships</td>
<td>NOAA Fisheries Alaska</td>
<td>Bonita Nelson- NOAA Auke Bay Laboratories, 17105 Lena Loop Rd, Juneau, AK, 99821, <a href="mailto:bonita.nelson@noaa.gov">bonita.nelson@noaa.gov</a>, 789-6071</td>
<td>AK Fisheries Science Center (NOAA) internship program, ANSEP (Bridge and Continuing students), Ernest Hollings Internship Program (NOAA). All are college level competitive process internships. Students may work in remote field settings, on NOAA vessels or and at a Juneau location of the Auke Bay Laboratories. These are summer internships and most result in completing a project or learning a specific task related to our research objectives.</td>
<td>0-10</td>
<td>1. - 20 communities within the Bering Strait/Norton Sound region from St. Michael to Shishmaref, including communities on St. Lawrence Island and Little Diomede Island.</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>internships</td>
<td>NOAA Fisheries Alaska Region</td>
<td>Melissa Mountcastle, NOAA Fisheries, Alaska Region, 709 West 9th Street, PO Box 21668, Juneau, AK, 99802, <a href="mailto:Melissa.Mountcastle@noaa.gov">Melissa.Mountcastle@noaa.gov</a>, 586-7640</td>
<td>Student Career Employment Program — Employees are permanent excepted appointments. Eligible to earn annual and sick leave. Federal tax and retirement will be taken out of their checks. Eligible for health benefits, life insurance, retirement, thrift savings plan. Covered under worker’s compensation. Not eligible to transfer. No reinstatement rights. Must maintain an overall GPA of 3.0. To be eligible for conversion to a career conditional/career appointment the student must have graduated with a degree, worked 640 hours (time worked under a STEP is creditable towards the requirement), and must be converted within 120 days after graduation. If not converted, the student will be terminated. <strong>Student Temporary Employment Program</strong> — STEP Employees are temporary excepted appointments with a not-to-exceed date. Eligible to earn annual and sick leave. Federal tax and social security will be taken out of their checks. Not eligible for health benefits, life insurance, retirement, thrift savings plan. Covered under workers’ compensation. Must maintain an overall GPA of 2.0.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>internships</td>
<td>North Pacific Fishery Management Council</td>
<td>Nicole Kimball, North Pacific Fishery Management Council, 605 W. 4th Ave, Suite 306, Anchorage, AK, 99501, <a href="mailto:nicole.kimball@noaa.gov">nicole.kimball@noaa.gov</a> 271-2809</td>
<td>There is an ad-hoc opportunity for internships — it is not a true ‘program’. But internships are available for limited periods of time in the summer, typically for students in a marine science related program.</td>
<td>0-10</td>
<td>Alaska communities are the priority.</td>
</tr>
<tr>
<td>internships</td>
<td>UAA Alaska Native Science and Engineering Program</td>
<td>Beth Spangler, ANSEP/ USFWS, 3211 Providence Drive, 200 D1, Anchorage, AK, 99508, <a href="mailto:beth_spangler@fws.gov">beth_spangler@fws.gov</a>, 786-1074</td>
<td>ANSEP is a longitudinal model that works with students from the time they are in middle school all the way through to the PhD. We increase university recruitment and retention rates through hands-on middle and high school outreach initiatives, rigorous summer bridging programs, focused academic learning communities, organized student cohorts, networks of peer and professional mentors, community based learning, professional internships, and undergraduate and graduate research projects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>internships</td>
<td>UAF SFOS</td>
<td>Katie Straub, UAF School of Fisheries and Ocean Sciences, 905 N. Koyukuk, 245 O’Neill Building, Fairbanks, AK, 99775-7220</td>
<td>Internships are set up through our Fisheries academic program for about a dozen undergraduate students/yr in the Fishing Industry in AK.</td>
<td>10-20 students/yr</td>
<td></td>
</tr>
<tr>
<td>internships</td>
<td>Bristol Bay Native Association</td>
<td>Courtenay Gomez, Bristol Bay Native Association, 1500 Kanakanak Road, P.O. Box 310, Dillingham, AK, 99576 <a href="mailto:cgomez@bbna.com">cgomez@bbna.com</a>, 842-6243</td>
<td>The BBNA summer fisheries internship program provides quality educational internships in fisheries science and natural resources by hiring local students to gain professional experience working on field research projects while earning academic credit for their internship through the UAF Bristol Bay Campus. Throughout the years BBNA has successfully hosted nearly 50 summer internships with partnering organizations including the USFWS Togiak National Wildlife Refuge and fisheries field offices, Lake Clark National Park &amp; Preserve, University of Washington Alaska Salmon Program (more commonly known as UW FRI), the Alaska Department of Fish &amp; Game Division of Commercial Fisheries and Division of Subsistence amongst others. Over time BBNA has earned a positive reputation for having a highly successful internship program, with a majority of our students pursuing degree programs and careers in fisheries, science and natural resource management.</td>
<td>0-10</td>
<td>BBNA’s 31 member communities</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>-----------------------------------</td>
<td>-----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>internships</td>
<td>Yukon River Drainage Fishermen's Association</td>
<td>Jill Klein, Executive Director, Yukon River Drainage Fishermen's Association, 725 Christensen Drive, suite 3B, Anchorage, AK, 99501, <a href="mailto:jill@yukonsalmon.org">jill@yukonsalmon.org</a>, 272-3141</td>
<td>For 5 years we ran a fisheries technician training program where we offered training in how to be a fisheries technician. We discontinued due to challenges in recruitment, high expenses and too few jobs to fill. We offer a position to an intern through the First Alaskans Institute Intern program. We have hosted an intern from the Yukon River in our Anchorage office for the past three years.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>scholarships</td>
<td>APICDA</td>
<td>Laura Delgado, APICDA, 509 W. 3rd Ave, Suite 101, Anchorage, AK, 99501, <a href="mailto:ldelgado@apicda.com">ldelgado@apicda.com</a>,</td>
<td>The Higher Education Scholarship is for full time students attending college. The max award is $5,000 per year and applicants must have a historical tie to one of the APICDA communities or 5 years residency prior to applying. The Supplemental Education Scholarship is offered to applicants attending a vocational school for certification or advanced training. Applicants must live in the APICDA region and plan to return once training is completed. The award is $3,000 per calendar year.</td>
<td>over 60 students/year</td>
<td>APICDA communities/Aleutians</td>
</tr>
<tr>
<td>scholarships</td>
<td>BBEDC</td>
<td>Pearl Strub, Bristol Bay Economic Development Corporation, P.O. Box 1464, First Avenue East, Dillingham, AK, 99576 <a href="mailto:pearl@bbedc.com">pearl@bbedc.com</a>, 842-4370</td>
<td>College Development Fund provides up to $1,000 per semester to students working towards a degree attending college part-time through UA or APU.Student Loan Forgiveness program for CDQ residents returning to a CDQ community for employment eligible for up to $20,000 student loan repayment over a five year period.</td>
<td>more than 50</td>
<td>Bristol Bay 17 CDQ communities</td>
</tr>
<tr>
<td>scholarships</td>
<td>BBEDC</td>
<td>Pearl Strub, Bristol Bay Economic Development Corporation, P.O. Box 1464, First Avenue East, Dillingham, AK, 99576 <a href="mailto:pearl@bbedc.com">pearl@bbedc.com</a>, 842-4370</td>
<td>Harvey Samuelsen Scholarship Trust provides scholarships to students attending college full-time</td>
<td>more than 50</td>
<td>Bristol Bay 17 CDQ communities</td>
</tr>
<tr>
<td>scholarships</td>
<td>BBEDC</td>
<td>Pearl Strub, Bristol Bay Economic Development Corporation, P.O. Box 1464, First Avenue East, Dillingham, AK, 99576 <a href="mailto:pearl@bbedc.com">pearl@bbedc.com</a>, 842-4370</td>
<td>Long term vocational training programs provided scholarships to CDQ residents up to $5,000 per year. Short term vocational training program provides up to $1,500 for residents attending trainings less than 7 days in duration.</td>
<td>more than 50</td>
<td>Bristol Bay 17 CDQ communities</td>
</tr>
<tr>
<td>scholarships</td>
<td>Central Bering Sea Fishermen's Association</td>
<td>Rena Kudrin, CBSFA, PO Box 288, St. Paul Island, AK, 99660, <a href="mailto:rkudrin@cbsfa.com">rkudrin@cbsfa.com</a>, 546-2597</td>
<td>We have a Scholarships and training grant to students for full time schooling from St. Paul Island to go on to a full accredited colleges.</td>
<td></td>
<td>St. Paul</td>
</tr>
<tr>
<td>scholarships</td>
<td>Chugach Regional Resources Commission</td>
<td>Ida Hildebrand and Hanna Eklund, CRRC, 6200 Lake Otis Parkway, Suite 201, Anchorage, AK 99507, <a href="mailto:idah@crccalaska.org">idah@crccalaska.org</a>, <a href="mailto:hanna@crccalaska.org">hanna@crccalaska.org</a>, 562-6647</td>
<td>We work in conjunction with the Chugach Alaska Corporations Heritage Fundation that provides scholarships to its shareholders, and village residents.</td>
<td></td>
<td>Prince William Sound communities; Cordova-Eyak; Port Graham; Nanwalek; Seward-Quetekck Tribe; Valdez Tribe; Tattlek; Chenega</td>
</tr>
<tr>
<td>scholarships</td>
<td>Coastal Villages Region Fund</td>
<td>Dawson Hoover, Coastal Villages Region Fund, 711 H Street, Ste 200, Anchorage, AK, 99501, <a href="mailto:dawson_h@coastalvillages.org">dawson_h@coastalvillages.org</a>, 278-5151</td>
<td>Scholarships: Our scholarship program provides a total of up to $500,000 in funding annually for residents at the university and vocational trade schools levels on a long-term (semester +) basis. On average, at least 90 students are funded through this program annually.</td>
<td>more than 50</td>
<td>20 communities in CVRF region</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>-----------------------------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>scholarships</td>
<td>NOAA</td>
<td>Melissa Mountcastle, NOAA Fisheries, Alaska Region, 709 West 9th Street, PO Box 21668, Juneau, AK, 99802, <a href="mailto:Melissa.Mountcastle@noaa.gov">Melissa.Mountcastle@noaa.gov</a>, 586-7640</td>
<td>Undergraduate Scholarship Program--The goal of this program is to increase the number of students who undertake course work and graduate with degrees in the targeted areas integral to NOAA’s mission. This program targets junior and senior year students who attend Minority Serving Institutions (MSIs) and have recently declared, or about to declare a major in a atmospheric, oceanic, or environmental science discipline.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>scholarships</td>
<td>NOAA</td>
<td>Melissa Mountcastle, NOAA Fisheries, Alaska Region, 709 West 9th Street, PO Box 21668, Juneau, AK, 99802, <a href="mailto:Melissa.Mountcastle@noaa.gov">Melissa.Mountcastle@noaa.gov</a>, 586-7640</td>
<td>Employee Tuition/Fee Assistance -- A maximum of $4,000 per academic year is provided to each scholar to cover the costs of actual tuition and fees and other allowable expenses approved by the program sponsor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>scholarships</td>
<td>NOAA</td>
<td>Ida Hildebrand and Hanna Eklund, CRRC, 6200 Lake Otis Parkway, Suite 201, Anchorage, AK 99507, <a href="mailto:idah@crrcalaska.org">idah@crrcalaska.org</a>, <a href="mailto:hanna@crrcalaska.org">hanna@crrcalaska.org</a>, 562-6647</td>
<td>We work in conjunction with the Chugach Alaska Corporations Heritage Fundation that provides scholarships to its shareholders, and village residents. In addition, we are developing a K-12 Science curriculum that incorporates Traditional Knowledge from the Prince William Sound area; and are developing a college-level textbook on Tribal Management of Natural Resources from a Tribal perspective.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>scholarships</td>
<td>NOAA Fisheries Alaska Region</td>
<td>Melissa Mountcastle, NOAA Fisheries, Alaska Region, 709 West 9th Street, PO Box 21668, Juneau, AK, 99802, <a href="mailto:Melissa.Mountcastle@noaa.gov">Melissa.Mountcastle@noaa.gov</a>, 586-7640</td>
<td>Alaska Tsunami Bowl -- $5,000 per year total for academic competition for high school students who excel in math and science and are interested in ocean sciences.</td>
<td></td>
<td>Stebbins, St. Michael, Unalakleet, Shaktokilik, Koyuk, Elim, Golovin White Mountain, Nome, Teller, Brevig Mission, Nome, Savoonga, Gambell, Little Diomede</td>
</tr>
<tr>
<td>scholarships</td>
<td>NSEDC</td>
<td>Jerry Ivanoff, Norton Sound Economic Development Corporation, Box 193, Unalakleet, AK, 99684, <a href="mailto:jerry@nsedc.com">jerry@nsedc.com</a>, 624-3190</td>
<td>The Norton Economic Development Corporation Education, Employment, and Training Department provides $2,000.00 per semester to our residents of the region in post-secondary education (collegiate or vocational). We provide training in entry level seafood processing for working with our partner, Glacier Fish Company.</td>
<td>more than 50</td>
<td>Stebbins, St. Michael, Unalakleet, Shaktokilik, Koyuk, Elim, Golovin White Mountain, Nome, Teller, Brevig Mission, Nome, Savoonga, Gambell, Little Diomede</td>
</tr>
<tr>
<td>scholarships</td>
<td>NW Arctic Borough</td>
<td>Ukallaysaq Okleasik, NW Arctic Borough, PO Box 1110, Kotzebue, AK 99752, <a href="mailto:tokleasik@nwabor.org">tokleasik@nwabor.org</a>, 442-2500</td>
<td>Frank R. Ferguson Scholarship Program. NW Arctic Borough Code Title 2.60.020 Scholarship awards. A. For accredited academic schools: No individual award may exceed $1,000 per semester or exceed $750.00 per quarter for full-time students; nor exceed $350.00 per semester or $200.00 per quarter for part-time students. For vocational or technical schools: No individual award may exceed $500.00 per training session under three months in length; nor exceed $1,000 per training session over three months in length.B. The awards of the committee shall be reported to the assembly.C. In conjunction with the requirements of this chapter the committee may take into consideration financial need, outstanding performance and community service in making its awards. (Ord. 07-08 § 1, 2007; Ord. 06-05 § 1, 2006; Ord. 03-10 § 2, 2003; Ord. 03-01 § 1, 2003; Ord. 89-20 § 1, 1989; Ord. 88-04 § 1, 1988; Code 1986 § 6.36.030)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>-----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>scholarships</td>
<td>NSEDC</td>
<td>Jerry Ivanoff, Norton Sound Economic Development Corporation, Box 193, Unalakleet, AK, 99684, <a href="mailto:jerry@nseedc.com">jerry@nseedc.com</a>, 624-3190</td>
<td>The Norton Economic Development Corporation Education, Employment, and Training Department provides $2,000.00 per semester to our residents of the region in post-secondary education (collegiate or vocational. We provide training in entry level seafood processing for working with our partner, Glacier Fish Company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studying Biology</td>
<td>University of Alaska Anchorage Department of Biological Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studying Fisheries as an undergrad or getting a graduate degree in fisheries, marine biology or oceanography</td>
<td>University of Alaska Fairbanks School of Fisheries and Ocean Sciences</td>
<td>Michael Castellini, Interim Dean, UAF School of Fisheries and Ocean Sciences, Fairbanks, AK 99775, <a href="mailto:mikec@ims.uaf.edu">mikec@ims.uaf.edu</a>, 474 7210</td>
<td>UAF’s School of Fisheries and Ocean Sciences offers a BS and a BA in Fisheries with an experiential component and the ability to finish the degree in either Juneau or Fairbanks. SFOS also has MS and PhD programs in Fisheries, Marine Biology and Oceanography.</td>
<td>Approximately 75 undergraduates and 160 graduate students</td>
<td>statewide and national/international students</td>
</tr>
<tr>
<td>Studying biology at a university level</td>
<td>University of Alaska Anchorage Alaska Native Science and Education Program (ANSEP)</td>
<td>Beth Spangler, ANSEP/ USFWS, 3211 Providence Drive, 200 D1, Anchorage, AK, 99508, <a href="mailto:beth_spangler@fws.gov">beth_spangler@fws.gov</a>, 786-1074</td>
<td>ANSEP is a longitudinal model that works with students from the time they are in middle school all the way through to the PhD. We increase university recruitment and retention rates through hands-on middle and high school outreach initiatives, rigorous summer bridging programs, focused academic learning communities, organized student cohorts, networks of peer and professional mentors, community based learning, professional internships, and undergraduate and graduate research projects.</td>
<td></td>
<td>statewide in rural communities</td>
</tr>
<tr>
<td>Studying Biology at a university level</td>
<td>UAS Sitka</td>
<td>Jan Straley, UAS, Sitka Sound Science Center, Sitka WhaleFest, Sitka, AK, 99835 <a href="mailto:jmstrale@uas.alaska.edu">jmstrale@uas.alaska.edu</a>,747 7779</td>
<td>UAS-Connecting Pacific Pathways through Research, Education and Experience in the SciencesStudents participate as a group of peers in distance-delivered and field courses based upon a central unifying theme connecting marine and terrestrial pathways in the North Pacific. Courses include aquaculture training (partner with UAS Ket Fish Tech) and a research-directed course using molecular techniques to answer ecological questions concerning how changing climate impacts terrestrial and marine systems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>-----------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>One year Certificate or Two year AAS Degree in Fisheries Technology</td>
<td>University of Alaska Southeast Fisheries Technology Program</td>
<td>Kate Sullivan and Barbara Morgan, University of Alaska Southeast Ketchikan, 2600 Seventh Avenue, Ketchikan, AK, 99901; <a href="mailto:kate.sullivan@uas.alaska.edu">kate.sullivan@uas.alaska.edu</a>; <a href="mailto:barbara.morgan@uas.alaska.edu">barbara.morgan@uas.alaska.edu</a>; 228-4565</td>
<td>The University of Alaska Southeast Ketchikan campus Fisheries Technology Program offers both a one year Fisheries Technology Certificate and a two year Fisheries Technology Associate of Applied Science (AAS options). Both provides students with a broad educational and practical foundation in the field of fisheries technology. Students will be prepared for entry level employment in federal and state agencies, hatcheries, and the private sector. Students may elect a certificate with a fish culture or fisheries management emphasis. The AAS degree is designed to be a transfer degree to baccalaureate degree programs. The program also provide short courses that aim to serve specific needs of various fisheries sectors in SE Alaska. Short courses and workshops vary from year to year and are offered as funding allows and as needs emerge as identified by industry sectors. The classes for the AAS and Certificate are fully distance delivered and all required general ed requirements are available by distance, making the degrees accessible across Alaska.</td>
<td>currently 39 students enrolled</td>
<td>statewide, mostly Southeast students</td>
</tr>
<tr>
<td>One-year Certificate in Environmental Studies or 1.5 year in Renewable Resources</td>
<td>University of Alaska Fairbanks, Bristol Bay Campus</td>
<td>Todd Radenbaugh, UAF Bristol Bay Campus, PO Box 1070, Dillingham, AK 99576; <a href="mailto:taradenbaugh@alaska.edu">taradenbaugh@alaska.edu</a> 842-5109</td>
<td>Offer an Environmental Science Certificate and Renewable Resource AAS Degree Info can be found at: <a href="http://www.uaf.edu/bbc">http://www.uaf.edu/bbc</a> and <a href="http://www.uaf.edu/bbesl/">http://www.uaf.edu/bbesl/</a>. The Environmental Studies Certificate and Renewable Resources AAS Degree Programs increase opportunities for Bristol Bay and Alaska Native students to participate in research and community development programs that are directly related to the ecosystem health of Bristol Bay. The programs are designed to provide university degrees that include experiential learning and research that can address how rural communities adjust to wide-ranging landscape changes. Three main objectives: (1) to develop environmental and renewable resource projects in collaboration with local businesses and regional entities; (2) to increase local expertise by involving undergraduate students in local research projects and internship opportunities (ecosystem health, sustainable energy, food production, and watershed management); and (3) to explore economic development projects and careers that are related to the health in rural communities.</td>
<td>10-20 students each year</td>
<td>32 communities in the Bristol Bay region and rural Alaskans served through CRCD</td>
</tr>
<tr>
<td>Bachelors Degree in Marine Biology</td>
<td>Alaska Pacific University</td>
<td></td>
<td>The BA in Marine Biology at APU is offered for students who want an education founded in the Liberal Arts, but who have a strong interest in Marine Biology. Students earning this degree will be well prepared for careers in public policy, business, law, or other professional areas, particularly where these areas intersect with the marine world, such as the seafood industries. This degree is also excellent preparation for students who want to enter graduate school or entry-level professional work in marine biology, fisheries science, or aquarium science.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors Degree in Marine Biology</td>
<td>University of Alaska Southeast, Department of Biology</td>
<td></td>
<td>UAS offers a BA and a BS in Biology. A BS in Marine Biology is also offered. These programs share permanent faculty with specialties in marine ecology, behavioral ecology, marine mammalogy, marine pollution, crustacean physiology, and marine phycology. Students can also get a BA/BS in Fisheries through UAF’s &quot;Two-Plus-Two&quot; program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>-----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>marine technology training</td>
<td>Alaska Vocational Technical Education Center AVTEC</td>
<td>Robert Thomas, AVTEC - Alaska's Institute of Technology, P. O. Box 889, Seward, AK, 99664, <a href="mailto:robert.thomas@avtec.edu">robert.thomas@avtec.edu</a>, 224–6194</td>
<td>We provide 20 different training programs running from 1 day to 12 weeks. They provide entry level training for mariners in both Deck and Engineering. We also offer advanced level training courses for licensed Deck Officers.</td>
<td>more than 50</td>
<td>statewide</td>
</tr>
<tr>
<td>marine technology training</td>
<td>Native Village of Eyak</td>
<td>Keith van den Broek, Native Village of Eyak, PO Box 1388, Cordova, AK, 99574, <a href="mailto:keith@nveyak.org">keith@nveyak.org</a>, 424-7738</td>
<td>on the job training for fisheries technicians and interns includes 1st aid, CPR, swiftwater safety, boating safety, bear safety, firearms handling, fish sampling methodology, overview of fisheries management systems.</td>
<td>0-10</td>
<td>NVE region</td>
</tr>
<tr>
<td>marine technology training</td>
<td>UAA Prince William Sound Community College</td>
<td>Alan Sorum, PWSCC, P. O. Box 97, Valdez, AK, 99686, <a href="mailto:asorum@pwscc.edu">asorum@pwscc.edu</a>, 255-3217</td>
<td>AAS degree in Technology, OSHA training, marine oil spill responder training</td>
<td>more than 50</td>
<td>Valdez, Cordova, Whittier, Seward, Kodiak</td>
</tr>
<tr>
<td>marine technology training</td>
<td>UAF Alaska Sea Grant Marine Advisory Program</td>
<td>Paula Cullenberg, Program Leader, Alaska Sea Grant Marine Advisory Program, UAF, 1007 W. 3rd Ave, Suite 100, Anchorage, AK 99501, <a href="mailto:paula.cullenberg@alaska.edu">paula.cullenberg@alaska.edu</a>, 274-9692.</td>
<td>Technical training and assistance to marine users across the state including: Fishermen (financial management training, gear use, direct marketing, marine refrigeration), Seafood Processors (HACCP, Just in Time handling, Leadership training), Harbor operators (rat eradication)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>marine technology training</td>
<td>University of Alaska Southeast</td>
<td>Dale Miller, Assistant Professor of Marine Transportation, UAS Ketchikan, 600 Steadman Dr., Ketchikan, 228-4575, <a href="mailto:dale.miller@uas.alaska.edu">dale.miller@uas.alaska.edu</a></td>
<td>The Marine Transportation Occupational Endorsement provides training for mariners to advance in the wide variety of positions and vessels in the marine industry. The courses and instructor are US Coast Guard approved for testing in class and articulate with the AAS in Marine Transportation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>marine technology training</td>
<td>University of Alaska Southeast</td>
<td>Dale Miller, Assistant Professor of Marine Transportation, UAS Ketchikan, 600 Steadman Dr., Ketchikan, 228-4575, <a href="mailto:dale.miller@uas.alaska.edu">dale.miller@uas.alaska.edu</a></td>
<td>Occupational Endorsement in Marine Engine Room Preparation, including diesel engines, refrigeration, hydraulics, heavy electrical systems, welding, safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>marine technology training</td>
<td>University of Alaska Southeast</td>
<td>Dale Miller, Assistant Professor of Marine Transportation, UAS Ketchikan, 600 Steadman Dr., Ketchikan, 228-4575, <a href="mailto:dale.miller@uas.alaska.edu">dale.miller@uas.alaska.edu</a></td>
<td>Occupational Endorsement in Welding. These occupational endorsements (O.E.) are based upon the American Welding Society Endorsed National Center for Construction Education and Research (NCCER). The mission of the AWS Welding O.E. is to prepare students to meet the need for industrial applications and welding in the workplace.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>Native Village of Eyak</td>
<td>Keith van den Broek, Native Village of Eyak, PO Box 1388, Cordova, AK, 99574, <a href="mailto:keith@nveyak.org">keith@nveyak.org</a> 424-7738</td>
<td>1 FT Tribal Biologist, ~8 FT Seasonal Fisheries Research Technicians, ~2 FT/PT Seasonal NR Interns. AK Native Hiring Preference, emphasis on local advertising for local hire (Cordova, Prince William Sound, Copper Basin)</td>
<td>Try for local hire (Cordova, Prince Williams Sound, Copper Basin)</td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>Alaska Department of Fish and Game</td>
<td>Deborah Hart, Alaska Department of Fish and Game, PO Box 110024, Juneau, AK, 99811-0024, <a href="mailto:deborah.hart@alaska.gov">deborah.hart@alaska.gov</a>, 465-1191</td>
<td>Fish/Wildlife Technicians Wildlife Physiologist Fish/Wildlife Biologist Veterinarian Fish/Wildlife Scientist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>-----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>employment</td>
<td>Alaska Sea Grant Marine Advisory Program</td>
<td>Paula Cullenberg, Program Leader, Alaska Sea Grant Marine Advisory Program, UAF, 1007 W. 3rd Ave, Suite 100, Anchorage, AK 99501, <a href="mailto:paula.cullenberg@alaska.edu">paula.cullenberg@alaska.edu</a>, 274-9692.</td>
<td>The Alaska Sea Grant Marine Advisory Program is an extension service through the University of Alaska Fairbanks Schools of Fisheries and Ocean Sciences. The program is supported by NOAA and the University of Alaska with funds appropriated by the State of Alaska. Sixteen extension agents live and work in 10 coastal communities with marine resource users from all aspects.</td>
<td>20</td>
<td>We are a community development group (CDQ) and seek out residents from our communities for our jobs. Our communities include: Atka, Akutan, False Pass, Nelson Lagoon, St. George and Unalaska</td>
</tr>
<tr>
<td>employment</td>
<td>Aleutian Pribilof Island Community Development Association (APICDA)</td>
<td>Laura Delgado, APICDA, 509 W. 3rd Ave, Suite 101, Anchorage, AK 99501, <a href="mailto:ldelgado@apicda.com">ldelgado@apicda.com</a>,</td>
<td>We offer approximately 30 positions related to fish processing from management to processor. We offer approximately 10-15 positions on our vessels from skipper to deckhand. These jobs are seasonal. We also assist residents from our region with employment with larger fish companies. These jobs and time frames vary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>Bristol Bay Economic Development Corporation</td>
<td>Pearl Strub, Bristol Bay Economic Development Corporation, P.O. Box 1464, First Avenue East, Dillingham, AK, 99576 <a href="mailto:pearl@bbedc.com">pearl@bbedc.com</a>, 842-4370</td>
<td>BBEDC hires seasonal employment positions with ADFG &amp; USFW (4), seasonal employment positions Bristol Bay Borough and City of Dillingham docks and harbors (<del>4), seasonal employment positions ice machines (2), seasonal employment BBSRI (9) Full-time Regional Fisheries Coordinator Full-time Economic Development &amp; Brokerage Coordinator Full-time Economic Development 7 Brokerage Assistant Coordinator</del>10 Seasonally Bristol Bay Science and Research Institute, ~5 Seasonally to work at the docks and harbors, 2 Seasonally for ADFG,2 Seasonally USFW</td>
<td>17 scientists, about 30 others operating BBEDC</td>
<td>Bristol Bay 17 CDQ communities: Aleknagik, Clarks Point, Dillingham, Egegik, Ekwok, Euk, King Salmon, Levelock, Manokotak, Naknek, Pilot Point, Port Heiden, Portage Creek, South Naknek, Togiak, Twin Hills, Ugashik</td>
</tr>
<tr>
<td>employment</td>
<td>Bristol Bay Native Association</td>
<td>Courtenay Gomez, Bristol Bay Native Association, 1500 Kanakanak Road, P.O. Box 310, Dillingham, AK, 99576 <a href="mailto:cgomez@bbna.com">cgomez@bbna.com</a>, 842-6243</td>
<td>Subsistence Fisheries Scientist - 1 full-time permanent position (my current position) Fisheries Education Coordinator - 1 part-time project position (Sidney Nelson) Summer Fisheries Interns - 2010 seven interns successfully completed the program</td>
<td></td>
<td>BBN A is an EOO but also has an Indian preference clause with most of the positions...My program is specifically tailored to provide educational employment opportunities to Bristol Bay students interested in educational/career paths relating to fisheries, natural resource management and other sciences.</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>employment</td>
<td>Central Bering Sea Fishermen's Association</td>
<td>Rena Kudrin, CBSFA, PO Box 288, St. Paul Island, AK, 99660, <a href="mailto:rkudrin@cbfsa.com">rkudrin@cbfsa.com</a>, 546-2597</td>
<td>Halibut fishermen, positions at CBSFA</td>
<td></td>
<td>St. Paul Island</td>
</tr>
<tr>
<td>employment</td>
<td>Chugach Regional Resources Commission</td>
<td>Ida Hildebrand and Hanna Eklund, CRRC, 6200 Lake Otis Parkway, Suite 201, Anchorage, AK 99507, <a href="mailto:idah@crccalaska.org">idah@crccalaska.org</a>, <a href="mailto:hanna@crccalaska.org">hanna@crccalaska.org</a>, 562-6647</td>
<td>Hatchery operations in Seward varies -3-5; village specific summer/seasonal fishing studies, weirs, egg counts etc. varies 6 or more, mostly technicians.</td>
<td></td>
<td>Native preference in all hires and local residents.</td>
</tr>
<tr>
<td>employment</td>
<td>Coastal Village Region Fund</td>
<td>Dawson Hoover, Coastal Villages Region Fund, 711 H Street, Ste 200, Anchorage, AK, 99501, <a href="mailto:dawson_h@coastalvillages.org">dawson_h@coastalvillages.org</a>, 278-5151</td>
<td>CVRF hires 225 positions at the Goodnews Bay Regional Seafood Processing Plant, 25 + positions at six Coastal Villages Seafoods halibut plants (in-region), 35 + full and part-time year-round positions at our various region offices, 25 + positions on our various in-region fleet, 27 + positions on our four crab boats, 70 + positions on our cod longliners, 135 positions on our pollock catcher/processor - various at-sea and on-shore processing job recruiting for industry partners</td>
<td>hundreds</td>
<td>CVRF 20 villages and other villages</td>
</tr>
<tr>
<td>employment</td>
<td>COSEE Alaska</td>
<td>Marilyn Sigman, COSEE Alaska, 1007 W. 3rd Ave, Suite 100, Anchorage, AK, 99501, <a href="mailto:mssigman@alaska.edu">mssigman@alaska.edu</a>, 274-9612</td>
<td>The COSEE Alaska project provides part-time support for one marine education specialist, one marine scientist, one marine science program coordinator, two marine educators at a research/education institutions, and two marine research/education program administrators.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>Icicle Seafoods</td>
<td>Kris Noroz, Icicle Seafoods, Inc, P.O. Box 1147, Petersburg, AK, 99833, <a href="mailto:kris@icicelseafoods.com">kris@icicelseafoods.com</a>, 772-4294, ext. 112</td>
<td>Seafood processing workers (land plants and floating processors) 2,000 We have positions as plant managers, fleet managers, vessel engineers, human resources, accountants, payroll, safety, electricians, maintenance, quality control, environmental compliance, sales, etc.</td>
<td>2,000 per year</td>
<td>all over coastal Alaska</td>
</tr>
<tr>
<td>employment</td>
<td>Kawerak</td>
<td>Rose Fosdick and Dawn Salesky, Kawerak, Inc., Box 948, Nome, AK, 99762 <a href="mailto:rfosdick@kawerak.org">rfosdick@kawerak.org</a>, <a href="mailto:dsalesky@kawerak.org">dsalesky@kawerak.org</a>, 443-5231</td>
<td>1 VP, Natural Resources Division 1 Admin Assistant 2 Eskimo Walrus Commission Staff (director, coordinator) 1 Fisheries Biologist 4 Fisheries researchers/social scientists 3 General Subsistence advocates (director, 2 coordinators/assistants)</td>
<td>15</td>
<td>Try for local hire (Cordova, Prince Williams Sound, Copper Basin)</td>
</tr>
<tr>
<td>employment</td>
<td>Native Village of Eyak</td>
<td>Keith van den Broek, Native Village of Eyak, PO Box 1388, Cordova, AK, 99574, <a href="mailto:keith@nveyak.org">keith@nveyak.org</a> 424-7738</td>
<td>1 FT Tribal Biologist, ~8 FT Seasonal Fisheries Research Technicians, ~2 FT/PT Seasonal NR Interns. AK Native Hiring Preference, emphasis on local advertising for local hire (Cordova, Prince William Sound, Copper Basin)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>NOAA Fisheries Alaska Region</td>
<td>Melissa Mountcastle, NOAA Fisheries, Alaska Region, 709 West 9th Street, PO Box 21668, Juneau, AK, 99802, <a href="mailto:Melissa.Mountcastle@noaa.gov">Melissa.Mountcastle@noaa.gov</a>,586-7640</td>
<td>NOAA Fisheries, Alaska Region is authorized 129 FTE and at this time have 120 employees. All employees support marine related programs from our Leadership to our Administrative Support Staff. The breakdown of divisions is as follows: Regional Administrator Staff: 7 NEPA/Analytical Team: 6 Administrative Appeals: 3 Restricted Access Management Program: 12 Operations &amp; Management: 12 Sustainable Fisheries: 29 Protected Resources: 15 Habitat Conservation: 14 Information Services: 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------------------------</td>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>employment</td>
<td>North Slope Borough</td>
<td>Taqulik Hepa, North Slope Borough, PO Box 69, Barrow, AK 99723; <a href="mailto:taqulik.hepa@north-slope.org">taqulik.hepa@north-slope.org</a>, 852-0350</td>
<td>Subsistence Research Coordinator (1), Wildlife Biologist (5)</td>
<td>6</td>
<td>North Slope Borough</td>
</tr>
<tr>
<td>employment</td>
<td>Northwest Arctic Borough</td>
<td>Ukallaysaq Okleasik, NW Arctic Borough, PO Box 1110, Kotzebue, AK 99752, <a href="mailto:tokleasik@nwabor.org">tokleasik@nwabor.org</a>, 442-2500</td>
<td>Yes we do hire employees in this field.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>Norton Sound Economic Development Corporation</td>
<td>Jerry Ivanoff, Norton Sound Economic Development Corporation, Box 193, Unalakleet, AK 99684, <a href="mailto:jerry@nsedc.com">jerry@nsedc.com</a>, 624-3190</td>
<td>Forty annually-seafood trawler pollock processors NSSP-@60 processors working with salmon in Unalakleet and crab &amp; halibut in Nome Six boat skippers Six deck hands, fisheries biologists at NSEDC, seafood processors at Norton Sound Seafoods</td>
<td></td>
<td>We give first preference to the Norton Sound Residents living in our member communities</td>
</tr>
<tr>
<td>employment</td>
<td>Pacific Seafood Processors Association</td>
<td>Mary McDowell, Executive Director, Pacific Seafood Processors Association, 222 Seward St, Suite 200, Juneau, AK 99801, <a href="mailto:marym@pspaish.net">marym@pspaish.net</a>, 586-6366</td>
<td>The trade association for which I work does not itself, provide employment in marine related positions, but the companies that belong to our association do. Our member companies have seafood processing facilities in dozens of locations around Alaska and employ thousands of people. They also have corporate offices in the Puget Sound area with additional employees. These companies provide employment in positions that range from entry-level, seafood processing line jobs; to skilled jobs in refrigeration, carpentry, mechanics, marine technology and so on; to professional positions in human resources, personnel management, information technology, product development, marketing, quality control, production safety, etc.</td>
<td>thousands</td>
<td>all over coastal Alaska</td>
</tr>
<tr>
<td>employment</td>
<td>Pew Foundation</td>
<td>Raychelle Daniel, Pew Environment, 725 Christensen Dr, #4, Anchorage, AK, 99501, r <a href="mailto:Daniel@pewtrusts.org">Daniel@pewtrusts.org</a>, 258-0226</td>
<td>The Pew Charitable Trusts, an independent nonprofit, Pew applies a rigorous, analytical approach to improve public policy, inform the public and stimulate civic life.</td>
<td>100</td>
<td>in Alaska 2, in US</td>
</tr>
<tr>
<td>employment</td>
<td>UAF Bristol Bay Campus</td>
<td>Debi McLean, Campus Director, UAF Bristol Bay Campus, PO Box 1485, Dillingham, AK 99976, <a href="mailto:dlmclean@alaska.edu">dlmclean@alaska.edu</a>, 842-5109</td>
<td>3 positions, 1 faculty 2 interns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>employment</td>
<td>UAF School of Fisheries and Ocean Sciences</td>
<td>Mike Castellini, Interim Dean, SFOS</td>
<td>Faculty and staff for the School of Fisheries and Ocean Sciences Approximately 60 faculty. Hire about 1/yr Approximately 150 staff in admin and research support. Hire about 5/yr</td>
<td></td>
<td>about 5 hired/yr</td>
</tr>
<tr>
<td>Are You Interested in?</td>
<td>Program/Organization</td>
<td>Contact Information</td>
<td>Program/Organization Description</td>
<td>Number of people</td>
<td>Region of State Served</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------------------------</td>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>employment</td>
<td>Yukon River Drainage Fishermen's Association</td>
<td>Jill Klein, Executive Director, Yukon River Drainage Fisheries Association, 725 Christensen Drive, suite 3B, Anchorage, AK, 99501, <a href="mailto:jill@yukonsalmon.org">jill@yukonsalmon.org</a>, 272-3141</td>
<td>We provide employment for in-river related programs. We hire people to conduct in-river subsistence harvest assessments during the salmon fishery with active fishers on a weekly basis; we hire people to assist ADFG in their post-season salmon harvest surveys (they work for 1 hour to 1 day to be a local assistant to the ADFG crew member). We also hire people for marine debris beach clean-ups. In the past we have hired people to work as fisheries technicians with fisheries research and monitoring projects. We hire from communities directly through Alaska Native tribal councils or through individuals, primarily Alaska Native that reside in Yukon River communities where we conduct projects or assist with state and federal projects that require a local assistant.</td>
<td>We hire from communities directly through Alaska Native tribal councils or through individuals, primarily Alaska Native that reside in Yukon River communities where we conduct projects or assist with state and federal projects that require a local assistant.</td>
<td></td>
</tr>
</tbody>
</table>
Comments from Workshop Participants: What do you feel are the educational or training priorities to be considered in the development of NOAA's North Pacific Marine Education and Training Program?

Priorities should be given for those areas in which there are jobs available, particularly in coastal communities and Alaska. We need better coordination between Ak Dept. of Labor & Workforce Development, the University of Alaska, voc ed institutions, and employers to identify available jobs, available education/training/internships, identify and fill gaps, and get folks in the pipeline to qualify for and fill these jobs. Hopefully this workshop will be a good start to getting us to where we need to be.

From the perspective of the seafood processing sector, I would like to look at ways to develop an approach to determining and tracking skilled labor needs across the industry and forming a coordinated approach to working with educational institutions (high schools, vocational schools, and colleges) to offer customized coursework to meet those needs, recruiting students into that training, and providing employment placement services. At any given time, any given company may need only one or two new employees with a particular skill (fillet machine technicians, refrigeration specialists, marine engine mechanics, quality control personnel, or whatever). However, across industry, there may be a total need for many people with a particular skill. I would like to investigate the feasibility of a coordinated approach to figuring that out, crafting and offering appropriate training opportunities, and advertising those opportunities. Additionally, I would like to see some effort put into letting junior and senior high school students in Alaska know about employment opportunities (seasonal, unskilled, year-round, and skilled) in the seafood industry so that they can begin considering those opportunities early. Such an outreach effort could include information about seafood processing industry opportunities as well as opportunities in marine sciences, fisheries management, etc. so students learn about the array marine related employment opportunities and can begin to zero in on those that may be most appropriate and of most interest to them. I would also like to see more emphasis in Alaska high schools and in post-high school programs on general "employment readiness" skills.

Supporting middle school and high school programs that create excitement and empowerment around science and mathematics. Supporting programs that encourage and mentor students pursuing careers in the sciences. Supporting programs designed to increase the number of students graduating with BS/MS/PhD degrees in the sciences.

Priority should be given to projects that will improve education, training, and communications on marine resource issues throughout the region and increase scientific education for marine-related professions in Alaska. Examples of training priorities would be: Marine Science and Technology, Fisheries and Seafood-related Training, Technology, Local and Traditional Knowledge, and Development of Partnerships.

Broad aspects of fisheries from research to applied issues Role of science in policy decisions

To train managers and students of the how to sustainably manage our finite but renewable marine resources including the coastlines and estuaries Train students to collect and interpret the scientific data that is essential for sustainable conservation, management, and scientific understanding Alaskan fishery resources

To present this Act to the students, it is vital that appropriate materials be developed that not only address the critical issues in the Act, but also the "language of the act." Strategies that encourage the development of knowledge and language should be coupled in any materials developed.

Fisheries and Marine Science education both at the K-12 and university level are the most important aspect of the MSA. We need to facilitate the education of Alaskans to be able to fill fisheries and marine science jobs of all types.
Comments from Workshop Participants: What do you feel are the educational or training priorities to be considered in the development of NOAA's North Pacific Marine Education and Training Program?

Fisheries technicians fisheries processing technicians environmental studies traditional ecological knowledge

Outreach to residents on job opportunities and how training will assist them in gaining employment.

Establishing and fostering partnerships between interested parties in Alaska so they may more fully understand NOAA fisheries and more efficiently work with the NOAA structure of funding and partnerships.

Broad aspects of fisheries from research to applied issues Role of science in policy decisions

Community level capacity building in understanding fisheries management by federal and state agencies Research programs that directly involve communities in understanding management and impacts Boating safety and commercial fisheries training with communities for economic benefits to rural Alaska

Not ready to comment on this until after the workshop. I believe every community has different needs, and local program coordinators should be placed in each community to ensure these needs are being met.

I think preparing middle school and high school students for college and graduate level programs in marine science or fisheries management should be a top priority. I also think that expanding marine training programs (for those that are not interested in a four-year degree) to rural, coastal AK communities should be a priority. I think we need to expand those types of opportunities (2-year programs, certificate programs, etc) that would allow kids to have the experience and education to work in fisheries management agencies that are close to home. Using on-line training programs would be ideal for rural communities.

I think my primary priority or concern is that it seems like programs such as mine and others with similar missions/goals around Alaska do a great job at recruiting students into fisheries and marine sciences but where I fall short is retaining these students into the local workforce. All of our program interns who have gone on to graduate with their Bachelor's have taken positions outside of the Bristol Bay region (except for myself) or have taken graduate student opportunities on project that do not focus on our regional fisheries. I think it's great that they have employment and educational opportunities available to them, however I think it's equally important that there are positions available for them to move home to. Many organizations such as BBN, BBEDC, and BBNC provide scholarships to students who are pursuing fisheries and marine educational career paths with the hopes of moving home to put their educations to use to manage their local species and benefit the economy and society of their home region...well what happens when these students graduate and we have to say, "Sorry you need to apply for jobs in Anchorage, Juneau, and Fairbanks because there just isn't anything available to you out here in Bristol Bay." Not one professional level fisheries scientist/researcher working on Bristol Bay fisheries in the Dillingham ADFG or USFWS offices is local...meaning born/raised in Bristol Bay.

Training and education programs that span students from high school through college or addition CTE and then on to the workplace.

Rural community residents should be provided opportunities to be involved in training and education for marine related positions, such as: tug boat captains, large boat captains, fish processing and marketing, commercial fisheries marine mammal observers, satellite telemetry and mapping of sea ice, ship mechanics, maintenance and repair, underwater camera operation, diving, sea mammal research. The communities in Northwest Alaska are all located on the coast because of our high dependance on the ocean as a means of transportation and plentiful supply of food resources. These community residents have an inherent knowledge and interest in the oceans. If opportunities come up for training and educating people for marine positions, small communities should be well aware of the opportunities and be provided information on how to apply.

I think that it is important that we fill marine and fisheries related positions with home-grown residents. There is a multi-billion dollar seafood industry in Alaska that is largely staffed and managed by lower-48 residents. I think that our coastal Alaskan residents should be armed with the skills, experience, and specialized training that would make than an invaluable component of our seafood industry.
Comments from Workshop Participants: What do you feel are the educational or training priorities to be considered in the development of NOAA's North Pacific Marine Education and Training Program?

The focus must include the major Rivers in Alaska and all the communities that depend on the fish that migrate and spawn in their major rivers and tributaries; and education must begin with K-12; if students are not familiar with fisheries/mariene careers, science, education, they will not be inclined to go into these fields in college or technical training. It seems that NOAA only focuses on ocean catches; and totally ignores the whole ecosystem of the fish, and that fish do not spawn in the oceans, they spawn in rivers, tributaries and inland; all of which impacts each community and user on the river systems. NOAA also places great weight on the commercial/monetary value of careers and users who are commercial fishers, ignoring, the equally valuable and resource dependent subsistence users, whose livelihood also depend perhaps even more dramatically on these resrouces. Although much lip service is given to Native users, Traditional Knowledge and their incorporation; and NOAA receives millions for this; it is not happening; Native groups are not receiving these funds; partnerships are not being formed; co-management is sparse if it exists at all.

There needs to be a whole pathway developed from certificates on up to PhD's.

Perhaps the biggest challenge is to make the program desirable to both candidates and mentors. Specifically, 1) minimize administrative work load imposed on prospective mentors to minimize burden of getting involved and implementing the program, 2) early planning so that if things like use of "non-perm" positions are required that a pool of such postions be available to the mentor before the recruitment process begins, 3) streamlined process for speed and ease of hiring (if a mentor knows a good candidate, they should be able to simply hire them without having to go through a recruitment process) 4) and flexibility to adapt to changing conditions and needs of the mentors and the skills/needs of the intern.

Providing a place for students to gain hands-on experience in any science related field is vital to nurturing the next generation's interest in marine science and science related positions. In addition, ensuring adequate educational opportunities (i.e. good science curriculum/teachers) is key in supporting those students once they have developed an interest in the sciences. Agencies such as fish and game can provide internship opportunities, but in order for it to be a well rounded opportunity that is set up for success, access to a good science curriculum and academic support are essential.

Rural and Indigenous Peoples receiving degrees in marine- and ocean-related programs should be a priority at this meeting. How to do that will be the focus of many of the discussions at the meeting. Open and innovative solutions should be examined. There needs to be a good roadmap of how students can get through these degree programs and all the help they will need, needs to be defined. For example, if they need help in biology, that help should be there for them to get through these programs. In addition, the use of traditional knowledge should be examined to find out if being grounded in traditional knowledge and wisdom helps students better understand western biology and marine science concepts.

Safety training should be the number one priority in my mind.

Multiple entry points to the education and training required for a broad array of potential careers, opportunities in both formal (K-16) and informal education settings, a coordinated system to make resources accessible to life-long learners to continue their education and training, technology training that keeps pace with the rate of change in technology.

Supporting middle school and high school programs that create excitement and empowerment around science and mathematics. Supporting programs that encourage and mentor students pursuing careers in the sciences. Supporting programs designed to increase the number of students graduating with BS/MS/PhD degrees in the sciences.
Comments from Workshop Participants: What do you feel are the educational or training priorities to be considered in the development of NOAA's North Pacific Marine Education and Training Program?

Education and training for Alaska Natives and rural Alaskans living along the Yukon River and in other rural places to be able to fill jobs in their communities as part of a comprehensive economic development plan. Education to create local fisheries managers from the Yukon River; not only to train local people as technicians but to enable them to be managers. UAF has great programs and money for recruitment but not many Yukon River students are in the fisheries program. A training program or education to enable local Yukon River residents to work with university fisheries field research projects that should be on-going due to continued rotation of students through the programs. Education and training in traditional ecological knowledge and how to integrate this with western scientific knowledge. Learning about climate change and how to create local monitoring programs to detect changes to the environment.

Consideration of National Ocean Policy, and what it means for Alaska. I also think that the education/training program should recommend that Traditional Knowledge should be included with the SCC. There should be a position on the SCC for TK.

There are many great programs in University, agency, and other organizations to recruit and train Alaska Native and other rural Alaskan in the marine and fisheries sciences, and I believe this workshop will be important step forward in trying to bring those various efforts together, identifiable the gaps, and identify programs to meet those needs. Equally important, is that aspect of the Section 109 that related to the development of a "means by which local and traditional knowledge (including Pacific Islander, Native Hawaiian, and Alaska Native knowledge) can enhance science-based management of fisheries." To some, this may be one of the most challenging components of the training program. However, this is very important to many rural communities, and I hope will be recognized by both the NMFS and NPFMC as a program priority. Fisheries managers have made progress in this areas, but there is a lot a room for improvement. I hope that this workshop will develop and prioritize programs or actions that NMFS, NPFMC, and others can take to enhance community involvement and use of LTK in the management process.

Long-term training with application deadlines - Geared towards providing future workforce participants/leaders in the field - Short-term training with an open-application period - Geared towards providing current workforce participants/leaders in the field - Youth component for various outreach opportunities to build interest

Many Alaskans live subsistence lifestyles and, in coastal communities, are dependent upon the ocean for food or jobs are unaware of ongoing marine research critical to Alaska’s economy and their livelihoods, but have insight into the natural world from local knowledge. These Alaskans will be experiencing and adjusting to an inevitable changing ocean system. For this reason, it is necessary for Alaskans living in coastal communities to have a diverse and rich understanding of ecological forces, hear about new and ongoing ocean research to be prepared for the future. Therefore the educational and training priorities should be focused on 1) developing programs in marine education and training including the all coastal communities of Alaska (training fisheries technicians and biologists, mentoring, bridging and internship programs, bringing scientists to communities for fellowships, citizen science) and 2) creating programs with a focus to retain and graduate students with higher education degrees in the sciences from these communities. I think these are the priorities NOAA should consider in development of the NPMETP.

I am sure that this is not the highest priority, but it is something that creates a barrier for me to become involved in working with students. Any program that partner students with NOAA's existing employees, should provide the support needed to those employees to help them make these mentoring relationships successful. That requires considering the education and training tasks and time to be a part of a person’s job, not an additional activity on top of existing responsibilities. I think many people are interested and willing to get involved in education and training programs, but that cannot take on the additional responsibility with existing workload.
Comments from Workshop Participants: What do you feel are the educational or training priorities to be considered in the development of NOAA's North Pacific Marine Education and Training Program?

I think it would be advantageous to offer grants to non-profit Alaska Native corporations to deliver services that they already provide to their community residents and tribal members which would include: - Scholarship programs for training and college which match or exceed scholarships that are already provided to students through other programs, basically doubling the amount of scholarships for those who pursue degrees or training in marine-related employment sectors - Funding for subsidized employment in marine related fields (internships) for pre-college and training and post-college and training - grants that allow non-profits or UAF rural college campuses to develop and create training programs that are tuition-free for rural students.

Educational programs for k-12 Summer internships within industry for degree seeking students (similar to ANSEP)

Hands on learning experiences like BBEDC's Salmon Camp Promoting marine science and fisheries careers through advertising using coastal region students (similar to ANSEP)

Marine Mammal Observer training opportunity Associate Degree programs in place as a stepping stone related to sciences TEK certifications/endorsements

Basic courses in scientific process of theories, chemistry, biology as it relates to coastal Alaska. Basic engineering, construction for working on docks and harbors and boat pull-outs. Project Management for longshore working or overseeing repair work on infrastructures. Coast Guard regulations and safety as related to environmental pollutants and safety work practices. Permitting processes required for getting projects, water supply systems of processing or waste disposals needed for operations. Basic operations of fish wiers and process for counting fish and monitoring harvests. Wild life counting processes and monitoring of environmental systems like rainfall, winter impacts on streams, lakes and feed for wildlife. Weather recordings. Basic transportation or seamanship credentials. Food handling regulations and requirements of processing.

Primary areas of need include undergraduate and distance curricula design, marine science lab development and access to library resources Efforts for student recruitment, retention, and educational equity; Coordinated research and community development projects that explore and determine best practices that help to find community based find solutions to local marine issues.
<table>
<thead>
<tr>
<th>First</th>
<th>Last</th>
<th>Position</th>
<th>Organization</th>
<th>E-Mail</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah</td>
<td>Arntson</td>
<td>Fish and Wildlife Careers for Alaskans Program Coordinator</td>
<td>ADF&amp;G</td>
<td><a href="mailto:sarah.arntson@alaska.gov">sarah.arntson@alaska.gov</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>Sally</td>
<td>Bibb</td>
<td>works on tribal consultation</td>
<td>NOAA Alaska Region</td>
<td><a href="mailto:sally.bibb@noaa.gov">sally.bibb@noaa.gov</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>Scott</td>
<td>Bloom</td>
<td>HI Program Coordinator</td>
<td>NOAA HI Region</td>
<td><a href="mailto:scott.bloom@noaa.gov">scott.bloom@noaa.gov</a></td>
<td>Honolulu, Hawaii</td>
</tr>
<tr>
<td>Beverly</td>
<td>Bradley</td>
<td>Program Coordinator</td>
<td>UAF Alaska Sea Grant Marine Advisory Program</td>
<td><a href="mailto:beverly.bradley@alaska.edu">beverly.bradley@alaska.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Shawn</td>
<td>Carey</td>
<td>Grants manager</td>
<td>NOAA grants manager</td>
<td><a href="mailto:shawn.carey@noaa.gov">shawn.carey@noaa.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Phyllis</td>
<td>Carlson</td>
<td>Director of Rural Education</td>
<td>Alaska Department of Education and Early Development</td>
<td><a href="mailto:phyllis.carlson@alaska.gov">phyllis.carlson@alaska.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Greg</td>
<td>Cashen</td>
<td>Workforce Investment Board</td>
<td>AK Dept of Labor and Workforce Dev</td>
<td><a href="mailto:greg.cashen@alaska.gov">greg.cashen@alaska.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Michael</td>
<td>Castellini</td>
<td>Interim Dean</td>
<td>UAF School of Fisheries and Ocean Sciences</td>
<td><a href="mailto:mcastellini@ims.uaf.edu">mcastellini@ims.uaf.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Richard</td>
<td>Caulfield</td>
<td>Provost</td>
<td>UAS</td>
<td><a href="mailto:provost@uas.alaska.edu">provost@uas.alaska.edu</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>Izetta</td>
<td>Chambers</td>
<td>MAP agent</td>
<td>UAF Alaska Sea Grant Marine Advisory Program</td>
<td><a href="mailto:izetta.chambers@alaska.edu">izetta.chambers@alaska.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Apella</td>
<td>Colorado</td>
<td>Director</td>
<td>World Wide Indigenous Science Network</td>
<td><a href="mailto:apela@wisn.org">apela@wisn.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Paula</td>
<td>Cullenberg</td>
<td>Program Leader</td>
<td>UAF Alaska Sea Grant Marine Advisory Program</td>
<td><a href="mailto:pcullenberg@uaf.alaska.edu">pcullenberg@uaf.alaska.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Raychelle</td>
<td>Danielle</td>
<td>contractor</td>
<td>Pew Trust</td>
<td><a href="mailto:rdaniel@pewtrusts.org">rdaniel@pewtrusts.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Laura</td>
<td>Delgado</td>
<td>Director</td>
<td>Aleutian Pribilof Island Development Corp.</td>
<td><a href="mailto:idelgado@apicda.com">idelgado@apicda.com</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Ginny</td>
<td>Eckert</td>
<td>Assistant Professor</td>
<td>UAF School of Fisheries and Ocean Sciences</td>
<td><a href="mailto:ginny.eckert@alaska.edu">ginny.eckert@alaska.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Rose</td>
<td>Fosdick</td>
<td>VP Natural Resources</td>
<td>Kawerak, Inc</td>
<td><a href="mailto:RFosdick@kawerak.org">RFosdick@kawerak.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Courteney</td>
<td>Gomez</td>
<td>Fisheries Partners Coordinator</td>
<td>Bristol Bay Native Association</td>
<td><a href="mailto:cgomez@bbna.com">cgomez@bbna.com</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Deborah</td>
<td>Hart</td>
<td>SouthEast Alaska Marine Fisheries</td>
<td>Commercial Fisheries, ADF&amp;G</td>
<td><a href="mailto:deborah.hart@alaska.gov">deborah.hart@alaska.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Taqulik</td>
<td>Hepa</td>
<td>Director of Wildlife Mgt</td>
<td>North Slope Borough</td>
<td><a href="mailto:taqulik.hepa@north-slope.org">taqulik.hepa@north-slope.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Adelheid</td>
<td>Herrmann</td>
<td>PhD Student/Commercial Fisherman</td>
<td>Chugach Regional Resources Commission</td>
<td><a href="mailto:herrmann@gci.net">herrmann@gci.net</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Ida</td>
<td>Hildebrand</td>
<td>Tribal Regional Resource P</td>
<td>Chugach Regional Resources Commission</td>
<td><a href="mailto:idah@crccalaska.org">idah@crccalaska.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Dawson</td>
<td>Hoover</td>
<td>Program Manager</td>
<td>Coastal Villages Region Fund</td>
<td><a href="mailto:dawson_h@coastalvillages.org">dawson_h@coastalvillages.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Jerry</td>
<td>Ivanoff</td>
<td>Training and Education Director</td>
<td>Norton Sound Economic Development Corporation</td>
<td><a href="mailto:jerry@nsedc.com">jerry@nsedc.com</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Terry</td>
<td>Johnson</td>
<td>Marine Advisory Program Specialist</td>
<td>UAF Alaska Sea Grant Marine Advisory Program</td>
<td><a href="mailto:terry.johnson@alaska.edu">terry.johnson@alaska.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Pete</td>
<td>Jones</td>
<td>Program Officer</td>
<td>NOAA Fisheries AK Region</td>
<td><a href="mailto:peter.D.Jones@noaa.gov">peter.D.Jones@noaa.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Bernice</td>
<td>Joseph</td>
<td>Vice Chancellor for Native and Rural Education</td>
<td>UAF</td>
<td><a href="mailto:bernice.joseph@uaf.edu">bernice.joseph@uaf.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Lisa</td>
<td>Kangas</td>
<td>Biologist</td>
<td>Tanana Chiefs Conference</td>
<td><a href="mailto:lisa.kangas@tananchiefs.org">lisa.kangas@tananchiefs.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Nicole</td>
<td>Kimball</td>
<td>Staff Analyst</td>
<td>North Pacific Fishery Management Council</td>
<td><a href="mailto:nicole.kimball@noaa.gov">nicole.kimball@noaa.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Bob</td>
<td>King</td>
<td>Legislative Aide</td>
<td>U.S. Senator Mark Begich's Office</td>
<td><a href="mailto:bob_king@begich.senate.gov">bob_king@begich.senate.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Jill</td>
<td>Klein</td>
<td>Executive Director</td>
<td>Yukon River Drainage Fishermens Association</td>
<td><a href="mailto:jill@yukonsalmon.org">jill@yukonsalmon.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Ruthie</td>
<td>Knight</td>
<td>Curriculum and Instruction Director</td>
<td>Valdez City Schools</td>
<td><a href="mailto:ruthie_knight@valdez.cc">ruthie_knight@valdez.cc</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Rena</td>
<td>Kudrin</td>
<td>Office Manager</td>
<td>Central Bering Sea Fisheries Association</td>
<td><a href="mailto:rkudrin@cbsfa.com">rkudrin@cbsfa.com</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Position</td>
<td>Organization</td>
<td>E-Mail</td>
<td>City</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>---------------------------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Jim</td>
<td>McDiarmid</td>
<td>curriculum writer/contractor</td>
<td>Sealaska Heritage Institute and Goldbelt Inc.</td>
<td><a href="mailto:jmacdi5600@aol.com">jmacdi5600@aol.com</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>Mary</td>
<td>McDowell</td>
<td>Vice President</td>
<td>Pacific Seafood Processors Assoc</td>
<td><a href="mailto:marym@pspafish.net">marym@pspafish.net</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>Debi</td>
<td>McLean</td>
<td>Director/Brick Bay Campus</td>
<td>UAF BB Campus CRCDS</td>
<td><a href="mailto:rfdim@uaf.edu">rfdim@uaf.edu</a></td>
<td>Dillingham</td>
</tr>
<tr>
<td>Doug</td>
<td>Mecum</td>
<td>Deputy Regional Administrator</td>
<td>NOAA Fisheries AK Region</td>
<td><a href="mailto:doug.mecum@noaa.gov">doug.mecum@noaa.gov</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>Mike</td>
<td>Miller</td>
<td>Tribal Council Member</td>
<td>Sitka Tribe of Alaska</td>
<td><a href="mailto:go2tbird@hotmail.com">go2tbird@hotmail.com</a></td>
<td>Sitka</td>
</tr>
<tr>
<td>Doug</td>
<td>Molyneaux</td>
<td>Research Biologist AYK</td>
<td>ADF&amp;G</td>
<td><a href="mailto:doug.molyneaux@alaska.gov">doug.molyneaux@alaska.gov</a></td>
<td>Anchorage/Bethel</td>
</tr>
<tr>
<td>Catherine</td>
<td>Moncrieff</td>
<td>Anthropologist</td>
<td>Yukon River Drainage Fishermens Association</td>
<td><a href="mailto:catherine@yukonsalmon.org">catherine@yukonsalmon.org</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Barbara</td>
<td>Morgan</td>
<td>Program Coordinator</td>
<td>UAS Ketchikan Fishery Technology Program</td>
<td><a href="mailto:barbara.morgan@uas.alaska.edu">barbara.morgan@uas.alaska.edu</a></td>
<td>Ketchikan</td>
</tr>
<tr>
<td>Katie</td>
<td>Murra Straub</td>
<td>Internship Coordinator</td>
<td>UAF SFOS</td>
<td><a href="mailto:kmstraub@alaska.edu">kmstraub@alaska.edu</a></td>
<td>Fairbanks</td>
</tr>
<tr>
<td>Bonita</td>
<td>Nelson</td>
<td>Research Fishery Biologist</td>
<td>NOAA Fisheries AK Region</td>
<td><a href="mailto:bonita.nelson@noaa.gov">bonita.nelson@noaa.gov</a></td>
<td>Juneau</td>
</tr>
<tr>
<td>John</td>
<td>Nickels</td>
<td>Assistant to General Manager</td>
<td>Aleutian Pribilof Island Development Corp.</td>
<td><a href="mailto:jnickels@apicda.com">jnickels@apicda.com</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Kris</td>
<td>Norosz</td>
<td>Government Affairs</td>
<td>Icicle Seafoods</td>
<td><a href="mailto:KrisN@icicleSeafoods.com">KrisN@icicleSeafoods.com</a></td>
<td>Petersburg</td>
</tr>
<tr>
<td>Tom</td>
<td>Okleasik</td>
<td>Planning Director</td>
<td>Northwest Arctic Borough</td>
<td><a href="mailto:tokleasik@nwabor.org">tokleasik@nwabor.org</a></td>
<td>Kotzebue</td>
</tr>
<tr>
<td>Chris</td>
<td>Oliver</td>
<td>Executive Director</td>
<td>North Pacific Fishery Management Council</td>
<td><a href="mailto:chris.oliver@noaa.gov">chris.oliver@noaa.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Mary</td>
<td>Pete</td>
<td>Director/Kuskokwim Campus</td>
<td>UAF Kuskokwim Campus</td>
<td><a href="mailto:lfmcp@uaf.edu">lfmcp@uaf.edu</a></td>
<td>Bethel</td>
</tr>
<tr>
<td>Todd</td>
<td>Radenbaugh</td>
<td>Assistant Professor Environmental Science</td>
<td>UAF Bristol Bay Campus</td>
<td><a href="mailto:taradenbaugh@alaska.edu">taradenbaugh@alaska.edu</a></td>
<td>Dillingham</td>
</tr>
<tr>
<td>Dawn</td>
<td>Salesky</td>
<td>VP Education, Emp., Training</td>
<td>Kawaiak, Inc.</td>
<td><a href="mailto:dsalesky@kawaiak.org">dsalesky@kawaiak.org</a></td>
<td>Nome</td>
</tr>
<tr>
<td>Glenn</td>
<td>Seaman</td>
<td>Graduate Student</td>
<td>UAF Center for Cross Cultural Studies</td>
<td><a href="mailto:glennseaman@gci.net">glennseaman@gci.net</a></td>
<td>Homer</td>
</tr>
<tr>
<td>Marilyn</td>
<td>Sigman</td>
<td>Marine Education Specialist</td>
<td>UAF Alaska Sea Grant Marine Advisory Program</td>
<td><a href="mailto:marilyn.sigman@uaf.edu">marilyn.sigman@uaf.edu</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Alan</td>
<td>Sorum</td>
<td>Head of training</td>
<td>UAA Prince William Sound Comm Coll</td>
<td><a href="mailto:asorum@pwscce.edu">asorum@pwscce.edu</a></td>
<td>Valdez</td>
</tr>
<tr>
<td>Beth</td>
<td>Spangler</td>
<td>Science and Fisheries Program Director</td>
<td>UAA Alaska Native Science and Education Program</td>
<td><a href="mailto:Beth_Spangler@fws.gov">Beth_Spangler@fws.gov</a></td>
<td>Anchorage</td>
</tr>
<tr>
<td>Jan</td>
<td>Straley</td>
<td>Biologist</td>
<td>UAS</td>
<td><a href="mailto:jan.straley@uas.alaska.edu">jan.straley@uas.alaska.edu</a></td>
<td>Sitka</td>
</tr>
<tr>
<td>Pearl</td>
<td>Strub</td>
<td>Education Dir</td>
<td>Bristol Bay Economic Development Corporation</td>
<td><a href="mailto:pearl@bbbedc.com">pearl@bbbedc.com</a></td>
<td>Dillingham</td>
</tr>
<tr>
<td>Kate</td>
<td>Sullivan</td>
<td>Assistant Professor</td>
<td>UAS Ketchikan Fishery Technology Program</td>
<td><a href="mailto:kate.sullivan@uas.alaska.edu">kate.sullivan@uas.alaska.edu</a></td>
<td>Ketchikan</td>
</tr>
<tr>
<td>Robert</td>
<td>Thomas</td>
<td>Maritime Department Head</td>
<td>Alaska Technology Institute (AVTEC)</td>
<td><a href="mailto:robert.thomas@avtec.edu">robert.thomas@avtec.edu</a></td>
<td>Seward</td>
</tr>
<tr>
<td>Keith</td>
<td>Van Den Broek</td>
<td>Fisheries Director</td>
<td>Native Village of Eyak</td>
<td><a href="mailto:keith@nvseyak.org">keith@nvseyak.org</a></td>
<td>Cordova</td>
</tr>
</tbody>
</table>
Are there other things you would like NOAA Fisheries to Consider as they develop their funding priorities for implementing MSA Section 305?

Teachers need programs that don't displace what they are already doing. they (the teachers) are already swamped with programs, assessments, etc. so, whatever is developed should be “infusion” into existing curricula or, an enhancement of what is already being used. this is not difficult to do and will be better received by teachers and administrators. a “new” program will most likely be shelved.

Please clarify if I can submit a proposal for my villages even though we aren't on the coast.

Because funding cannot do all that is recommended, I suggest putting money toward items that are not in practice yet, as in: funding indigenous science forums, funding western science and indigenous science collaborations. I hope NOAA will ask for help from an advisory group which has expertise in living and working in rural and Alaska Native communities so they have a head start in understanding needs, barriers and success stories and how things work or don’t work in small communities.

Every two years it would be good to gather again to assess the program and help give ongoing direction for improvement

Recommend that NOAA continue to consult, either informally or through stakeholder groups, as RFP’s are developed, and any resulting programs are ultimately designed and implemented.

To ensure that Tribes are partners and not tokens.

Work with a diverse groups of rural and coastal communities, not just the easiest route

Continue to fund such meetings in order to maintain high level of input and ownership from stakeholders.

Reconvene in two years and re-evaluate successes and provide input as to next steps and/or re-prioritize efforts

For a portion of the funds, require collaboration between/among communities, industry, and education.

As always, ask congress for more funds.

Consider allotting more resource than MSA money ot more effective community involvemnet and use of LTK in fisheries managment. Be proactive in your Tribal Consultations, rather than reactive which has been the norm in the past.

Research should incorporate the St. Paul Island, St. Matthews Island, St. Lawrence Island, and Little Diomede Island Communities, as they will be adversely impacted with the increase in fishing and commercial traffic in the Bering Sea. They should be included in the planning and research, as they are on the front line in this matter. Indigenous science can provide the global warming data needed with the proper training and research data sought. They have been pretty observant over the years, as they are part of the cycle in the Bering Straits Ecosystem. Thank you for this meeting.

Some larger organizations have more access to a larger variety of funds and perhaps the man power to obtain funds; smaller groups may lack man power and eligibility for certain funds - these groups should be given some access to these funds if the work meets NOAA identified priorities and needs

In addition to status quo applicants hopefully NOAA would consider other innovative ideas as well. Also, there may be other educational institutions other than the University of Alaska that could provide marine-and -ocean related career opportunities to Alaska Natives and others.

Traditional knowledge also relates to science & research issues - so I would hope that there could be some funding sought from other areas and not only under MSA 305j

Your inclusion of the Native perspective was greatly appreciated and essential to be successful. I would esp recommend forming partnership as the tribal groups also have resources for "employment & training" programs and it seems if you would work together both efforts would accomplish more for well being of coastal families to access cash economies.

NOAA must go beyond the single University focus of funding and commit funds to other universities to inject healthy competition and inspire increased creativity in programs and projects.
Section 305 (16 U.S.C. 1855) is amended by adding at the end thereof the following:

`(j) Western Pacific and Northern Pacific Regional Marine Education and Training-

`(1) IN GENERAL- The Secretary shall establish a pilot program for regionally-based marine education and training programs in the Western Pacific and the Northern Pacific to foster understanding, practical use of knowledge (including native Hawaiian, Alaskan Native, and other Pacific Islander-based knowledge), and technical expertise relevant to stewardship of living marine resources. The Secretary shall, in cooperation with the Western Pacific and the North Pacific Regional Fishery Management Councils, regional educational institutions, and local Western Pacific and Northern Pacific community training entities, establish programs or projects that will improve communication, education, and training on marine resource issues throughout the region and increase scientific education for marine-related professions among coastal community residents, including indigenous Pacific islanders, Native Hawaiians, Alaskan Natives, and other underrepresented groups in the region.

`(2) PROGRAM COMPONENTS- The program shall--

`(A) include marine science and technology education and training programs focused on preparing community residents for employment in marine related professions, including marine resource conservation and management, marine science, marine technology, and maritime operations;

`(B) include fisheries and seafood-related training programs, including programs for fishery observers, seafood safety and seafood marketing, focused on increasing the involvement of coastal community residents in fishing, fishery management, and seafood-related operations;

`(C) include outreach programs and materials to educate and inform consumers about the quality and sustainability of wild fish or fish products farmed through responsible aquaculture, particularly in Hawaii, Alaska, the Western Pacific, the Northern Pacific, and the Central Pacific;
(D) include programs to identify, with the fishing industry, methods and technologies that will improve the data collection, quality, and reporting and increase the sustainability of fishing practices, and to transfer such methods and technologies among fisheries sectors and to other nations in the Western, Northern, and Central Pacific;

(E) develop means by which local and traditional knowledge (including Pacific islander, Native Hawaiian, and Alaskan Native knowledge) can enhance science-based management of fishery resources of the region; and

(F) develop partnerships with other Western Pacific Island and Alaskan agencies, academic institutions, and other entities to meet the purposes of this section.'.