CEÑALIULRIIT CRSA

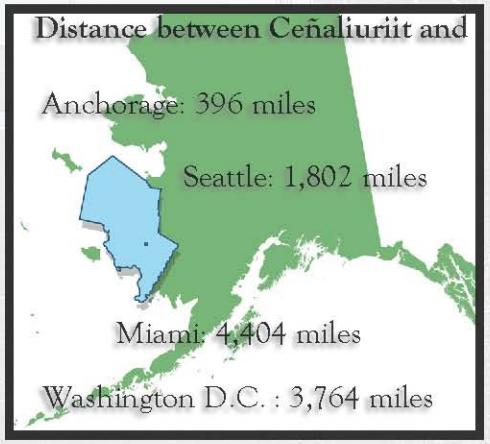
Photo Courtesy: DCRA

Brief History: The Ceñaliulriit Coastal Resource Service Area (CRSA) is composed of delta lands draining Alaska's largest rivers, the Yukon and Kuskokwim Rivers. It provides salmon habitat, important migratory stopovers for birds, and marine resources. With over forty villages along those rivers, the coast, and Nunivak Island, Ceñaliulriit CRSA has more communities than any other coastal district. The population and heritage is largely Yup'ik Eskimo and many residents still speak English as a second language. Subsistence hunting, fishing, and plant gathering are priority activities for the people of the CRSA.

Pronunciation:	(Snah Lə̧eet)
Population (2007):	16,362
Shoreline:	8,993 miles
Coastal Area:	35,168 square miles
Annual Precipitation:	12-22"
Annual Snowfall:	38-79"
Hours of Daylight Summer:	19 hours, 31 min
Hours of Daylight Winter:	8 hours, 26 min
Regional Native Corporation:	Calista Corporation
Legislative District:	6, 37, 38, 39, C, S, T


Photo Courtesy: DCRA


Photo Courtesy: DCRA



STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

CENALIULRIIT COASTAL RESOURCE SERVICE AREA (CCRSA)
The CRSA will be conducting this project as a legislatively named CIAP recipient on behalf of the State of Alaska

PROJECT TITLE: "Our Living Lands and Waters" - *Unguwalrea Nunavut Meqllu* Community Project Monitoring & Surveillance

PROJECT CONTACT:

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Project Duration

The project will take three and one-half years to complete.

Estimated Cost

Spending Estimate $				
Total	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
$475,000	$175,000	$125,000	$125,000	$50,000

All of the funding will be with FY 10 funding

Funding Per Allocation Year of CIAP ($)				
Total	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$475,000				$475,000

PROJECT LOCATION

(See Attached Map) The Ceñaliulriit Coastal Resource Service Area includes the greater Yukon-Kuskokwim Delta region including Nunivak Island. The CRSA includes 8,933 miles of coast, and a coastal zone of 15,364 square miles. Forty communities are located in the Ceñaliulriit CRSA: Akiachak, Akiak, Alakanuk, Aniak, Atmautluak, Chefornak, Chevak, Eek, Emmonak, Goodnews Bay, Hooper Bay, Kasigluk, Kipnuk, Koliganek, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nunam Iqua, Nunapitchuk, Oscarville, Pilot Station, Pitka's Point, Platinum, Quinhagak, Russian Mission, Scammon Bay, St. Mary's, Toksook Bay, Tuluksak, Tuntutuliak, and Tununak.

The Ceñaliulriit District covers approximately 48,000 square miles of which roughly 36,000 square miles are in the coastal zone. The Coastal Zone includes only the land and water below an elevation of 200 feet. Exceptions to this role are isolated highlands, such as the Askinuk Mountains at Scammon Bay, the Kaluyut Mountains that cover most of Nelson Island, and the

Kusilvak Mountains located on a line between Scammon Bay and Mountain Village. Several Isolated peaks—Nushkolik, Ingrisarak, Ingrichvak and Ungulungwak—are also included

PROJECT DESCRIPTION.

This project is intended to implement the project monitoring and surveillance objectives of Ceñaliulriit Coastal Management Plan (CMP). The project will use a community education and skills development approach to train teams of individuals throughout the CRSA in monitoring, reporting and response techniques. The training will be build around the core "enforceable policies" of the CMP and will include objectives that the CMP seeks to include in its mission as well.

Three types of project will frame the training community, area wide and regional projects. The desired outcome is the development of response protocols apt for each project incident. For example, a fuel oil leak incident manager may be Village Corporation tank farm manager. A proper notification is dated and in writing. A secondary incident manager might be the Tribal EPA IGAP coordinator. He/she gets notified as well. Follow-ups are documented until action is taken. That is an example of a local protocol. Below is a table of containing examples of each kind of incident or project.

Level of Concern	Incident/Project	Protocol
Local	Fuel Spill	Contact incident manager in writing; follow-up & document until action is taken
Area Wide	Mine Development	Identify issues, attend meetings, make sure they are addressed & document.
Regional	OCS	Identify issues, Submit comments, facilitate local meetings, if needed & document

The following characterizes the training over the course of the project. Specifics and greater detail will be developed as part of the project task.

Year 1.0 Course

- The Spirit of *Unguwalrea Nunavut Meqllu.* "You are the protectors of the land"
  - Monitoring & Surveillance: Becoming the Eyes and Ears of *Unguwalrea Nunavut Meqllu* Learning what to look for, learning how to look at an "incident". Practicing how to "see" what is really there
  - Reporting & Documentation: Becoming the Voice of *Unguwalrea Nunavut Meqllu* Learning some technical terms, e.g., source vs non-source point pollution., learning how to document it. Practicing describing an incident with some examples.
- What are "Protocols" and why they are important? Put you in control of situations; organizing yourself for action; helps people who have responsibility do their job better—keeps everyone on their toes; builds confidence with agency partners and, most important, builds confidence in the community that someone is "in charge"
  - Examples of protocols include: Project information and distribution, subsistence access considerations; cultural resources considerations; incidence response and

contacts, local service roads and trails, noise consideration, cultural site restrictions, conflicts with subsistence uses.

- Introduction to CMP enforceable policies and operational objectives for Ceñaliulriit.
- Local monitoring and surveillance opportunities
  - Wastewater/sewage disposal; landfill; fuel storage and distribution, trash and junk not containerized, litter, slaughter waste and dead animals, hazardous waste handling, testing water, keeping an eye on local roads and trails;
  - Subsistence camps and all of the issues with proper disposal, waste and litter.
- Area Wide monitoring and surveillance opportunities include road construction, airport projects, capital projects, mining, commercial fish processing infrastructure, energy infrastructure, ports and docks, tourism development.
- Regional monitoring and surveillance opportunities include offshore oil and gas development; offshore mineral development; climate change impacts, large fleet fishing, pacific underwater cable, large scale onshore mining.
- Practice simulations and role play
- Survey of Online Resources
  - Research and learning sites
  - Networking and staying connected.
  - (if approved) Using the UNMI portal

Year 2.0 Course

- Refresher from 1.0 (new participants)
- Case studies from the first year
  - Local
  - Area Wade
  - Regional
- Advanced monitoring and surveillance techniques: forensic monitoring
- Map-based reporting (UNMI Portal)
- Reviewing the protocols, updates and changes
- Briefing on Partnership Agreements that affect the protocols and any new enforceable policies
- Briefing on the “Project Horizon”
- Recommendations for changes to CMP and Objectives
- Team simulations
- UMNI Practitioner Awards
- Partnership Recognition and Award

Year 3.0 Course

- Refresher from 1.0 (new participants)
- Case studies from second year
  - Local
  - Area Wide
  - Regional
- Advanced Reporting techniques: using the UNMI Portal’s report generator.
- Reviewing the protocols and updates and changes

- Briefing on the status of the Partnership Agreements
- Briefing on "Project Horizon"
- Recommendations for changes to CMP and Objectives
- Team simulations
- UNMI Practitioner Awards
- Partnership Recognition and Award

Year 3.5. Evaluation.

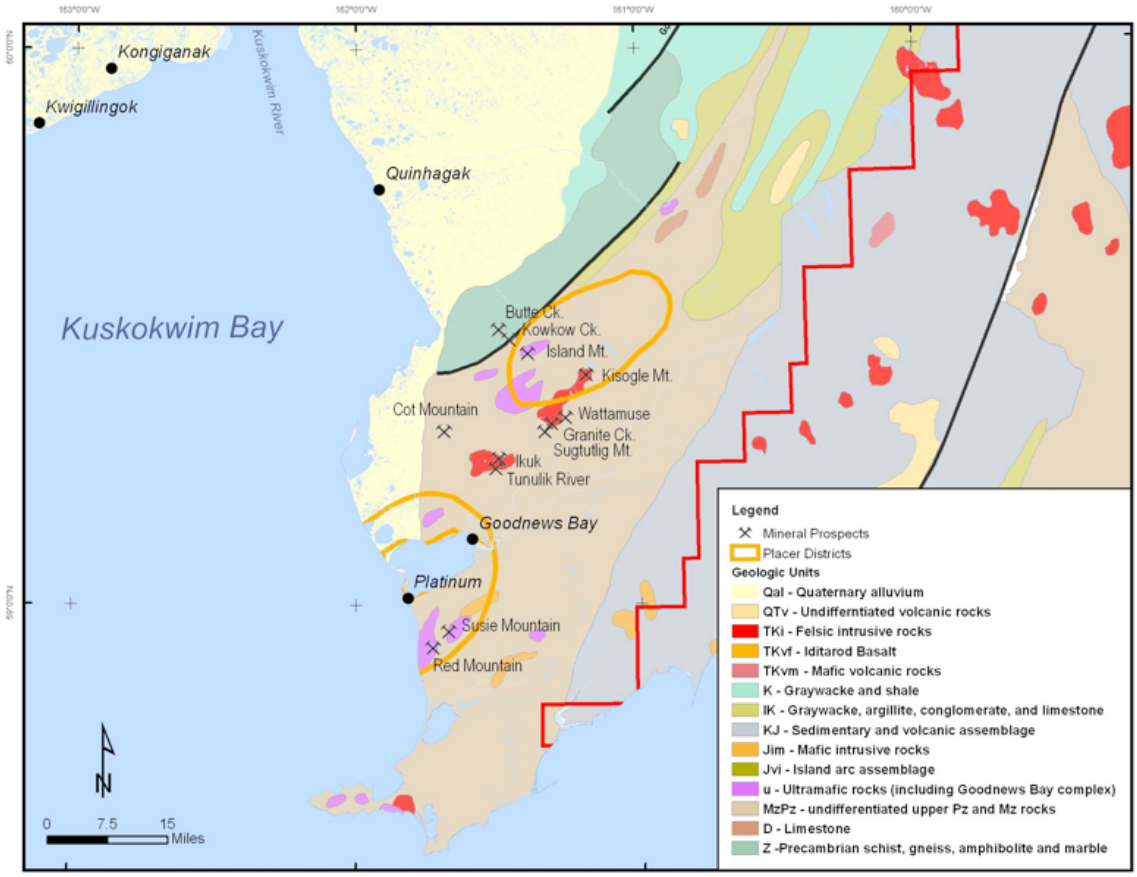
- Virtual gathering (via Web) to provide an evaluation of the CIAP project by the participants
    - Strengths and Weaknesses
    - Lessons learned
    - Lasting impacts
    - Where do we go from here? The future and UNMI

Test Beds. Assessing the effectiveness of the organization and content will be a critical part of this project. The focus of the testing of the training and networking will be on the local and area level. A regional simulation of an OCS project will be conducted in Year 2.0 when the portal conferencing and mapping tools are fully tested and available for use. If the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) do not approve the UNMI Portal, we will try to find a host site, perhaps from a Partnership agency, to network the CRSA communities in a simulation of an OCS project.

1. Local Testing.

This will engage at least 20 communities in the development of protocols for monitoring local facilities and community practices. A minimum of 2 representatives from each community will be trained and one of those will be the EPA-funded Tribal Environmental coordinator where they are active. The project coordinator will select the other participant(s). They will all apply and be selected based on interest and ability. The teams will return to their community and facilitate the setting up of protocols. Technical assistance will be provided from among a relevant agency Partnership Agreement (SEE Project 1.03), by a consultant retained by the project or by the project coordinator. Once the protocol is established and a set of reports submitted, the CIAP team will go on site to review and evaluate.

2. Area Wide Test (Goodnews Bay)



Goodnews Bay provides the perfect setting for an Area Wide test bed for protocol, monitoring and reporting. In this case, the team will have a couple of live projects to review and coordinate with: The district is in extreme southwestern Alaska, and borders the Bering Sea. About 600,000 ounces of platinum (plus some iridium, osmium, ruthenium, palladium, and rhenium) and 27,000 ounces of gold were won from placer deposits in the Salmon River from 1934 to 1976. Present reserves are unknown, but are the subject of ongoing exploration. The source of the platinum-group elements appears to be in the Red Mountain and Susie Mountain ultramafic rocks. The same approach to developing protocols and monitoring and surveillance will be followed here as with the local, but—of course—the target will be different and the rules of engagement will be different. Significant Technical Assistance will be focused on this test bed in Year 1.0 of the project.

Ongoing Tests, Drills and Networking.
The project coordinator will be working intensely over the phone with his teams in each of the Villages. It is important that he/she builds a strong relationship of encouragement and support and accomplishment. If the UNMI portal (Project 1.04) is approved, this will be a key method of delivering information and conferencing in real time with the team members. Conducting drills and practice in project and incidence response will be an important part of that relationship building.

Certification.
There will be few incentives (given the demands) for these volunteers to remain engaged other

than a strong team leader (Project Coordinator), access privileges to state of the art technology, a few meetings and the satisfaction that comes from successfully applied learning. But one benefit that the project can confer is a *Certification of Completion in Project Monitoring & Surveillance Techniques* to each participant who completes the test bed phase of this project.

MEASURABLE GOALS AND OBJECTIVES

The following goals/Objectives are taken from the Coastal Management Plan. These are 13 of the

Goal/Objective	Comment
Goal 1A. Objective 2. Participate in regional planning exercises and project development plans	Year 1.0. 1 Training and 4 Quarterly exercises; Year 2.0. 1 Training and 4 quarterly exercises; Year 3.0. 1 Training and 4 quarterly exercises
Goal 1A. Objective 4. Work with resource developers to ensure subsistence access	Year 1.0. Goodnews Bay Testbed will establish a project protocol for consideration of subsistence access in plan development and will be documented in Testbed Report; Year 2.0 & 3.0 Goodnews Bay model will be built into 20-30 village protocols during simulations and will be documented in reports
Goal 1A. Objective 4. Encourage project applicants to include local knowledge into their studies	Year 1.0 Goodnews Bay Testbed will establish a project protocol for consideration of local knowledge and cultural resources in plan development. As before, this will be documented in Testbed report. The Goodnews Bay model will be used in the Area Wide Project simulations developed for 20-30 villages by participants in years 2.0 and 3.0. This will be documented in the reports
Goal 2A. Objective 2. Provide training to village leaders regarding effective participation in ACMP review	Year 1 training for 40-60; Year 2 training for 60-80; Year 3 continuing training for 40-60. Collaboration is a major part of the training.
Goal 2A. Objective 3. Distribute project information before and during consistency reviews	An information distribution protocol will be included in the final village project and incidence monitoring and surveillance plan for 20-30 Ceñaliulriit communities.
Goal 2A. Objective 4. Provide agencies and applicants with distribution lists and encourage them to initiate early consultation	Same as above
Goal 2B. Objective 2. Work with area residents and government agencies to monitor projects and enforce requirements	There will a total of 20-30 plans and assessments of local incident response in place by year 2.0 that will include community and government protocol; The following projection of simulations that will

	involve locals and multiple agencies: Yr 1.0, 4; Yr 2.0, 4; Yr 3.0, 4.
Goal 3B. Objective 1. Participate in permit reviews to ensure proper treatment of mining effluent and tailings	Year 1 incorporates a testbed for Area Wide response at Goodnews Bay and will include a protocol for effluent monitoring. This will provide the Area Wide modeling for other communities during training in years 2.0 and 3.0. All documented in project reports
Goal 3B. Objective 1. Encourage pre-application meetings between industry and communities	A project meeting protocol including pre-development, development and operation monitoring will be included in the final village project and incidence monitoring and surveillance plan for 20-30 Ceñaliulriit communities.
Goal 3B. Objective 2. Encourage the citizen monitoring of water quality for waterways that are subject to mining runoff	Same as 3B, O1, above.
Goal 3B. Objective 4. Educate the public on how to identify and stop potential fuel oil spills from local storage and distribution systems	This is the "Local Incidence Response" protocol that will be developed in year 1 for 20-30 communities and evaluated and tested for the following 2 years.
Goal 3B. Objective 11. Work with government agencies and area residents to ensure compliance with water quality laws	Monitoring protocols and Agreements under T1.03 will be included in the participant training Yr 1.0. By the end of year 3.0, 20-30 Local plans will be in place incorporating the interagency-local monitoring agreement.
Goal 7A. Objective 1, Work with all concerned parties during consistency reviews to mitigate conflicts between project and cultural resource preservation	Year 1.0 Goodnews Bay Testbed will establish a project protocol for consideration of local knowledge and cultural resources in plan development. As before, this will be documented in Testbed report. The Goodnews Bay model will be used in the Area Wide Project simulations developed for 20-30 villages by participants in years 2.0 and 3.0. This will be documented in the reports

Summary of Estimated Work Products, Project Output and Accomplishment for Project.

- A workbook will be developed and published that is designed coastal village volunteers; working title: *Managing Project Impacts and Incidence Control in the Coastal Community.*
- 200 copies of the workbook distributed throughout the CRSA; *Electronic* version available for download;
- Workshop delivered to 60-80 participants;
- 40-60 participants involved all three years of training
- 20 Local Case studies generated from the experiences of the Test Beds

- 1 Area Wide Case Study from the experience of Goodnews Bay.
- 1 Regional Case Study resulting from the Year 2.0 exercise
- 3 Workshop Reports
- 1 Project Evaluation
- 1 Consolidate Report of Recommendations for Changes to the CMP
- 20-30 Community Monitoring & Surveillance Plans and Protocols in place;
- I Area Wide Monitoring & Surveillance Plan and Protocol in place;
- 1 Regional Monitoring & Surveillance Plan and Protocol
- 40-60 trained and experienced coastal environmental monitoring and surveillance volunteers distributed among 75% of CRSA communities;

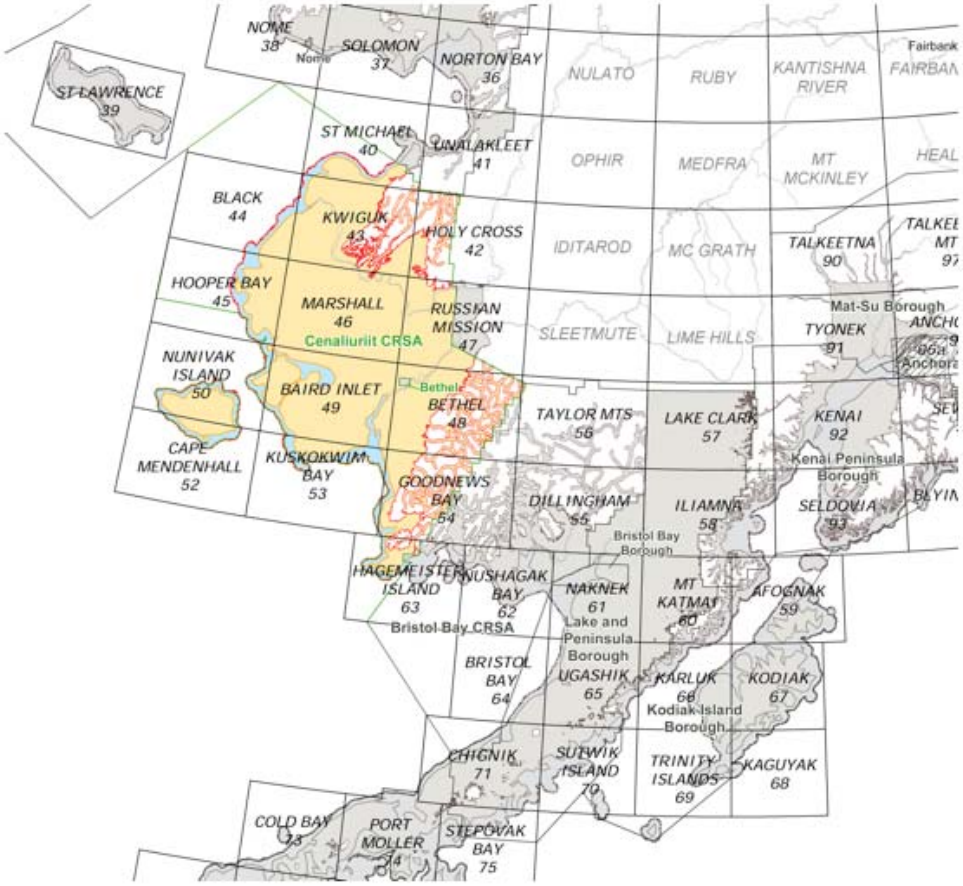
PROJECT CONSISTENCE WITH CIAP AUTHORIZED USES.
This project is based on Authorized Use No. 4: Implementation of a federally approved marine, coastal or comprehensive conservation management plan.
The CMP contains 16 goals, 97 objectives and some 182 strategies to achieve the overall service mission of the organization. The *Unguwalrea Nunavut Meqllu Initiative* or UNMI provides a framework for accomplishing most of the these elements through four components: **Community-Based Project Monitoring, Surveillance & Reporting** (T1.01), **Community-Based Environmental Monitoring** & Surveillance (T1.02), **UNMI Strategic Partnerships** (T1.03)linked to the desired outcomes of the CMP, and a **web-based information portal** and conferencing space (T1.04) to provide the collaboration the CMP calls for.
The objectives and strategies largely centered on the **four areas** we are addressing through the UNMI: **Village involvemen**t in project planning, monitoring and surveillance; **subsistence users involvement** in the monitoring and surveillance of the coastal environment that yields their survival; Interagency, Scientific and community **partnerships** to ensure "consideration" of CMP priorities; and access to vital information, project notifications, visual and map-based data along with a method for continuous **collaboration**. Attached to this document is a table containing 113 of the objective and strategic elements contained in the CMP and addressed by the four UNMI Tier 1 projects. While these projects do stand alone, their interconnection can be seen by the elements of the plan that they share. The table consists of three columns. The left column contains the number (1-113) for the plan element, the middle column contains a description of the plan element, and the right column refers to the project by it's number, T1.01, for example refers to this project, the first Tier 1 project.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.
Some of the key activities for which federal agency participation and/or coordination will be critical will be:

- Workshop 1.0-3.0, Year 1.0-3.0. Federal project monitoring expert with a background in community or public participation would add value to the workshop experience.
- Quarterly simulations and, especially, the OCS simulation to provide a Regional response experience for the participants, will be more meaningful if federal monitoring agencies helped to plan and participate in the simulations.

COST SHARING OR MATCHING FUNDS
There will be no cost sharing or matching funds.

Attachment A. Map of Ceñaliulriit District



Attachment 2.

Table Reference No.	Strategy Addressed By Projects	CIAP Project ID
1	Goal 1A. Objective 1. Identify important subsistence use areas and determine sensitivity to coastal activities	T1.01, T1.02
2	Goal 1A. Objective 1. Designate Subsistence Use Areas Under 11.AAC.114.250	T1.03
3	Goal 1A. Objective 1. Participate in project consistency reviews to ensure that subsistence resources and uses are protected and not precluded.	T1.05
4	Goal 1A. Objective 2. Participate in regional planning exercises and project development plans	T1.01, T1.02, T1.04
5	Goal 1A. Objective 3. Work with state and federal agencies to identify and protect referenced habitats.	T1.03
6	Goal 1A. Objective 4. Communicate with other coastal districts to determine how they are addressing common issues.	T1.03. T1,04
7	Goal 1A. Objective 4. Establish subsistence access enforceable policy	T1.03
8	Goal 1A. Objective 4. Work with resource developers to ensure subsistence access.	T.1.01, T1.04
9	Goal 1A. Objective 4. Work with state and federal agencies, science community including the Alaska Native Science Commission on techniques and standards to achieve our goals	T1.02, T1.03, T1.04
10	Goal 1A. Objective 4. Encourage project applicants to include local knowledge into studies.	T1.01
11	Goal 2A. Objective 1. Encourage Applicants and agencies to sponsor pre-application meetings	T1.03
12	Goal 2A. Objective 2. Request that coordinating agencies invite local participation through teleconferences or other means during project reviews	T1.03, T1.04
13	Goal 2A. Objective 2. Provide training to village leaders regarding effective participation in ACMP review.	T1.01
14	Goal 2A. Objective 2. Use current technology	T1.04

	to distribute information and provide training and receive comments	
15	Goal 2A. Objective 3. Distribute project information before and during consistency reviews	T1.01, T1.04
16	Goal 2A. Objective 4. Provide agencies and applicants with distribution lists and encourage them to initiate early consultation.	T1.01,T1.03, T1.04
17	Goal 2B. Objective 1. Designate areas under 11 AAC 114.250 that will allow development of appropriate enforceable policies.	T1.03
18	Goal 2B. Objective 1. Develop Enforceable policies to protect coastal resources	T1.02,T1.03
19	Goal 2B. Objective 1. Work closely with the regional NGOs, Tribal Councils, cities, corporations and applicants to design projects that protect subsistence and cultural resources	T1.01, T1.03, T1.04
20	Goal 2B. Objective 2. Work with area residents and government agencies to monitor projects and enforce requirements	T1.01
21	Goal 2B. Objective 3. Encourage applicants to avoid excavation in important wetlands	T1.01
22	Goal 2B. Objective 3. Develop policies that will protect permafrost and water drainage systems.	T1.02, T1.03
23	Goal 2B. Objective 4. Develop working relations with agencies and villages that encourage continual consultation about the needs for improvement.	T1.03, T1.04
24	Goal 2B. Objective 5. Encourage communities in the region to prepare and adopt land use, comprehensive plans and ensure that these plans are compatible with the Ceñaliulriit CMP.	T1.01
25	Goal 3A. Objective 1. Encourage communities to work with projects to reduce dust.	T1.01
26	Goal 3A. Objective 2. Participate in DEC permit reviews.	T1.03
27	Goal 3A. Objective 3. Participate in the State's ad hoc working group associated with the Arctic Council	T1.03
28	Goal 3A. Objective 4. Work with government agencies and area residents to monitor projects to ensure compliance with laws.	T1.01
29	Goal 3B. Objective 1. Participate in permit	T1.01

	reviews to ensure proper treatment of mining effluent and tailings	
30	Goal 3B. Objective 1. Encourage pre-application meetings between industry and communities	T1.03, 1.04
31	Goal 3B. Objective 1. Encourage the development of watershed management initiatives	T1.02, T1.03
32	Goal 3B. Objective 2. Encourage citizen monitoring of water quality for waterbodies subject to mining runoff.	T1.01, T1.02
33	Goal 3B. Objective 3. Cooperate with agencies attempting to identify and stop nonpoint source water pollution in region.	T1.02, T1.04
34	Goal 3B. Objective 4. Educate the public on how to identify and stop potential fuel oil spills from local storage and distribution systems	T1.01, T1.04. T2.0
35	Goal 3B. Objective 5. Work with agencies to fund, train and equip village oil response teams	T1.03
36	Goal 3B. Objective 6. Work with agencies and communities to ensure that fish waste is properly disposed of	T1.03
37	Goal 3B. Objective 7. Work with government and NGOs to eliminate discharge of plastic and other waste from ships into the ocean	T1.03
38	Goal 3B. Objective 8. Work with state and regional organizations to address village water and sewage treatment and disposal.	T1.03. T2.0
39	Goal 3B. Objective 9. Work with the state and state agencies to inform residents about the dangers of toxic and hazardous materials present in the villages and camps	T1.03
40	Goal 3B. Objective 9. Ensure that toxic and hazardous materials are properly shipped, stored, and removed from the Ceñaliulriit Region.	T1.03, T2.0
41	Goal 3B. Objective 10. Support recycling efforts throughout the region.	T1.03, T2.0
42	Goal 3B. Objective 11. Work with government agencies and area residents to monitor projects to ensure compliance with water quality laws.	T1.01, T1.02, T1.03
43	Goal 4A. Objective 1. Work with state and	T1.03, T1.04

	federal agencies to identify and protect sensitive habitats.	
44	Goal 4A. Objective 2. Designate important habitat areas under 11AAC 114.250(h)	T1.03
45	Goal 4A. Objective 2. Develop enforceable policies to protect habitat.	T1.03
46	Goal 4A. Objective 2. Work with state and federal agencies to identify and protect important habitats that are not designated.	T1.02, T1.03
47	Goal 4A. Objective 3. As always, work with agencies	T1.03
48	Goal 4A. Objective 3. Develop enforceable policies to protect wetlands	T.103
49	Goal 4A. Objective 4. Ensure that site preparation activities are times to minimize impacts to critical fish and wildlife	T1.01
50	Goal 4A. Objective 5. Develop enforceable policies regarding the maintenance of natural water drainage systems	T1.03
51	Goal 4A. Objective 6. Same with Permafrost	T1.03
52	Goal 4A. Objective 7. Work with state and federal agencies re monitor and surveillance of endangered species	T1.02, T1.03
53	Goal 4A. Objective 8. Work with project stakeholders to ensure that infrastructure projects are compatible to the environment, subsistence activities and the Yup'ik culture.	T1.01
54	Goal 4A. Objective 9. Work with state and federal agencies to classify lands for the protection of fish and game while supporting commercial recreation and traditional uses on an optimum sustained yield basis, or maintenance of unique or rare species of regional, state, or national significance.	T1.03
55	Goal 4A. Objective 10. Work to minimize noise from projects.	T1.01
56	Goal 4A. Objective 11. Work with land management agencies to solve the explosive population of beaver impacting habitat.	T1.03
57	Goal 5A. Objective 1. Use written and oral sources to identify historical ice conditions, landforms, flood patterns and other natural features impacting the coastal environment.	T1.03, T1.04
58	Goal 5A. Objective 1. Designate areas for natural hazards under 11 AAC 114.250	T1.03
59	Goal 5A. Objective 2. Develop enforceable	T1.03

	policies to address natural hazards	
60	Goal 5A. Objective 2. Recommend alternative measures to address the natural hazards impinging upon projects.	T1.01
61	Goal 5A. Objective 3. Participate in reviews of OCS activities	T1.01, T1.02, T1.04
62	Goal 6A. Objective 1. Encourage village to develop positions on recreation and tourism through the development of local plans	T1.03
63	Goal 6A. Objective 1. Encourage environmentally friendly tourism	T1.03
64	Goal 6A. Objective 2. Develop a list of areas that should be avoided by visitors	T1.03, T1.04
65	Goal 6A. Objective 2. Create a brochure that educates visitors on how to respect traditional laws, values and culture	T1.04
66	Goal 6A. Objective 3. Work with state and federal agencies to enact and enforce appropriate controls over guides and commercial outfitters.	T1.03
67	Goal 6A. Objective 4. Work with landowners to minimize impact from sports hunters on subsistence resources.	T1.03
68	Goal 6A. Objective 5. Work with villages and the tourism industry to do an analysis of optimal outdoor recreational tourism for the region.	T1.03
69	Goal 6B. Objective 1. Work with government agencies and landowners to identify recreational areas and trends.	T1.03
70	Goal 7A. Objective 1. Work with state agencies to designate the entire coastal district as important for the study and understanding of historic and prehistoric resources under 11AAC114.250.	T1.03
71	Goal 7A. Objective 1. Work with all concerned parties during consistency reviews to mitigate conflicts between the project and cultural resource preservation.	T1.01
72	Goal 7A. Objective 2. Work with applicants, residents and visitors to educate them about regulations governing cultural resources.	T1.03, T1.04
73	Goal 7A. Objective 2. Ensure that the villages understand the technical assistance available under the State Historic Preservation Office for identification, protection, and	T1.01, T1.04

	management of significant sites.	
74	Goal 7A. Objective 3. Work with schools, visitor associations and applicants to develop a general understanding and a respect for ancestral sites.	T1.03
75	Goal 7A. Objective 4. Promote further research, inventories, documentation regarding historical and cultural sites	T1.03
76	Goal 7A. Objective 5. Begin using traditional place names in the CMP.	T1.03
77	Goal 8A. Objective 1. Avoid or minimize adverse impacts from oil and gas projects	T1.01, 1.02
78	Goal 8A. Objective 2. Ensure Local involvement in decisions about planning, siting design and management of energy facilities and activities	T1.01, T1.03, T1.04
79	Goal 8B. Objective 1. Provide for local employment	T1.03
80	Goal 8B. Objective 2. Develop plans for ensuring that oil and gas facilities will fund local infrastructure costs generated by the project.	T1.03
81	Goal 8B. Objective 3. Explore opportunities to lower energy costs for the Ceñaliulriit region.	T1.03
82	Goal 8C. Objective 1-2. Ensure that oil spill response plans are in place prior to a project and kept up to date.	T1.01
83	Goal 8C. Objective 3. Involve local organizations in preparation for clean-up of local spills from fuel oil storage and distribution.	T1.01, T2.0
84	Goal 9A. Objective 1. Identify adverse impacts from the development of new transportation facilities and develop mitigation measures for those impacts.	T1.01
85	Goal 9A. Objective 2. Identify route deficiencies and optimization strategies for prospective projects.	T1.01
86	Goal 9A. Objective 3. Consider inter-village and subregional transportation and utility infrastructure projects that provide more cost-effective services in the region.	T1.03, T1.04
87	Goal 9B. Objective 1. Ensure transportation and utility projects include consultation with local landowners and communities.	T1.01, T1.03, T1.04

88	Goal 9B. Objective 2. Assist villages to secure transportation and development planning funds.	T1.03, T1.04
89	Goal 9B. Objective 3. Encourage the development of community land-use plans	T1.03
90	Goal 9B. Objective 4. Work to relocate airports that have become safety hazards by being located too close to the community or which are threatened by erosion.	T1.03, 1.04
91	Goal 10A. Objective 1. Avoid adverse impacts from mining operations in the Coastal Zone	T1.01, 1.02
92	Goal 10A. Objective 2. Evaluate areas in the CRSA that have potential for mineral development.	T1.03, 1.04
93	Goal 10A. Objective 3. Establish a process that integrates local input from traditional and city councils, local corporations and other local and regional organizations into the planning, siting, design, operation and abandonment of mining facilities and activities	T1.01, T1.04
94	Goal 10A. Objective 4. Work with appropriate state and federal agencies to ensure that abandoned sites and facilities are restored to pre-mining condition to the maximum extend feasible.	T1.03
95	Goal 10B. Objective 1. Identify sand and gravel sources that are compatible with adjacent uses and located in an area that will also benefit local village development	T1.01, T1.03
96	Goal B. Objective 2. Develop strategies to make the cost of mineral development include the cost of community infrastructure impacted by the project.	T1.01, T1.03
97	Goal 11A. Objective 1. Ensure that commercial fishing and seafood processing is compatible with other coastal uses and resources.	T1.01, T1.03
98	Goal 11B. Objective 1. Avoid impacts from development activities on fish habitat and population.	T1.01, T1.02
99	Goal 11C. Objective 1. Encourage the preparation of a fisheries development plan that identifies opportunities for maintaining or expanding fisheries opportunities for local	T1.03

	residents	
100	Goal 12A. Objective 1. Ensure that significant negative impacts from timber harvests are avoided	T1.01
101	Goal 13A. Objective 1. Analyze implementation of recent changes to the ACMP to determine if "Areas Which Merit Special Attention" (AMSAs) would provide protections in addition to those provided by area designations under 11 AAC 114.250.	T1.02, T1.03
102	Goal 14 A. Objective 1. Ensure capital projects do not significantly impact coastal resources and uses and that appropriate groups in the region are involved.	T1.01, T1.04
103	Goal 14A. Objective 2. Ensure that all stakeholder development plans in the region include provisions for maintenance of water drainage systems and preventing harm to permafrost areas.	T1.03
104	Goal 14A. Objective 3. Encourage developers to give affected communities advance notice of any development activities, especially those that will bring significant numbers of workers into the community.	T1.01, T1.03, T1.04
105	Goal 14A. Objective 4. Assist in coordinating capital improvement planning in the CRSA to promote efficiency, minimize disruption and maximize benefits.	T1.01, T1.04
106	Goal 14A. Objective 5. Work with villages and government agencies to monitor the operations of tank farms, landfills, sewage lagoons and similar facilities.	T1.03
107	Goal 14B. Objective 1-2. Support preparation of village comprehensive plans to help guide development affecting the subject community.	T1.03, T1.04
108	Goal 14B. Objective 3. Encourage projects that are sensitive to cultural effects on the community.	T1.03
109	Goal 15A. Objective 1. Assert as much control as possible through the ACMP and permit reviews.	T1.01, T1.03, T1.04
110	Goal 16 A. Objective 1. Prepare communities for possible adverse effects from climate change.	T1.03, T1.04
111	Goal 16A. Objective 2. Encourage research	T1.02, T1.03

	and monitor trends.	
112	Goal 16A. Objective 3. Work with coastal communities to inventory and respond to coastal erosion.	T1.03, T1.04
113	Goal 16A. Objective 4. Work with coastal communities and researchers to prepare for possible changes in species distribution and populations.	T1.02, T1.03

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

CENALIULRIIT COASTAL RESOURCE SERVICE AREA (CCRSA)

The CRSA will be conducting this project as a legislatively named CIAP recipient on behalf of the State of Alaska

PROJECT TITLE: "Our Living Lands and Waters" - *Unguwalrea Nunavut Meqllu*
Coastal Services Environmental Monitoring and Surveillance

PROJECT CONTACT:

Contact Name: Vincent Beans, Board Chair
Address: P.O. Box 32336
Mountain Village, Alaska 99632
Telephone number: 907-591-2347
Fax number: 907-279-7788
Email Address: Punty15@yahoo.com

Project Duration

The project will take three and one-half years to complete.

Estimated Cost

Spending Estimate $				
Total	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
$536,000	$147,200	$157,950	$157,950	$72,900

All of the funding will be with FY 10 funding

Funding Per Allocation Year of CIAP ($)				
Total	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$536,000	0	0	0	$536,000

PROJECT LOCATION

(See Attached Map-Attachment 1) The Ceñaliulriit Coastal Resource Service Area includes the greater Yukon-Kuskokwim Delta region including Nunivak Island. The CRSA includes 8,933 miles of coast, and a coastal zone of 15,364 square miles. Forty communities are located in the Ceñaliulriit CRSA: Akiachak, Akiak, Alakanuk, Aniak, Atmautluak, Chefornak, Chevak, Eek, Emmonak, Goodnews Bay, Hooper Bay, Kasigluk, Kipnuk, Koliganek, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nunam Iqua, Nunapitchuk, Oscarville, Pilot Station, Pitka's Point, Platinum, Quinhagak, Russian Mission, Scammon Bay, St. Mary's, Toksook Bay, Tuluksak, Tuntutuliak, and Tununak.

The Ceñaliulriit District covers approximately 48,000 square miles of which roughly 36,000 square miles are in the coastal zone. The Coastal Zone includes only the land and water below an elevation of 200 feet. Exceptions to this role are isolated highlands, such as the Askinuk Mountains at Scammon Bay, the Kaluyut Mountains that cover most of Nelson Island, and the

Kusilvak Mountains located on a line between Scammon Bay and Mountain Village. Several Isolated peaks—Nushkolik, Ingrisarak, Ingrichvak and Ungulungwak—are also included

PROJECT DESCRIPTION

This project implements the coastal environmental monitoring and surveillance objectives of Ceñaliulriit Coastal Management Plan (CMP). Keeping a 'living journal' of the health of subsistence resources helps achieve a number of the strategies focused directly on the environment. This project gets subsistence users directly involved in the kind of 'citizen-science' programs used by USFWS, NPS and other resource management agencies throughout the country. The National Research Council of the National Academies through the Polar Research Board has said that the role of community participation in environmental monitoring and surveillance as a critical best practice in the gathering of environmental information that is critical to environmental protection. [1]

The Coastal Environment Is Subject To Growing Pressures.

The Coastal Environment in Western Alaska is subject to many forces that can affect its viability, both natural and man-made. The effects of global climate change, the impact of onshore infrastructure activity, mineral development, and community behavior can all have specific and cumulative effects on the coastal environment.

The Ceñaliulriit CRSA is located in a region that faces existing impacts from these forces today but the irresistible forces of development promise even greater pressures in the future, T. Neil Davis of the Geophysical Institute in Fairbanks, Alaska notes: *Acre for acre, the huge continental shelf area of the Bering Sea may be the most valuable real estate on the Earth's surface. This view, expressed by a past director of the University of Alaska's Institute of Marine Science, Dr. Donald Hood, takes into account the Bering Sea's potential for petroleum and mineral development. But most important probably is the renewable food resource.*

The following is a list of existing factors impacting the coastal environment of the Bering Sea.

- Stresses on Solid Waste Infrastructure
- Flooding and Coastal Changes
- Landfill Sites
- Energy production/distribution/storage
- Ocean shipping and fleet networks
- Human use and occupancy impacts in general
- Mineral exploration and development

The future will ensure the growth of all of these factors and will include, at some point, oil and gas development.

Mining is worth special mention. Donlin Creek in the Calista Region is a large gold prospect on the Western border of the CRSA. The CRSA includes a portion of the Goodnews Bay Mining

[1] *Polar Research Board of the National Research Council of the National Acadamies (2004): Developing a Research and Restoration Plan for Arctic-Yukon-Kuskokwim (Western Alaska) Salmon. pp 162-163*

District prospects including the Ikuk prospect, Clara Creek prospect and the Boulder Creek prospect. A map of the Goodnews Bay Mining District is attached (Attachment 2).

Finally, it is naïve if the rich oil and gas prospects offshore will remain in limbo for long. There will be no significant impact from non-fossil-fuel energy development for decades because the growth in demand for energy from emerging economies replaces the reduction in demand from new technologies. The social and political realities of our energy economy continue to face relentless demand.

What the project will accomplish. This project will establish a citizen-scientist environmental monitoring program that merges the subsistence users' intimate knowledge of the coastal region with the technical training in what to look for, when and how to report the findings. The National Park Service and the US Fish and Wildlife Service to support their management responsibilities have used this approach. The in-house coordinator for this project will be someone with a strong environmental sciences background who is well-connected to the academic and agency scientists who will we want to become partners in this effort. The project coordinator will be a person with a strong scientific and technical background but will also be a generalist who is capable of bridging among many disciplines to guide the work. The budget will include a professional services line item with adequate funds to execute a number of small contracts to specialists and to provide reimbursements to cooperating organizations under reimbursable services agreements (RSAs). The curriculum will be developed in parallel with the Handbook; the project will also launch a web site unless project 1.04 is approved, in which case the web-based elements of this project will be hosted by the UNMI Portal.

This project DIRECTLY contributes to the PROTECTION of coastal areas by strengthens data-gathering capacity of the coastal resource managers IN THE FIELD. This project STENGTHENS data gathering in three ways:

a. This project welcomes and **engages scores of subsistence users** to become the eyes and ears of the *Unguwalrea Nunavut Meqllu* initiative, "Our Living Lands and Waters" initiative that is the foundation of the future of Ceñaliulriit CRSA's engagement in protecting our Coastal Region;

b. The project establishes a set of **"best practices" standards** for local observers to easily gather and present useful data for the use of agency resource managers and for Ceñaliulriit District stakeholders;

c. The project brings together in one manual the most important **key indicators** that CRSA residents can look for when engaged in **subsistence activities**;

d. Finally, this project will produce an **easy-to-use reporting system**, including a hard copy journal/'punch list' and an electronic system for those with access to computers, cellular or hand-held devices.

Coursework/Courseware. Development of the coursework training module, meetings with advisors and drafting and publishing a field handbook will be the focus of the first 18 months of the project. The Coordinator will organize the interagency and research collaborative to work with the content development and provide scientific peer review. Community experts will be engaged as well and will provide guidance during this process.

At the beginning of the second year, a public relations/ information campaign will be initiated in anticipation of the 18-month target for completion of the materials. The P/I campaign will be aimed at generating interest in participating in the citizen-scientist program connected with the *Unguwalrea Nunavut Meqllu* Initiative. Recruitment and screening the initial group of participants will be completed in time to secure housing and travel arrangement for the first training that will be timed to coincide with the release of the publication and the curriculum.

The training will take a week with instructors representing the various specialties incorporated in the Handbook. The training will be designed for 20 participants to keep a good ratio of instructors to participants. The training will be evaluated, revised and improved for a total of three rounds of instruction throughout the performance period of this project.

A good recruitment process will be especially critical for the first training sessions because those session will be documented by a videographer for editing into a set on learning DVDs that will also be available online through the UNMI Portal (T1.04) or, if that is not approved, a Website developed for this project.

The following represents a broad outline of the instructional curriculum. Obviously the final product that will result from the dedicated work of experts may bear little resemblance to this.

Day One (Classroom). (Orientation)
Blessing by Elder. Introduction of participants and instructors, venues for workshops, including numerous field trips and outdoors laboratory activities. Provide an overview of the UNMI Partnership and who the partners are and how they contributed to the success of the project. The participants will beak into five teams of four each according to relative area, Overview of workshop materials and overview of the UNMI Handbook. Each team member will be issued a low cost web tablet computer for his or her use during the workshop. A module on the morning of the first day will be a walk through the equipment and the pre-bookmarked reference sites that will be used by the instructors during the week. If the UNMI portal is approved for funding (T1.04) some time will be spent orienting the teams on the features of that online resource. As part of his or her lab work in the field, each team member will be issued a small digital camera. Images, as they will learn, are an important part of documentation. The afternoon will be spent learning basics of using the field Handbook in both print and digital versions.

Note: A hosted dinner and evening activities will be planned for every day but Friday.

Day Two (Classroom AM; Field PM) (Learning to Observe & Record)
Blessing by Elder. *The Yupiaq Worldview: A Pathway to Ecology and Spirit* by Angayuqaq Oscar Kawagley will be discussed (by Dr. Kawagley himself, if possible) as an example of blending Western and Traditional sciences. Then on to the hardcore training. What kind of data/information do we need to understand the health of the Coastal environment? How much of that data/information do you see every day at home or undertaking subsistence activities? How can you record the information (like keeping a journal) and then report it? Learn how to frame the information so it is still useful but protects private information, such as the location of a specific harvesting area. Then it's off to the field to practice making observations. Each team will have a particular location that has been set up for them. The instructor key will have all the

important things to note about each target. The teams will be given a limited time to make their observations and then return to the Classroom and report out to the group what they saw. They will be evaluated and critiqued.

Day Three (Classroom AM; Field PM) (Indicator Species-Marine Mammal; Habitat)
Blessing by Elder. USFWS Marine Mammal Biologist will talk about which animals are the most critical indicator species for observation and in which area. The instructor will discuss what information they need and why it is valuable and what is the best way to get that information, especially from a harvest, including sampling, documenting and reporting. University of Alaska, Fairbanks Instructor in Habitat Biology. What are the key coastal flora indicator species and what do they tell us about the health of the environment. The instructor will discuss what to look for when harvesting, what to observe in fresh water, salt water and mixed regimes and will provide guidance on how to sample, record and report. In the afternoon it is off to the field to do some habitat sampling, recording and reporting.

Day Four (Classroom AM; Field PM) (Indicator Species: Fish and Mollusk; Aquatic Plants and Phytoplankton).
Blessing by Elder. Continuation of the training in indicator species commonly found in the coastal environment. Agency and/or University Fish Biologist discusses sampling and testing techniques that can be used in harvests. A survey of non-finfish species and sampling techniques is also provided. A Marine biologist, likely from the Auk Bay campus in Juneau would provide an overview of important aquatic plants, color, and behavior and include some sampling and testing techniques. The afternoon will be spent in the field using the techniques discussed and the day ends with Team Reports.

Day Five (Classroom AM; Field AM and PM).
Blessing by Elder. The last day will be spent in the field at each team site conducting simulations. Three 'problem indicators' will be planted at each team site and they will have the task of discovering and reporting them online to the appropriate agency. If the portal (T1.04) is available, the automated reporting system will be utilized in the field. Otherwise, alternative reporting techniques will be practiced. End of the day, Certificates of Completion; exchange of information and commitment to stay connected. If the UMNI Portal is in place, a conferencing area will be set up for these teams.

Project Milestones (Note: 0.00 = The Beginning of Year 1 Activities)

Outcome Description	Comment	Milestone
Project Coordinator	Advertised in papers of general circulation and online	Hired by 0.01.5
Organize Agency/Science/Subsistence Experts Advisory Committee	State & Federal agencies, AVCP, UAF, Cooperative Institute for Arctic Research, Arctic Research Consortium, Polar Research Board, Pacific Arctic Group	Completed by 0.03.5

	(This is linked to T1.03)	
Complete Draft of Workbook & Handbook	Collaborative effort among Advisory Team & Coordinator	Completed by 0.10
Peer Review Complete	Academic & Research Advisors	Completed by 0.12
Rewrite and typeset Handbook for proof draft	Coordinator, Graphic Artist and Publisher	Completed by 1.02
Begin Public Awareness Campaign and Recruiting for initial Training	Coordinator, Partners, esp Regional Non-Profits	Begin 1.02
Advisory produces a short list of instructors and selection and recruitment is completed	Coordinator, Advisory	Completed by 1.03
Review of Proof Draft complete, final edits complete, ready for publication	Coordinator, Publisher and Graphic Artist.	Completed by 1.04
Completed draft of Workbooks	Coordinator and Advisory	Completed by 1.04.5
Publication of Handbook	A minimum of 500 copies of the handbook will be published on the initial run at a cost of $30 per copy	Publication and Software release on 1.05.5
First Week-long workshop held	Prefer location in region; may have to use Bethel because of facility demands, but TBD.	1.06
Edited Video of Workshop I and all materials go online for registered UNMI participants or those interested in the UNMI Citizen-Scientist Program in the CRSA Villages.	Coordinator Videographer; streaming on the UMNI Portal (T1.04)	1.08
90-Day evaluation period of training effectiveness from the field	Coordinator, Participants, Advisory	1.09
Revisions of Workshop Materials and Curricula	Coordinator, Advisory	1.11
Workshop II	Coordinator, Instructors	2.03
Evaluation	Coordinator, Advisory	2.06
Workshop III	Coordinator, Instructors	2.09
Evaluation	Coordinator, Advisory	2.12
Online Training and	Coordinator, University	1.08-3.06

Tutorials	Partner	
Drilling, simulation exercises, Networking activities	Coordinator, University Partner and Advisory	1.08-3.06
Project Evaluation and Close-out	Coordinator, Advisory	3.06

PROJECT CONSISTENCE WITH CIAP AUTHORIZED USES.
This project is based on Authorized Use No. 4: Implementation of a federally approved marine, coastal or comprehensive conservation management plan.

MEASURABLE GOALS AND OUTCOMES

CMP Goal	Outcome
Goal 1A. Objective 1. Identify important subsistence use areas and determine sensitivity to coastal activities	By Year 3.5, the additional information developed through this project will contribute to the nomination of at least 1 new AMSA
Goal 1A. Objective 2. Participate in regional planning exercises and project development plans	All certified participants would participate in at least 3 planning exercises a year during each year of the project.
Goal 1A. Objective 4. Work with state and federal agencies, science community including the Alaska Native Science Commission on techniques and standards to achieve our goals	18 Months of work with a project advisory committee including scientific and agency participants will assist in the development of Best Practices for hundreds of indicator species that are part of the subsistence use cycle.
Goal 2B. Objective 1. Develop Enforceable policies to protect coastal resources	At least 6 new enforceable policies will be incorporated into the CRSA mandate after year 3.5 builds technical capacity and a successful working relationship with federal and state enforcement agencies.
Goal 3B. Objective 1. Encourage the development of watershed management initiatives	The capacity-building resulting from this initiative will result in the development of at least 3 new watershed management plans in the CRSA Region
Goal 3B. Objective 2. Encourage citizen monitoring of water quality for waterbodies subject to mining runoff.	Each village in the CRSA will have at least two citizen-scientists trained in water testing, water standards and reporting.
Goal 3B. Objective 11. Work with government agencies and area residents to monitor projects to ensure compliance with water quality laws.	As a result of Goal 3B. Objective 2 accomplishment (above), a minimum of 12 CRSA communities will have agreements with monitoring agencies for water quality testing services
Goal 4A. Objective 2. Work with state and federal agencies to identify and protect important habitats that are not designated.	Technical training in habitat monitoring will enable field support for habitat monitoring agencies. By the end of Year 3.5 a minimum of 3 interagency agreements will be executed between the CRSA and habitat monitoring

	agencies to provide ongoing field activity and training of citizen-scientists
Goal 4A. Objective 7. Work with state and federal agencies re monitor and surveillance of endangered species	Among the indicator species are scores of species commonly encountered in the subsistence resource regime, such as (*Branta canadensis*): ***canadensis*** [Atlantic], *interior* [Interior], ***maxima*** [Giant], ***moffitti*** [Moffit's], ***parvipes*** [part of 'Lesser complex'], *fulva* [Vancouver], and ***occidentalis*** [Dusky] among the geese population; Northern Fur Seal
Goal 8A. Objective 1. Avoid or minimize adverse impacts from oil and gas projects	The training of observer teams will result in teams of residents suited for future impact monitors in the event of oil and gas development
Goal 10A. Objective 1. Avoid adverse impacts from mining operations in the Coastal Zone	The engagement of local citizen-scientists will provide an additional layer of monitoring for mining operations
Goal 13A. Objective 1. Analyze implementation of recent changes to the ACMP to determine if "Areas Which Merit Special Attention" (AMSAs) would provide protections in addition to those provided by area designations under 11 AAC 114.250.	As stated above, the result of information at the end of this project will contribute to the nomination of at least 1 new AMSA in the CCRSA region.
Goal 16A. Objective 2. Encourage research and monitor trends.	The end of year 3.5 will result in the training and engagement of a minimum of 60 citizen-scientists in the Ceñaliulriit CRSA.
Goal 16A. Objective 4. Work with coastal communities and researchers to prepare for possible changes in species distribution and populations.	The CRSA will have at least 1 agreement with a scientific and research agency for ongoing data gathering related to climate change and planning for species and/or habitat redistribution.

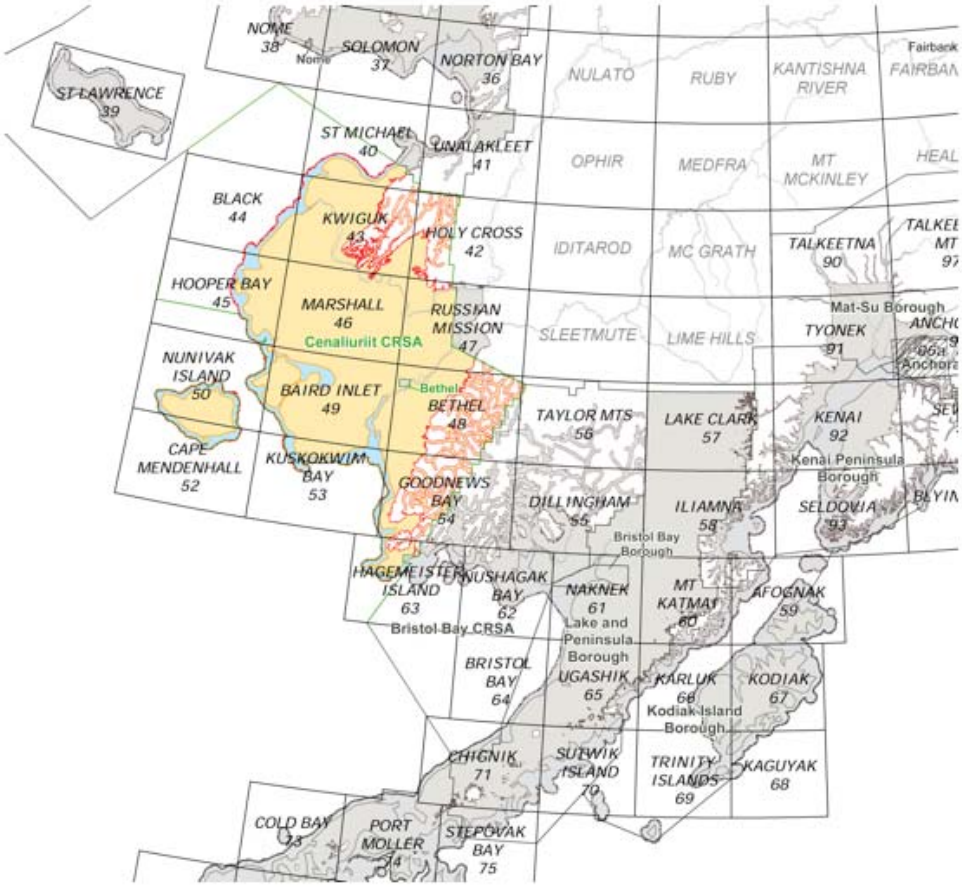
COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.
Project Advisor Relationship. The principal coordinative relationship with the key federal agencies engaged in the CRSA is in the project advisory relationship established to support the *Unguwalrea Nunavut Meqllu* initiative. These relationships will be directly addressed in T1.03 The operational term of art in this initiative is "co-relevancy". Co-relevancy requires a interlocking relationship among the stakeholders, particularly the management agencies and the Ceñaliulriit planners. For the manual, this "co-relevance" will be required for standards setting to be used as 'best practices'. This will involve cross training and education among professional managers and community residents and subsistence users.

COST SHARING OR MATCHING FUNDS. *CIAP funds may be used for cost-sharing or matching purposes required by another grant. If they are used in this manner, a letter will be included with the CIAP grant application from the other federal agency (the agency charged with administering the program that includes the cost-sharing or matching requirement)*

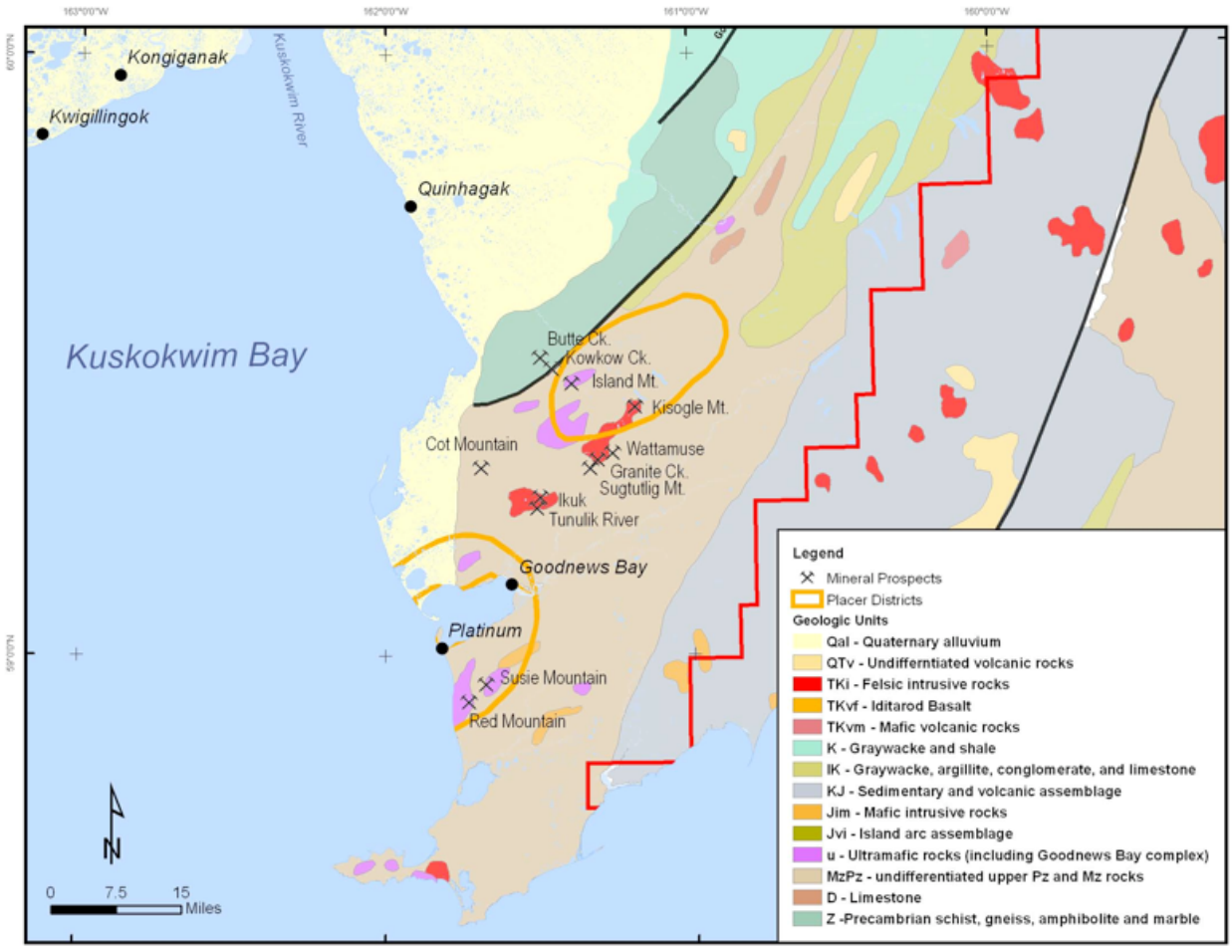
indicating that the other program allows the use of federal funds to meet the cost-sharing or matching requirements.

Through various partnership agreements with federal agencies, non-profits and scientific organizations, the project has a goal to leverage its contribution to their work through contract RSAs with an equal value of contributed services in behalf of the CIAP project. These in-kind values will nearly double the value of the contractual line item in the project budget.

Attachment 1. Map of the Cenaliulriit Region



Attachment 2. Goodnews Bay Mining District



STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

CENALIULRIIT COASTAL RESOURCE SERVICE AREA (CCRSA)
The CRSA will be conducting this project as a legislatively named CIAP recipient on behalf of the State of Alaska

PROJECT TITLE: "Our Living Lands and Waters" - *Unguwalrea Nunavut Meqllu*
UNMI Portal

PROJECT CONTACT:

Contact Name: Vincent Beans, Board Chair
Address: P.O. Box 32336
Mountain Village, Alaska 99632
Telephone number: 907-591-2347
Fax number: 907-279-7788
Email Address: Punty15@yahoo.com

Project Duration
The project will take three and one-half years to complete.
Estimated Cost

Spending Estimate $				
Total	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
$1,050,000	$600,000	$300,000	$100,000	50,000

All of the funding will be with FY 10 funding

Funding Per Allocation Year of CIAP ($)				
Total	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$1,050,000	0	0	0	$1,050,000

PROJECT LOCATION
(See Attached Map-Attachment 1) The Ceñaliulriit Coastal Resource Service Area includes the greater Yukon-Kuskokwim Delta region including Nunivak Island. The CRSA includes 8,933 miles of coast, and a coastal zone of 15,364 square miles. Forty communities are located in the Ceñaliulriit CRSA: Akiachak, Akiak, Alakanuk, Aniak, Atmautluak, Chefornak, Chevak, Eek, Emmonak, Goodnews Bay, Hooper Bay, Kasigluk, Kipnuk, Koliganek, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nunam Iqua, Nunapitchuk, Oscarville, Pilot Station, Pitka's Point, Platinum, Quinhagak, Russian Mission, Scammon Bay, St. Mary's, Toksook Bay, Tuluksak, Tuntutuliak, and Tununak.
The Ceñaliulriit District covers approximately 48,000 square miles of which roughly 36,000 square miles are in the coastal zone. The Coastal Zone includes only the land and water below an elevation of 200 feet. Exceptions to this role are isolated highlands, such as the Askinuk Mountains at Scammon Bay, the Kaluyut Mountains that cover most of Nelson Island, and the

Kusilvak Mountains located on a line between Scammon Bay and Mountain Village. Several Isolated peaks—Nushkolik, Ingrisarak, Ingrichvak and Ungulungwak—are also included

PROJECT DESCRIPTION

This project implements the Coastal Management Plan (CMP) Objectives that call for the establishment of communication and a system to insure full and direct participation in project review and communication. Goal No. 2A. Objective 2 of the CMP, for instance calls for *"…local participation through teleconferencing or other means during project review."*; and the same goal and objective provides a strategy that directs the CRSA to *"…Use current technology to distribute information and provide training and receive comments"*. Other objectives call for methods and means to establish *"early consultation"* and *"provide agencies with distribution lists"*.

The challenge of managing communication over geographically scattered communities in a large community and meeting the demand for interactive information and rapid response and information sharing can only be met with state of the art technology. Add to this challenging the need to maintain and add to existing mapping data regarding subsistence use areas as well as tracking the changes of a variety of data and the argument for technological solutions becomes more persuasive,

While this is a stand-alone project, it is proposed under an umbrella called the *Unguwalrea Nunavut Meqllu Initiatives or UNMI,* The UNMI is a set of proposals to invest the CIAP funds in an implementation program for the CMP that will transform the operational and working relationships of the Ceñaliulriit region among our stakeholders including agencies, non-profit organizations, the scientific community and our villages,

This project is driven by the information, communication, and reporting objectives of Ceñaliulriit Coastal Management Plan (CMP). This investment by the CIAP funds will build a community portal, that will include conventional portal services, specified below, and a map-based system modeled after the People of the Arctic Portal http://www.arcticportal.org

This project is a comprehensive solution to many of the information, participation and reporting needs of coastal area stakeholders, including resource management and conservation agencies, Regional non-profits, project developers, and community members.

What the project will accomplish. First, a definition is called for. What is a "Portal"? A Portal is a single address where a person can find multiple layers of information that is both web-based and stored on a server. The portal has a unique "look and feel" that is consistent with the context of the service. The UMNI Portal will provide both "static" information (meaning a read-only browser); and "dynamic" content (meaning information that can be shared and written to). The first is for information "sourcing" and the second is for information "sharing". Like the Arctic Portal in the example provided above, this portal will have a map-based feature that provides many layers of information for the same base maps. If the user wants to look at the distribution of animals during different times of the year, that will be one layer; waterfowl would be another layer; habitat features would be multiple layers. Dozens of mapping layers would be provided. An example of this feature can be found at this link: http://portal.inter-map.com/

So now we know that we will be building a website, but a website on steroids, so to speak. We

know that this website will have some standard portal features which we detail below. We also know that we will have a "place" on this site where content can be shared and edited. And we will have a nice, attractive interactive map feature. An important feature that will make this giant website *really* useful will be a "Reporting" feature. All the investment that CIAP is making into the development of **partnerships** (T1.03) and trained observers and reporters (T.1.01, T1.02) will come together when a reporting template will take that information and put it into a format that makes sense to an agency in the midst of a wastewater discharge permit review process, for example. And just to make sure that the system is useful for Yup'ik placenames and traditional naming conventions if the reporter is getting his/her information from an elder, there will be a Yup'ik translating feature linked to all features. Why? Picture the younger, technologically savvy citizen-scientist in Mountain Village sitting at his computer with an elder who just returned from a trip and found a dead goose and notice other geese exhibiting odd behavior. The Old Man uses traditional placenames and Yup'ik descriptors. The Young Man uses the map to key in on the location and enters both the English and the Yup'ik into the dynamic information system linked to the map. This incident now has a placeholder for other Yup'ik speakers in the future and over time, the cumulative information will be pulled into a report for agencies and scientists accessing the Portal.

The Portal.

The Ceñaliulriit CRSA will be actively engaged in managing comments on permitting relating to enforceable policies through project monitoring and surveillance, protecting subsistence and cultural resources through a citizen-scientist program engaging subsistence users, establishing and growing collaborative relationships with the scientific and agency communities, and strengthening protocols and collaboration among Ceñaliulriit District communities.

The objective of the UNMI Portal is to:

- Facilitate e-communication, data transactions and networking amongst stakeholders in the protection of Ceñaliulriit District's coastal region;
- Make available electronic resources valuable to the CRSA mission including books, research papers, journal articles, research study reports, policy documents and commission reports;
- Develop a platform for stakeholders to share their work for knowledge sharing and knowledge generation;

Registered Users

- Agency Personnel (~50)
- Cenaliulriit Communities (initially 200, scalable to 1,000)
- Academic and Scientific (~50)
- Area Schools (~250, scalable to 1,000)
- Corporations and non-profits (~50)

All Registrants will have basic word-processing and web-browsing skills; half the users will be making connection from sub-optimal connectivity environment, so both low-speed and high-speed access will be accommodated in the content design. Initially the architecture should

accomodate~150 users will be using the site simultaneously.

Content. A wide range of specialist and user-generated content is expected to be uploaded on the site, this includes: Curriculum materials, reading, articles and research papers; reports; and by some so-called "power-users", multi-media data. Accommodating uploads of ~50 MB scalable to ~200 MB by users should be a design feature.

- Library resource will be available including books, research papers, journal articles, research study reports, policy documents and commission reports. The UNMI Advisory Committee will ensure that the content is authentic, relevant and up-to-date. Efforts will be made to make readings available in the Yup'ik language as well.
- A conferencing area for researchers and project professionals and community monitors to collaborate on project review, incident command, and data activities;
- Discussion forums will be provided for knowledge sharing and networking among the various stakeholders in Ceñaliulriit District.
- A technical assistance link to request help with any of the features of the Portal
- Blogs and journals can be added
- Podcasting features will be available
- E-mail accounts for member users will be included. This facility can be extended to the larger community as the network widens and demands increase.

The web portal should ideally be supported on an open-source OS, database and Web platform, that is database-driven, scalable, stable, secure, capable of being hosted on a shared/independent server. The front-end will be UNICODE compliant and be able of bilingual (English and Yup'ik) content generation and querying. The portal should be optimized for all major browsers.

The Map Feature.

Attachment 2 contains a detailed technical of this feature called IMAPS.

The Base Map. The map feature will be based on the subsistence-mapping project that was completed by the Ceñaliulriit CRSA previously. The goal is to make these maps accessible, useful and dynamic for our communities who will be using them to monitor project and incidence activities.

Map Layers. In the old days we used to use clear plastic Mylar sheets with information that we could lay over a map to see the relationship of the overlain features to the base map. Today we accomplish the same thing with graphical layering. For the UNMI Portal Map we will incorporate various environmental and population information as map layers.

Data-Driven Map information. A system of information that dynamically links to associated forms of output such as text reports, spreadsheets, or graphical data formats like charts and maps is called a relational database (RDB). The process of updating the data and changing the output is called a relational database management system (RDBMS). The UNMI Map system will be capable of being edited and updated by information gathered through monitoring, surveillance and field research efforts. As information from agencies and other partners is provided, the Portal map information will continuously improve and refresh.

Project Milestones (Note: 0.00 = The Beginning of Year 1 Activities)

Outcome Description	Milestone
Form a Portal Project subcommittee from the Advisory Committee	Formed 0.02
Hire Portal Project Manager	Completed by 0.03.5
Contract with Web Design and engineering team with digital mapping expertise	Completed by 0.06
Contract with an RDBMS consultant	Completed by 0.06
Initial data compiling and entry	Completed by 0.09
Run simulation/tests	0.10-0.12
Rollout, training and testing	1.02
Portal 2.0 (upgrades and changes)	2.03
Portal 3.0 (upgrades and changes)	3.0
Final evaluation and close out	3.5

PROJECT CONSISTENCE WITH CIAP AUTHORIZED USES.

This project is based on Authorized Use No. 4: Implementation of a federally approved marine, coastal or comprehensive conservation management plan.

MEASURABLE GOALS AND OUTCOMES.

The Portal Project Coordinator will be required to issue a quarterly performance evaluation of the Portal with specific reference to each of these objectives. Year 1.0 will probably demonstrate low performance overall, but by the middle of year 2.0, the Portal will have "caught on" as a collaborative tool.

CMP Goal	Outcome
Goal 1A. Objective 2. Participate in regional planning exercises and project development plans	The portal will be used to host 12 Project simulations by year 3.5 and 14 Environmental simulations by 3.5
Goal 1A. Objective 4. Communicate with other coastal districts to determine how they are addressing common issues.	By 2.5, the Portal will host at least 1 technical conference between among the Project Advisory, the CRSA Board and another CRSA
Goal 1A. Objective 4. Work with resource developers to ensure subsistence access.	By 2.5 the CRSA will host an online workshop with developers and agencies on how to use

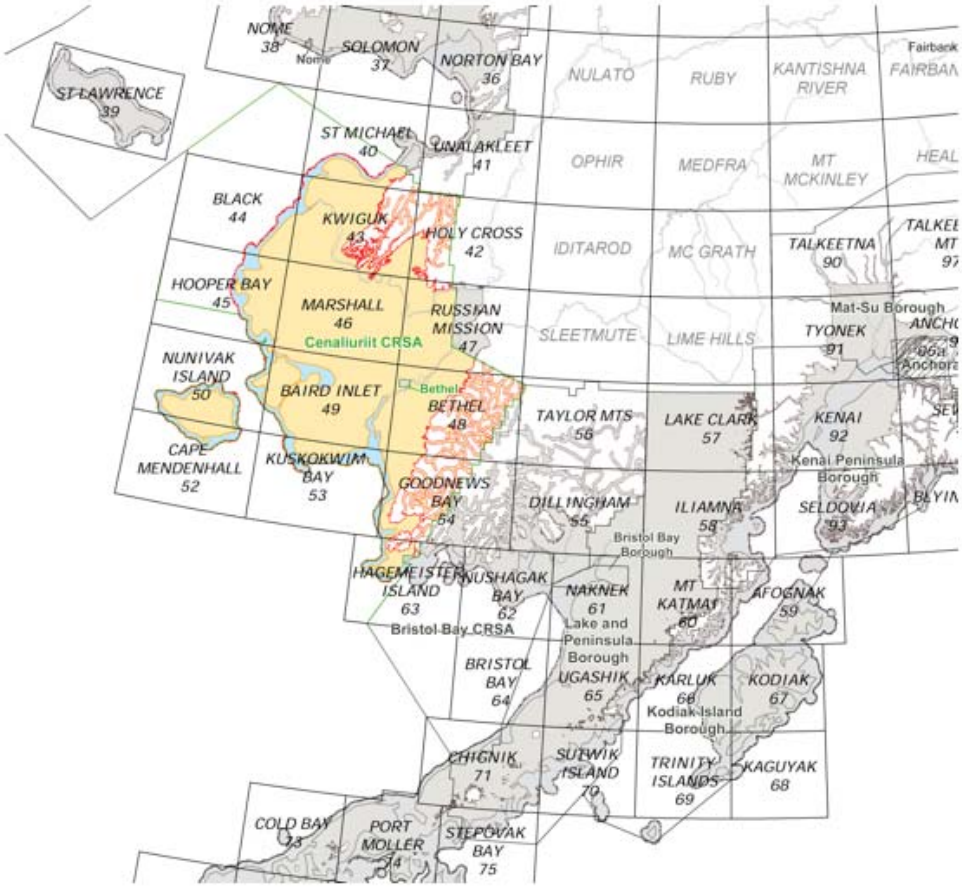
	the Maps feature to check for potential conflict
Goal 1A. Objective 4. Work with state and federal agencies, science community including the Alaska Native Science Commission on techniques and standards to achieve our goals	This is built into the Project Advisory system. The portal would be the basis for 1 meeting a month to supplement the face-to-face sessions that will occur each quarter.
Goal 2A. Objective 2. Request that coordinating agencies invite local participation through teleconferences or other means during project reviews	This will occur on an ongoing basis. Quarterly statistical reports of Portal Use will be issued including the use of the Portal for Project Review, Permit comments, Pre-developent conferencing, etc
Goal 2A. Objective 2. Use current technology to distribute information and provide training and receive comments	The goal is to achieve 100% portal use for notification and comment gathering. Statistics on Portal Use will be maintained.
Goal 2A. Objective 3. Distribute project information before and during consistency reviews	By 3.5 100% Portal utilization by agencies for consistency revue by the CRSA
Goal 2A. Objective 4. Provide agencies and applicants with distribution lists and encourage them to initiate early consultation.	Usage of the Portal for distribution lists and consultation will be incorporated into the Partnership Agreements of the 13 participant agencies
Goal 2B. Objective 1. Work closely with the regional NGOs, Tribal Councils, cities, corporations and applicants to design projects that protect subsistence and cultural resources	The combination of the collaborative platform of the portal and the dynamic mapping layers will make this outcome easier. The effectiveness of achieving this objective will be evaluated as part of the quarterly review.
Goal 2B. Objective 4. Develop working relations with agencies and villages that encourage continual consultation about the needs for improvement.	Statistics will be kept on all traffic and parsed by header and use surveys responded to by users. User and agency feedback will also go into the evaluation.
Goal 3B. Objective 1. Encourage pre-application meetings between industry and communities	Industry and developer community will be invited to use the Portal for communicating with communities. Obviously no substitute for onsite visits, but will help in facilitation. Statistics on registered industry users and traffic will be included in the Quarterly.
Goal 3B. Objective 3. Cooperate with agencies attempting to identify and stop nonpoint source water pollution in region.	Conferencing capabilities and the dynamic map can aid in this collaboration. Nonpoint source collaborations will be a statistical tag for reporting.
Goal 3B. Objective 4. Educate the public on how to identify and stop potential fuel oil spills from local storage and distribution systems	All training materials on Community oil spill surveillance; response and protocols will be available on the Portal. Link statistics to that material will be kept.
All other Objectives and strategies of the CMP covered by this project. Please refer to the CMP Objectives/Strategy Reference Matrix	43, 57,61,64,65,72,73,78,86,87,88, 90,92,93 102,104,105,107, 109,110,112

(Attachment 3)	

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.
Project Advisor Relationship. The principal coordinative relationship with the key federal agencies engaged in the CRSA is in the project advisory relationship established to support the *Unguwalrea Nunavut Meqllu* initiative. These relationships will be directly addressed in T1.03 The operational term of art in this initiative is "co-relevancy". Co-relevancy requires a interlocking relationship among the stakeholders, particularly the management agencies and the Ceñaliulriit planners. Of the 13 agencies and organizations that will part of the core project partnership, three of those agencies we are looking to are federal: USFWS, NOAA, and EPA.

COST SHARING OR MATCHING FUNDS.
No matching funds are anticipated to be used in this project.

Attachment 1. Map of the Cenaliulriit Region



Attachment 2. IMAPS Technical Detail

IMAPS is a three-year project that springs from the completed subsistence base maps produced by the Ceñaliulriit CRSA. Yup'ik voice-to-text translating software, linking the existing base maps to a scalable and interactive mapping layer using Google Map API will be completed. An associated product will be the completion of a lexicon of Yup'ik geographical keywords that, along with the corresponding English words or phrases, will be capable of launching the map-based RDBMS ("Relational Database Management System").

This RDBMS will help drive several report templates that will compile both text and graphical site-specific data into a context-rich query report. This interactive map tool will have utility for both English-only managers as well as bilingual Yup'ik speakers. There will be a Yup'ik-English-Yup'ik translation and pronunciation guide build in to the **IMAPS** program. All of this would be available on the Web (through the Portal identified in the association **SUSCOM** project) with both a public "front-end" and a password-protected "back-end" for conferencing & collaboration. The **IMAPS** will also have a secure area that will provide a searchable archive of reports and linked electronic reference materials. The **IMAPS** project is the kind of forward-looking collaborative tool that will attract private sector foundation support and it is our intent, through the SUSCOM initiative, to attract private foundation funds to help implement and improve this remarkable tool.

A considerable amount of work has gone into the production of a survey of southwest Alaska villages as part of the mapping project completed by the CRSA. The majority of the villages in the region were included in the study.

Some of the significant deliverables included in this project will include:

- Detailed Digital Maps of the region villages;
- Audio data of significant features of the affected areas in Yup'ik language and linked to an English lexicon;
- RDBMS of context-rich, attribute driven information linked to mapping layers;
- Interactive device networking including a set of JavaScript-based templates for link-and-display services integrated into the Google Map API layer;
- Stakeholder training in the mapping tools;
- Additional data collection and integration into the RDBMS.

All of the work deliverables collected together represents significant data for project assessment and planning.

Because this project benefits all the agency, community and resource stakeholders, an **IMAPS Advisory Team** will formed from among the stakeholder teaming partners identified in the

SUSCOMS, including MMS, USFWS, Caninermiut/Qualuyatt-Llu Nunmamta Menuitangnaqlerkanun Nunam Caliarat, DCRA, DNR and others.

Because the base map information is not query-based, the first task will be to create a **"taggable" map layer** for linking data attributes generated in the Relational Database System. We will call this the 'tag layer'. To complete this task, we will work with a consulting expert in Google Map API and Java Scripting to build a 'digital frame' for the existing base maps.

Once the digital frame is completed, the technical decision about **server requirements, design and location** will be made. This milestone takes up consideration such as:

- Whether to lease server space from the Portal manager (SEE the SUSCOM project Web Portal) to house the project or Co-Manage the data with an agency partner (SEE the SUSCOM project Co-Management),
- Whether to develop reimbursable service agreement (RSA) with the University of Alaska or use a mirror server linked to the Google server farm and contract with Google to manage it in our behalf.

The design and **development of the underlying database management system (RDBMS)** will occur on a parallel track. Here, consultants, working closely with CRSA staff and the IMAPS Advisory Team will design and test the underlying data base management architecture. This will be a unique and challenging adaptation of RDBMS technology. The various Yup'ik dialects are 'context-rich' languages and Native speakers, linguists and API code experts will be teamed up to push the technological "envelope" to ensure that the reports generated from the attributable data are relevant and meaningful.

Once the technical networking details are settled and the RDBMS architecture is completed, **data compiling and management** must take place. Three important components of data management are involved at this point: attribute tagging and formatting of existing data, identification of gaps in existing data and filling those gaps. The data formatting will be conducted and managed online by contract data technicians (either in or out of the region) and the additional data gathering will be conducted in the field.

The next activity of the project, occurring almost simultaneously with the posting of the data will be the development of **the report generation templates** that can be used by the CRSA to generate input to MMS and State personnel. The automated output will provide a draft that will then be posted in the conferencing space on the Portal for collaboration leading to a final staff-generated comment.

The next to final stage will be testing, revising the IMAPS tool be running simulations in collaboration with the Advisory Team. The simulation and revision would generate the development of a **implementation plan** and policy and procedure manual for IMAPS operation. Finally, MAPS rollout will be include the **training of paraprofessional technicians** who will work on contract with the CRSA. Each IMAPS paratech will be required to work with the system 4 hours a week as a base engagement performing simulations and updating data. Initial funding of the paratechs will be an RSA with the Tribal Council. In some cases, as with the Tribal Environmental Specialists, IMAPS can provide a salary offset or enhancement, depending on individual Tribal policy. Rollout and operation would be detailed in the implementation plan for IMAPS.

Attachment 3. CMP Reference Matrix for Goals/Objectives Strategy

Table Reference No.	Strategy Addressed By Projects	CIAP Project ID
1	Goal 1A. Objective 1. Identify important subsistence use areas and determine sensitivity to coastal activities	T1.01, T1.02
2	Goal 1A. Objective 1. Designate Subsistence Use Areas Under 11.AAC.114.250	T1.03
3	Goal 1A. Objective 1. Participate in project consistency reviews to ensure that subsistence resources and uses are protected and not precluded.	T1.05
4	Goal 1A. Objective 2. Participate in regional planning exercises and project development plans	T1.01, T1.02, T1.04
5	Goal 1A. Objective 3. Work with state and federal agencies to identify and protect referenced habitats.	T1.03
6	Goal 1A. Objective 4. Communicate with other coastal districts to determine how they are addressing common issues.	T1.03. T1,04
7	Goal 1A. Objective 4. Establish subsistence access enforceable policy	T1.03
8	Goal 1A. Objective 4. Work with resource developers to ensure subsistence access.	T.1.01, T1.04
9	Goal 1A. Objective 4. Work with state and federal agencies, science community including the Alaska Native Science Commission on techniques and standards to achieve our goals	T1.02, T1.03, T1.04
10	Goal 1A. Objective 4. Encourage project applicants to include local knowledge into studies.	T1.01
11	Goal 2A. Objective 1. Encourage Applicants and agencies to sponsor pre-application meetings	T1.03
12	Goal 2A. Objective 2. Request that coordinating agencies invite local participation through teleconferences or other means during project reviews	T1.03, T1.04
13	Goal 2A. Objective 2. Provide training to	T1.01

	village leaders regarding effective participation in ACMP review.	
14	Goal 2A. Objective 2. Use current technology to distribute information and provide training and receive comments	T1.04
15	Goal 2A. Objective 3. Distribute project information before and during consistency reviews	T1.01, T1.04
16	Goal 2A. Objective 4. Provide agencies and applicants with distribution lists and encourage them to initiate early consultation.	T1.01,T1.03, T1.04
17	Goal 2B. Objective 1. Designate areas under 11 AAC 114.250 that will allow development of appropriate enforceable policies.	T1.03
18	Goal 2B. Objective 1. Develop Enforceable policies to protect coastal resources	T1.02,T1.03
19	Goal 2B. Objective 1. Work closely with the regional NGOs, Tribal Councils, cities, corporations and applicants to design projects that protect subsistence and cultural resources	T1.01, T1.03, T1.04
20	Goal 2B. Objective 2. Work with area residents and government agencies to monitor projects and enforce requirements	T1.01
21	Goal 2B. Objective 3. Encourage applicants to avoid excavation in important wetlands	T1.01
22	Goal 2B. Objective 3. Develop policies that will protect permafrost and water drainage systems.	T1.02, T1.03
23	Goal 2B. Objective 4. Develop working relations with agencies and villages that encourage continual consultation about the needs for improvement.	T1.03, T1.04
24	Goal 2B. Objective 5. Encourage communities in the region to prepare and adopt land use, comprehensive plans and ensure that these plans are compatible with the Ceñaliulriit CMP.	T1.01
25	Goal 3A. Objective 1. Encourage communities to work with projects to reduce dust.	T1.01
26	Goal 3A. Objective 2. Participate in DEC permit reviews.	T1.03
27	Goal 3A. Objective 3. Participate in the State's ad hoc working group associated with the Arctic Council	T1.03
28	Goal 3A. Objective 4. Work with government	T1.01

	agencies and area residents to monitor projects to ensure compliance with laws.	
29	Goal 3B. Objective 1. Participate in permit reviews to ensure proper treatment of mining effluent and tailings	T1.01
30	Goal 3B. Objective 1. Encourage pre-application meetings between industry and communities	T1.03, 1.04
31	Goal 3B. Objective 1. Encourage the development of watershed management initiatives	T1.02, T1.03
32	Goal 3B. Objective 2. Encourage citizen monitoring of water quality for waterbodies subject to mining runoff.	T1.01, T1.02
33	Goal 3B. Objective 3. Cooperate with agencies attempting to identify and stop nonpoint source water pollution in region.	T1.02, T1.04
34	Goal 3B. Objective 4. Educate the public on how to identify and stop potential fuel oil spills from local storage and distribution systems	T1.01, T1.04. T2.0
35	Goal 3B. Objective 5. Work with agencies to fund, train and equip village oil response teams	T1.03
36	Goal 3B. Objective 6. Work with agencies and communities to ensure that fish waste is properly disposed of	T1.03
37	Goal 3B. Objective 7. Work with government and NGOs to eliminate discharge of plastic and other waste from ships into the ocean	T1.03
38	Goal 3B. Objective 8. Work with state and regional organizations to address village water and sewage treatment and disposal.	T1.03. T2.0
39	Goal 3B. Objective 9. Work with the state and state agencies to inform residents about the dangers of toxic and hazardous materials present in the villages and camps	T1.03
40	Goal 3B. Objective 9. Ensure that toxic and hazardous materials are properly shipped, stored, and removed from the Ceñaliulriit Region.	T1.03, T2.0
41	Goal 3B. Objective 10. Support recycling efforts throughout the region.	T1.03, T2.0
42	Goal 3B. Objective 11. Work with government agencies and area residents to	T1.01, T1.02, T1.03

	monitor projects to ensure compliance with water quality laws.	
43	Goal 4A. Objective 1. Work with state and federal agencies to identify and protect sensitive habitats.	T1.03, T1.04
44	Goal 4A. Objective 2. Designate important habitat areas under 11AAC 114.250(h)	T1.03
45	Goal 4A. Objective 2. Develop enforceable policies to protect habitat.	T1.03
46	Goal 4A. Objective 2. Work with state and federal agencies to identify and protect important habitats that are not designated.	T1.02, T1.03
47	Goal 4A. Objective 3. As always, work with agencies	T1.03
48	Goal 4A. Objective 3. Develop enforceable policies to protect wetlands	T.103
49	Goal 4A. Objective 4. Ensure that site preparation activities are times to minimize impacts to critical fish and wildlife	T1.01
50	Goal 4A. Objective 5. Develop enforceable policies regarding the maintenance of natural water drainage systems	T1.03
51	Goal 4A. Objective 6. Same with Permafrost	T1.03
52	Goal 4A. Objective 7. Work with state and federal agencies re monitor and surveillance of endangered species	T1.02, T1.03
53	Goal 4A. Objective 8. Work with project stakeholders to ensure that infrastructure projects are compatible to the environment, subsistence activities and the Yup'ik culture.	T1.01
54	Goal 4A. Objective 9. Work with state and federal agencies to classify lands for the protection of fish and game while supporting commercial recreation and traditional uses on an optimum sustained yield basis, or maintenance of unique or rare species of regional, state, or national significance.	T1.03
55	Goal 4A. Objective 10. Work to minimize noise from projects.	T1.01
56	Goal 4A. Objective 11. Work with land management agencies to solve the explosive population of beaver impacting habitat.	T1.03
57	Goal 5A. Objective 1. Use written and oral sources to identify historical ice conditions, landforms, flood patterns and other natural features impacting the coastal environment.	T1.03, T1.04

58	Goal 5A. Objective 1. Designate areas for natural hazards under 11 AAC 114.250	T1.03
59	Goal 5A. Objective 2. Develop enforceable policies to address natural hazards	T1.03
60	Goal 5A. Objective 2. Recommend alternative measures to address the natural hazards impinging upon projects.	T1.01
61	Goal 5A. Objective 3. Participate in reviews of OCS activities	T1.01, T1.02, T1.04
62	Goal 6A. Objective 1. Encourage village to develop positions on recreation and tourism through the development of local plans	T1.03
63	Goal 6A. Objective 1. Encourage environmentally friendly tourism	T1.03
64	Goal 6A. Objective 2. Develop a list of areas that should be avoided by visitors	T1.03, T1.04
65	Goal 6A. Objective 2. Create a brochure that educates visitors on how to respect traditional laws, values and culture	T1.04
66	Goal 6A. Objective 3. Work with state and federal agencies to enact and enforce appropriate controls over guides and commercial outfitters.	T1.03
67	Goal 6A. Objective 4. Work with landowners to minimize impact from sports hunters on subsistence resources.	T1.03
68	Goal 6A. Objective 5. Work with villages and the tourism industry to do an analysis of optimal outdoor recreational tourism for the region.	T1.03
69	Goal 6B. Objective 1. Work with government agencies and landowners to identify recreational areas and trends.	T1.03
70	Goal 7A. Objective 1. Work with state agencies to designate the entire coastal district as important for the study and understanding of historic and prehistoric resources under 11AAC114.250.	T1.03
71	Goal 7A. Objective 1. Work with all concerned parties during consistency reviews to mitigate conflicts between the project and cultural resource preservation.	T1.01
72	Goal 7A. Objective 2. Work with applicants, residents and visitors to educate them about regulations governing cultural resources.	T1.03, T1.04
73	Goal 7A. Objective 2. Ensure that the villages	T1.01, T1.04

	understand the technical assistance available under the State Historic Preservation Office for identification, protection, and management of significant sites.	
74	Goal 7A. Objective 3. Work with schools, visitor associations and applicants to develop a general understanding and a respect for ancestral sites.	T1.03
75	Goal 7A. Objective 4. Promote further research, inventories, documentation regarding historical and cultural sites	T1.03
76	Goal 7A. Objective 5. Begin using traditional place names in the CMP.	T1.03
77	Goal 8A. Objective 1. Avoid or minimize adverse impacts from oil and gas projects	T1.01, 1.02
78	Goal 8A. Objective 2. Ensure Local involvement in decisions about planning, siting design and management of energy facilities and activities	T1.01, T1.03, T1.04
79	Goal 8B. Objective 1. Provide for local employment	T1.03
80	Goal 8B. Objective 2. Develop plans for ensuring that oil and gas facilities will fund local infrastructure costs generated by the project.	T1.03
81	Goal 8B. Objective 3. Explore opportunities to lower energy costs for the Ceñaliulriit region.	T1.03
82	Goal 8C. Objective 1-2. Ensure that oil spill response plans are in place prior to a project and kept up to date.	T1.01
83	Goal 8C. Objective 3. Involve local organizations in preparation for clean-up of local spills from fuel oil storage and distribution.	T1.01, T2.0
84	Goal 9A. Objective 1. Identify adverse impacts from the development of new transportation facilities and develop mitigation measures for those impacts.	T1.01
85	Goal 9A. Objective 2. Identify route deficiencies and optimization strategies for prospective projects.	T1.01
86	Goal 9A. Objective 3. Consider inter-village and subregional transportation and utility infrastructure projects that provide more cost-effective services in the region.	T1.03, T1.04

87	Goal 9B. Objective 1. Ensure transportation and utility projects include consultation with local landowners and communities.	T1.01, T1.03, T1.04
88	Goal 9B. Objective 2. Assist villages to secure transportation and development planning funds.	T1.03, T1.04
89	Goal 9B. Objective 3. Encourage the development of community land-use plans	T1.03
90	Goal 9B. Objective 4. Work to relocate airports that have become safety hazards by being located too close to the community or which are threatened by erosion.	T1.03, 1.04
91	Goal 10A. Objective 1. Avoid adverse impacts from mining operations in the Coastal Zone	T1.01, 1.02
92	Goal 10A. Objective 2. Evaluate areas in the CRSA that have potential for mineral development.	T1.03, 1.04
93	Goal 10A. Objective 3. Establish a process that integrates local input from traditional and city councils, local corporations and other local and regional organizations into the planning, siting, design, operation and abandonment of mining facilities and activities	T1.01, T1.04
94	Goal 10A. Objective 4. Work with appropriate state and federal agencies to ensure that abandoned sites and facilities are restored to pre-mining condition to the maximum extend feasible.	T1.03
95	Goal 10B. Objective 1. Identify sand and gravel sources that are compatible with adjacent uses and located in an area that will also benefit local village development	T1.01, T1.03
96	Goal B. Objective 2. Develop strategies to make the cost of mineral development include the cost of community infrastructure impacted by the project.	T1.01, T1.03
97	Goal 11A. Objective 1. Ensure that commercial fishing and seafood processing is compatible with other coastal uses and resources.	T1.01, T1.03
98	Goal 11B. Objective 1. Avoid impacts from development activities on fish habitat and population.	T1.01, T1.02
99	Goal 11C. Objective 1. Encourage the	T1.03

	preparation of a fisheries development plan that identifies opportunities for maintaining or expanding fisheries opportunities for local residents	
100	Goal 12A. Objective 1. Ensure that significant negative impacts from timber harvests are avoided	T1.01
101	Goal 13A. Objective 1. Analyze implementation of recent changes to the ACMP to determine if "Areas Which Merit Special Attention" (AMSAs) would provide protections in addition to those provided by area designations under 11 AAC 114.250.	T1.02, T1.03
102	Goal 14 A. Objective 1. Ensure capital projects do not significantly impact coastal resources and uses and that appropriate groups in the region are involved.	T1.01, T1.04
103	Goal 14A. Objective 2. Ensure that all stakeholder development plans in the region include provisions for maintenance of water drainage systems and preventing harm to permafrost areas.	T1.03
104	Goal 14A. Objective 3. Encourage developers to give affected communities advance notice of any development activities, especially those that will bring significant numbers of workers into the community.	T1.01, T1.03, T1.04
105	Goal 14A. Objective 4. Assist in coordinating capital improvement planning in the CRSA to promote efficiency, minimize disruption and maximize benefits.	T1.01, T1.04
106	Goal 14A. Objective 5. Work with villages and government agencies to monitor the operations of tank farms, landfills, sewage lagoons and similar facilities.	T1.03
107	Goal 14B. Objective 1-2. Support preparation of village comprehensive plans to help guide development affecting the subject community.	T1.03, T1.04
108	Goal 14B. Objective 3. Encourage projects that are sensitive to cultural effects on the community.	T1.03
109	Goal 15A. Objective 1. Assert as much control as possible through the ACMP and permit reviews.	T1.01, T1.03, T1.04
110	Goal 16 A. Objective 1. Prepare communities	T1.03, T1.04

	for possible adverse effects from climate change.	
111	Goal 16A. Objective 2. Encourage research and monitor trends.	T1.02, T1.03
112	Goal 16A. Objective 3. Work with coastal communities to inventory and respond to coastal erosion.	T1.03, T1.04
113	Goal 16A. Objective 4. Work with coastal communities and researchers to prepare for possible changes in species distribution and populations.	T1.02, T1.03

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM
Ceñaliulriit Coastal Resource Service Area (CCRSA)

PROJECT TITLE: Ceñaliulriit CRSA CIAP Project Management and Administration

PROJECT CONTACT:

Contact Name: Vincent Beans, Board Chair
Address: P.O. Box 32336
Mountain Village, Alaska 99632
Telephone number: 907-591-2347
Fax number: 907-279-7788
Email Address: Punty15@yahoo.com

PROJECT DURATION

The project will take three and one half years to complete.

ESTIMATED COST

Spending Estimate $				
Total	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
$459,786	$131,000	$131,000	$131,000	$66,786

All of the funding will be with FY 10 funding

Funding Per Allocation Year of CIAP ($)				
Total	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$459,786				$459,786

PROJECT LOCATION

(See Attached Map-Attachment 1) The Ceñaliulriit Coastal Resource Service Area includes the greater Yukon-Kuskokwim Delta region including Nunivak Island. The CRSA includes 8,933 miles of coast, and a coastal zone of 15,364 square miles. Forty communities are located in the Ceñaliulriit CRSA: Akiachak, Akiak, Alakanuk, Aniak, Atmautluak, Chefornak, Chevak, Eek, Emmonak, Goodnews Bay, Hooper Bay, Kasigluk, Kipnuk, Koliganek, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nunam Iqua, Nunapitchuk, Oscarville, Pilot Station, Pitka's Point, Platinum, Quinhagak, Russian Mission, Scammon Bay, St. Mary's, Toksook Bay, Tuluksak, Tuntutuliak, and Tununak.

The Ceñaliulriit District covers approximately 48,000 square miles of which roughly 36,000 square miles are in the coastal zone. The Coastal Zone includes only the land and water below an elevation of 200 feet. Exceptions to this role are isolated highlands, such as the Askinuk Mountains at Scammon Bay, the Kaluyut Mountains that cover most of Nelson Island, and the Kusilvak Mountains located on a line between Scammon Bay and Mountain Village. Several Isolated peaks—Nushkolik, Ingrisarak, Ingrichvak and Ungulungwak—are also included

PROJECT DESCRIPTION

The CIAP project profile contains a management issue that is addressed by this proposal. There will be three project coordinators working intensely for 3.5 years managing complex projects. They will require administrative support. There will be a team of project advisors or Partners who will be making demands upon Ceñaliulriit, not the least of which will be managing RSA requests. There will be over a million dollars in contractual funds to manage in conjunction with State administrators and facilitating the needs of busy contractors and overworked agency staff can't be left to Project coordinators or to the Board itself. This is not even mentioning the administration of the legal and technical contractor working on behalf of Ceñaliulriit in negotiating those important interagency agreements that will support those important projects. This project will provide a CIAP Managing Administrator (MA) positioned between the Executive Board and the CIAP project coordinators. The MA will be directly responsible for the administration of the Partnership contractor. Project 1.03, unlike the others, has no coordinator per se to manage the short-term contract for the legal and technical writing of the project Partnership Agreements for the Advisory Committee. Managing that contract will be the responsibility of the CIAP MA. While the Chair of the CRSA will nominally supervise the Project Coordinators, the MA will have a delegated role that will give him/her input into the performance evaluations of the Coordinators. This should help create a cooperative team relationship among the Coordinators and the CIAP MA.

The Term of employment.

The first and second year, the CIAP MA will be fill time; by the last year and one-half, the administrative demands of the position will be winding down, so the CIAP MA is projected to be a ½ time employee of the CRSA.

Milestones. (for activity sequencing, 0.00 = Year 1; 0.01= the first month of the first year, etc)

Keys:

Key Milestone	Estimated Date	Responsible Party
Chair hires MA	0.01	Chair
Coordinators Hired	0.02	Chair
Legal contractor hired for Agreements	0.03	MA, Chair
First Q CIAP Report to State	0.03	MA
Recruitment of Advisory complete and Informal participation begins	0.04	MA, Coordinators, Chair
"Objectives" Statistical Reporting for Portal Coordinator put in place	0.06	MA
Second Q CIAP Report	0.06	MA
Automated financial reporting and monitoring system in place	0.09	MA
Third Q CIAP Report	0.09	MA
Formal signing of	0.10	Agencies, Chair

Partnership Agreements		
Legal Contract close out	0.12	MA
Fourth Q CIAP Report	0.12	MA
First Annual Personnel Evaluation	1.02	Chair, MA

MEASURABLE GOALS AND OBJECTIVES

Outcome Description	Comment	Metric
Fifth Q CIAP Report	1.03	MA
Project Evaluations	1.04	Advisory Committee, Board, MA
Sixth Q CIAP Report	1.06	MA
Equipment Inventory	1.09	MA
Seventh Q CIAP Report and First Statistical Q Report on Portal Use and Meeting Objectives of CMP	1.09	MA and 1.04 Coordinator
Eighth Q CIAP and Portal Report	1.12	MA and 1.04 Coordinator
Ninth Q CIAP and Portal Report	2.03	MA and 1.04 Coordinator
2nd Personnel Evaluations	2.03	Chair and MA
2nd Project Evaluation	2.04	Advisory Committee, Board and MA
Tenth Q CIAP and Portal Report	2.06	MA and 1.04 Coordinator
Eleventh Q CIAP and Portal Report	2.09	MA and 1.04 Coordinator
Evaluate Advisory Committee strengths/weaknesses	2.10	Project Coordinators, Chair, Board & MA
Advisory Committee Contract Ends, Close-out	2.12	MA
Twelfth Q CIAP and Portal Report	2.12	MA
3rd Annual personnel Evaluation	3.02	Chair, MA
Thirteenth Q CIAP and Portal Report	3.03	MA
Begin Termination of contracts, Portal Management Transfer Agreement to AVCP (Example)	3.04	MA
Final CIAP Report and Project Close-out	3.06	MA

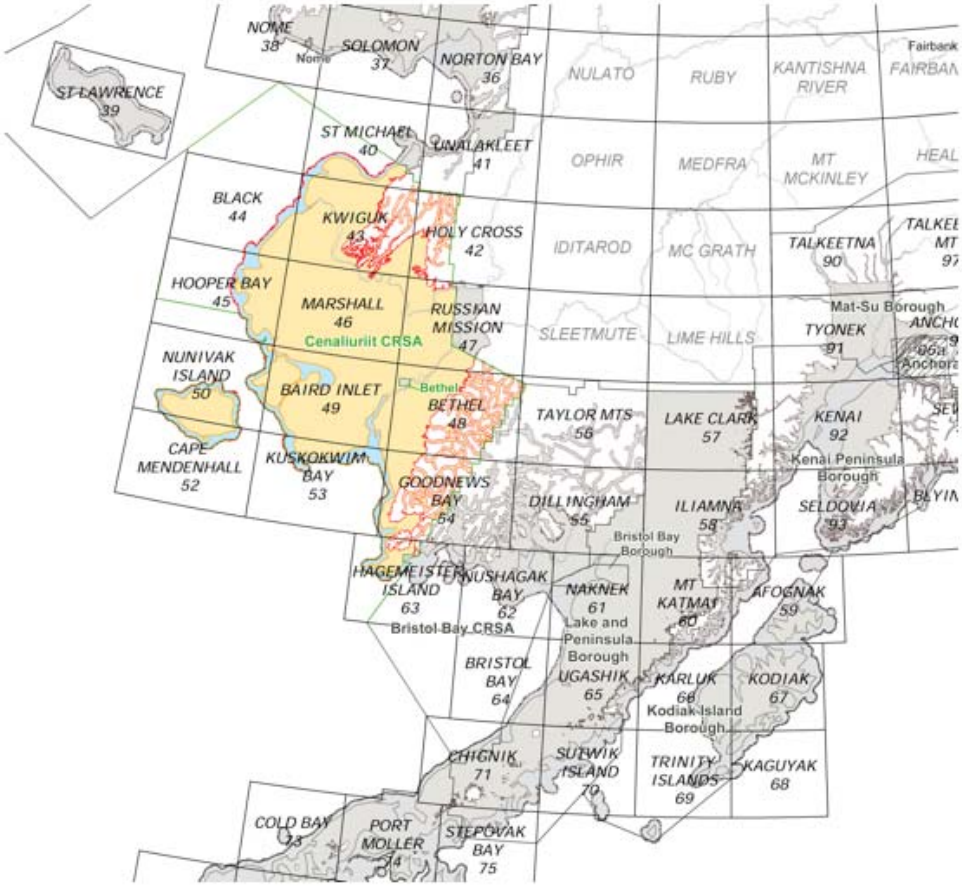
PROJECT CONSISTENCE WITH CIAP AUTHORIZED USES.
This is project based on Authorized Use No. 3: Planning Assistance and Administrative Costs of Complying with CIAP.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.

Project Advisor Relationship. Coordination will occur mostly through the Project Advisory Committee and contract oversight; also federal funding agency through the State cognizant officer.

COST SHARING OR MATCHING FUNDS.
There are no matching funds.

Attachment 1. Map of the Ceñaliulriit Region



STATE OF ALASKA

COASTAL IMPACT ASSISTANCE PROGRAM

Ceñaliulriit Coastal Resource Service Area (CCRSA)

PROJECT TITLE: Ceñaliulriit Clean Coast Initiative (3CI)
Solid Waste Assessment and Best Practices Training

PROJECT CONTACT:

Contact Name: Vincent Beans, Board Chair
Address: P.O. Box 32336
Mountain Village, Alaska 99632
Telephone number: 907-591-2347
Fax number: 907-279-7788
Email Address: Punty15@yahoo.com

PROJECT LOCATION:
Ceñaliulriit Coastal Resource Service Area (CCRSA)
(See Attached Map) The Ceñaliulriit Coastal Resource Service Area includes the greater Yukon-Kuskokwim Delta region including Nunivak Island. The CRSA includes 8,933 miles of coast, and a coastal zone of 15,364 square miles. Forty communities are located in the Ceñaliulriit CRSA: Akiachak, Akiak, Alakanuk, Aniak, Atmautluak, Chefornak, Chevak, Eek, Emmonak, Goodnews Bay, Hooper Bay, Kasigluk, Kipnuk, Koliganek, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nunam Iqua, Nunapitchuk, Oscarville, Pilot Station, Pitka's Point, Platinum, Quinhagak, Russian Mission, Scammon Bay, St. Mary's, Toksook Bay, Tuluksak, Tuntutuliak, and Tununak.

PROJECT DURATION
The project will take three (3) years to complete.

ESTIMATED COST

Spending Estimate $				
Total	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
$250,000	$100,000	$100,000	$ 50,000	$0

Funding Per Allocation Year of CIAP ($)				
Total	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$250,000				$250,000

PROJECT DESCRIPTION

Problem Statement.

***Ceñaliulriit CRSA tries to fill a jurisdictional void created by the lack of borough government in western Alaska. The absence of borough government leaves a gap in the governmental hierarchy that removes a local level of control most Americans take for granted.* –Ceñaliulriit Coastal Management Program (1985)**

The impact of a lack of regional government, like a county or a borough government in rural areas is that area-wide services, such as planning, are not available, except through non-profits and NGOs like **Ceñaliulriit CRSA**. In the absence of regional governmental planning, the 41 communities of the CRSA (see below) continue to provide services that have, to a greater or lesser degree, an impact on the environment. According to reports by Tribal environmental staff funded by the federal Environmental Protection Agency's (EPA's) IGAP program, three areas that warrant special concern are:

- **Solid Waste Disposal and Management**
- **Fuel Oil and Gasoline Distribution and Management**
- **Practices of Subsistence Users While in Camp**

It is useful to briefly discuss why other critical services, such as water and sewer are not also on this list. Potable drinking water and sewage treatment and handling are service missions of the Public Health Service Under PL 92-638. The communities of the Ceñaliulriit District do receive public health services through the Office of Environmental Health (OEH) through the Yukon-Kuskokwim Health Corporation (YKHC) and planning from the Indian Health Services (IHS) water plant training as well as engineering and design for community sewer systems. Aside from the direct provisioning of medical services through a series of community clinics, the highest priorities of the OEH are water and sewer.

Last year, four federal cabinet secretaries came to Southwestern Alaska, including parts of the Ceñaliulriit District. These Secretaries, including **Interior Secretary Ken Salazar**, **Agriculture Secretary Tom Vilsack**, **HUD Secretary Shaun Donovan**, and **Education Secretary Arne Duncan**, had an opportunity to view first hand the conditions in our communities. They emerged from those communities convinced that directing resources through the existing mission of their respective agencies was needed; creative solutions had to be found. The result of the visit from those cabinet secretaries is a document entitled ***Forgotten America, Rural Alaska Problems and Solutions*** (attached) produced by **Calista, Incorporated**, the regional for-profit corporation created under the Alaska Native Claims Settlement Act; the **Association for Village Council Presidents (AVCP)**, the regional non-profit services organization, **AVCP Housing**, the Native American Housing Assistance and Self Determination Act of 1996 (*NAHASDA*) Contractor for the region; and the **Yukon-Kuskokwim Health Corporation (YKHC)**, the PL 92-639 Indian Health Service (IHS) compacted health care provider for the region. Page 14, Issue 8, in Forgotten America, states (in relevant part):

…Every day more and more goods are flown into the villages. Environmental conditions such as permafrost, wetlands, flooding, drainage and dust are a challenge to waste disposal. This region is the spring nesting and breeding grounds for ducks, black brants, emperor geese, northern pintails, grebes, loons, swans and cranes and is, according to the U.S. Fish and Wildlife Service, the most important shorebird nesting area in the country. Marine mammals include spotted seals, ringed seals, Pacific walrus, Pacific bearded seals, whales and threatened Steller sea lions. The rivers, ponds and small streams are the habitat of at least 44 species of fish including

all 5 species of Pacific salmon. Most villages have, at best, a Class 3 unpermitted landfill. Most villages have problems such as accidental, uncontrolled open burning, particulates blowing back over town, the spread of contaminated soil/snow from the tires and tracks of vehicles entering the dumpsite, non-burnable items such as old snowmobiles, trucks and batteries leaking acids and people disposing of hazardous wastes at the dumpsite. ***There is no doubt that these pollutants are leaching into the surrounding wetland environment…Both in the past and today, ponds are often used as dump sites and waste is dumped indiscriminately into these sites…*** [Emphasis added]

- **Solid Waste Disposal and Management**

Solid waste disposal and landfill issues have long been a matter of concern to our communities. In most other cases, the disposal of trash and garbage is left to the community. The presence of an unfenced or open landfill impacts both the environment and the quality of life in the community. Concerns about the disposal of hazardous waste are present in almost every community on the coast. As noted above: Most villages have, at best, a Class 3 unpermitted landfill. Most villages have problems such as accidental, uncontrolled open burning, particulates blowing back over town, the spread of contaminated soil/snow from the tires and tracks of vehicles entering the dumpsite, non-burnable items such as old snowmobiles, trucks and batteries leaking acids and people disposing of hazardous wastes at the dumpsite**. There is no doubt that these pollutants are leaching into the surrounding wetland environment…Both in the past and today, ponds are often used as dump sites and waste is dumped indiscriminately into these sites.** Another aspect of this problem is that fact that so much packaging comes into the Village and there are no recycling solutions for these remote communities.

METHODOLOGY

The 3CI stands for the **Ceñaliulriit Clean Coast Initiative**, which will focus on the development of **'best practices' standards** for the human community living within the Coastal District. The intent is to develop the template using the site-specific coastal communities **on Nelson Island during the first year** (because they are organized as a consortium with community-based environmental staff) and then, transfer those templates to 20 + communities over the next two years. Each of the 'best practices' modules will be done collaboratively with multiple **federal and state agencies** as well as the **regional non-profits** serving the District. This project will be divided into three phases: (1) Assessment; (2) Site Specific Best Practices Recommendations; (3) Training and Dissemination. *Phase 1* will begin with contact with agency stakeholders including, but not limited to, regional health and housing agencies. A target list of communities will be developed from the most urgent to the least. Contractors, including potential RSA Agreements with agencies, will be hired and deployed for a detailed site-specific assessment of solid waste conditions. The Assessment will determine (1) potential ground water impacts, (2) whether the fencing is adequate to prevent litter and pollution, (3) whether flooding or erosion threatens the integrity of the site; (4) whether the site has adequate carrying capacity for the community; (5) whether there is storage of hazardous waste; (6) whether there is adequate disposal of dead animal parts and biological waste in general; whether there is potentially dangerous methane production; and any and all matters pertaining to the integrity of the solid waste disposal system in the community. *Phase 2* will identify specific remediation recommendations, funding sources and strategies and Best Practices that should be employed in managing the particular site. *Phase 3* will provide the finding and recommendations directly to the community in a workshop.

MILESTONES

Key Milestone	Estimated Date	Responsible Party
Receive Approval 3CI	Year 1.0	MMS
3CI/PM hired	Year 1.1.5	ED
Contract with Solid Waste Assessment Team	Year 1.2.5	ED/PM
Cleanup Recommendations-Solid Waste	Year 1.9.5 (Y1) 2.4.5. (Y2) 2.10.5 (Y3)	Contractors
"Best Practices" Recommendations for Solid Waste, Fuel Handling and Distribution, and Subsistence Camp	Year 1.9.5-2.12	Contractors
Assessments, Recommendations and Best Practices in ¾ of Villages Solid Waste.	Year 2.12	PM/Contractors
Project Evaluation and Close-out for 3CI	Year 2.12	PM

MEASURABLE GOALS AND OBJECTIVES

Outcome Description	Comment	Metric
Solid Waste Assessment.	Travel to site, review waste practices, assess & recommend	10 Villages Assessed Y1.0 10Villages Assessed by Year 2.0 10 Villages assessed by Year 2.12
"Best Practices" Available online	Interdisciplinary team	Posted on Ceñaliulriit Portal by 2.0
Workshops for Key Stakeholders in Solid Waste Practices	Solid Waste "Best Practices" Workshops held during regional conferences	60 Council Members and staff trained in Solid Waste "Best Practices"

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USES.
This project is consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetland.

Because many of the communities in the Ceñaliulriit CRSA are also in-holders in federal managed systems, a critical part of maintaining a healthy coastal regime is "Best Practices" by the occupants and users of the environment. It is the aspiration of Ceñaliulriit that this project will help them to be better partners with Coastal Resource Managers by being better stewards of the land.

Benefits to the Coastal Environment

- Assessments that determine leakage into the coastal waterways from poorly managed landfills will develop an action plan to stop the polluting of the coast;

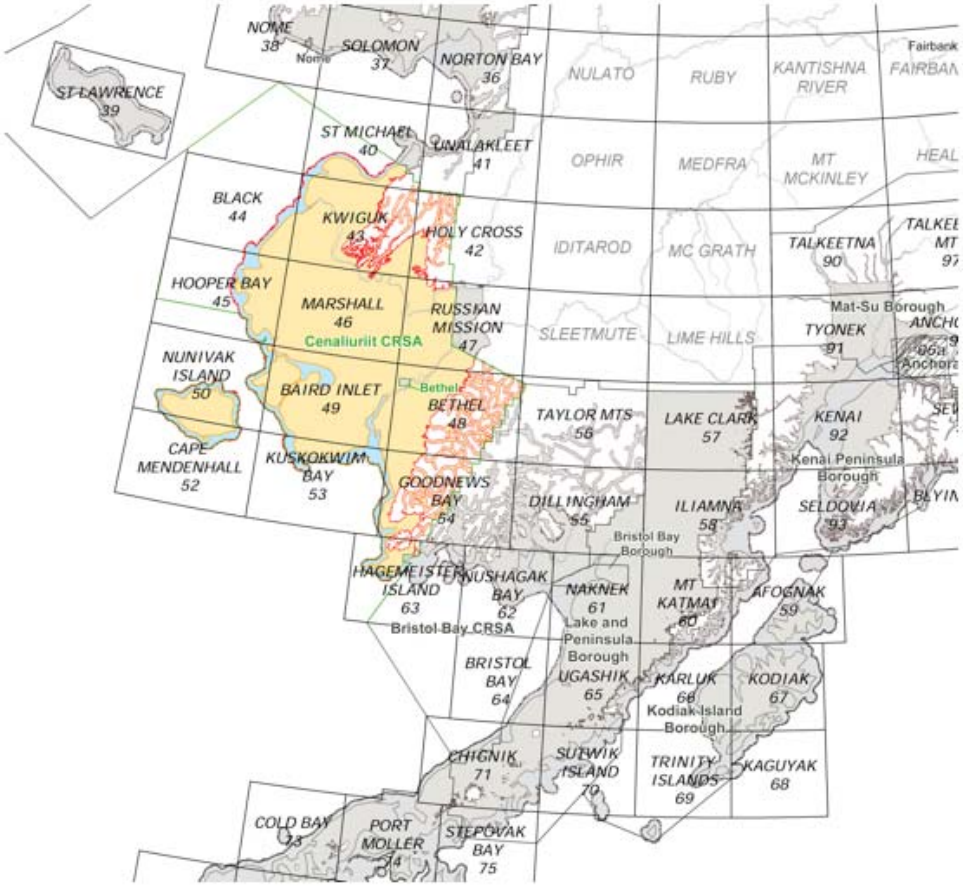
- Assessments that determine a poorly fenced landfill is allowing waste, ash, paper and light debris to be carried by the wind into the Coastal environment will result in an action plan to end that migrating waste, including a clean-up campaign;

- Assessments that determine that a landfill is being utilized to dispose hazardous waste, including chemical and biological waste will result in an action plan to end the practice and provide an alternative for that type of waste (i.e., Burn Box)

- In general, the priority for mitigation action plans will be those conditions that directly pollutes the Coastal Environment

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.
Multiple federal agencies will be involved in the collaboration on the formation of 'best practices'; The Environmental Protection Agency through its Tribal Environmental Program and IGAP-funded environmental staff in the region will be an important partner in the 3CI.

COST SHARING OR MATCHING FUNDS.
No cost sharing is involved in this project


NOME
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RUBY
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RIVER
Fairbank
FAIRBAN
ST LAWRENCE
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ST MICHAEL
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UNALAKLEET
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MEDFRA
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HEAL
BLACK
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KWIGUK
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HOLY CROSS
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IDITAROD
MC GRATH
TALKEETNA
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TALKEE
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HOOPER BAY
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MARSHALL
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Cenaliuriit CRSA
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MISSION
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SLEETMUTE
LIME HILLS
TYONEK
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Mat-Su Borough
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TAYLOR MTS
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LAKE CLARK
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KENAI
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Kenai Peninsula
Borough
CAPE
MENDENHALL
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GOODNEWS
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DILLINGHAM
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ILIAMNA
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SELDOVIA
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Bristol Bay
Borough
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Bristol Bay CRSA
Lake and
Peninsula
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BRISTOL
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UGASHIK
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KARLUK
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Kodiak Island
Borough
KODIAK
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CHIGNIK
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SUTWIK
ISLAND
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TRINITY
ISLANDS
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KAGUYAK
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COLD BAY
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PORT
MOLLER
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STEPOVAK
BAY
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STATE OF ALASKA

COASTAL IMPACT ASSISTANCE PROGRAM

Ceñaliulriit Coastal Resource Service Area (CCRSA)

PROJECT TITLE: Ceñaliulriit Clean Coast Initiative (3CI):
Fuel Handling Assessments and Best Practices Training

PROJECT CONTACT:

Contact Name: Vincent Beans, Board Chair
Address: P.O. Box 32336
Mountain Village, Alaska 99632
Telephone number: 907-591-2347
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PROJECT DURATION
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ESTIMATED COST

Spending Estimate $				
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- **Fuel Oil and Gasoline Distribution and Management.**

Millions of gallons of fuel are transported to, lightered to bulk storage, and distributed to homes in rural Alaska. Electrical utilities located in each of the villages consume millions of gallons of fuel that are delivered to separate tank farms. And often the school district maintains a separate bulk fuel storage system for its own use. Fuel oil handling and storage over time and scattered throughout the scores of communities within the Ceñaliulriit CRSA present a challenge to the coastal regime from the **cumulative effects of spills and leaks**. Fixing leaky tank farms is one of the initiatives that the State of Alaska Denali Commission has addressed in the past. Replacement of some, but not all of those storage facilities has been accomplished.
The Institute for Social and Economic Research presented an assessment of the components of delivered fuel prices in Rural Alaska and the Institute noted that, among several factors, fuel loss due to inadequate infrastructure during unloading and delivery at the village. The research notes:
Deficient or Missing Moorage: *Many communities lack proper moorage. To compensate, fuel barges are often forced to execute risky maneuvers to offload fuel. Either the barge is nosed into the bank and propelled forward against the current, or it is held in place in by the fuel hose that is unloading the fuel.*
Deficient or missing marine header. *A marine header is a series of piping, valves, and pumps that receives fuel from a barge and pumps it into a storage tank. The slower a marine header pumps, the longer the barge takes to unload, increasing costs and risks of spills. If a community is missing a marine header, the fuel must be trucked off the barge.* ISER, Components of delivered fuel prices in Alaska, Meghan Wilson et al (2010).
If there is a **2%-3% loss of fuel** through the complex supply chain described in the attached except *"The Western Alaska Fuel Market"*, spread over time, adds up to millions of gallons of cumulative impact on the Coastal environment.
While the goal of reducing imported fuel by substituting locally produced renewable energy is the long-term solution to reducing the environmental hazards of hydrocarbon dependency, **loss reduction and spill abatement** is a critical immediate and transitional mitigating step that will be taken; this is the focus of this sub-project of the 3CI.

METHODOLOGY
The 3CI stands for the **Ceñaliulriit Clean Coast Initiative**, which will focus on the development of **'best practices' standards** for the human community living within the Coastal District. The intent is to develop the template using the site-specific coastal communities **on Nelson Island during the first year** (because they are organized as a consortium with community-based environmental staff) and then, transfer those templates to 20 + communities over the next two years. Each of the 'best practices' modules will be done collaboratively with multiple **federal and state agencies** as well as the **regional non-profits** serving the District.
Fuel Handling Assessment & Best Practices Training.

A contractor will be hired to conduct a sampling of 1/4 of the CRSA Villages in addition to the Nelson Island communities. The Villages will be self-selected. The contractor will travel on site and review the supply chain and fuel handling practices and estimate transfer efficiencies and loss. The results of the assessment will be evaluated and recommendations for site-specific "Best Practices" will be made. Cost estimates for capital remediation will be provided and workshops will be held in each community to disseminate the findings.
The costs will be

- Contractor travel to the villages, board and housing,
- Contractor time and materials to document each site and develop a set of recommendations;
- Cost of developing the training materials for the Village. This will consist mainly of the documentation laid out in a workbook.
- Cost of a one-two day workshop (depending on the extend of the recommendations resulting from the severity of the conditions). These costs will include:
    - Facility cost
    - Material cost
- Cost of converting material to web-compatible format for putting on a password-protected web site for the instructional benefit of others.
- If the CRSA does not have a website for information dissemination, there would be an additional cost for producing a website.

MILESTONES

Key Milestone	Estimated Date	Responsible Party
Receive Approval 3CI	Year 1.0	MMS
3CI/PM hired	Year 1.1.5	ED
Contract with the Fuel Handling & Distribution Assessment Team	Year 1.3	ED/PM
Fuel Handling and Distribution Site-Specific Spill Mitigation Measures	Year 1.9 2.6 (Y2) 2.11 (Y3)	Contractors
"Best Practices" Recommendations for Solid Waste, Fuel Handling	Year 1.9.5-2.12	Contractors
½ Villages for Fuel Handling and Distribution	Year 2.12	PM/Contractors
Project Evaluation and Close-out for 3CI	Year 2.12	PM

MEASURABLE GOALS AND OBJECTIVES

Outcome Description	Comment	Metric
Assessments of Fuel	Travel to site, review waste	7 Villages Assessed Y1.0

Outcome Description	Comment	Metric
Handling and Distribution	practices, assess & recommend	7 Villages Assessed Y 2.0 6 Villages Assessed Y 2.12
"Best Practices" Available online	Interdisciplinary team	Posted on Ceñaliulriit Portal by 2.0
Workshops for Key Stakeholders in Fuel Handling and Distribution	Fuel Handling & Distribution "Best Practices" Workshops held during statewide conferences such as the providers conference and rural Energy Conference	100 Village distributors, nonprofits involved in fuel distribution and staff trained in Fuel Handling and Distribution "Best Practices"

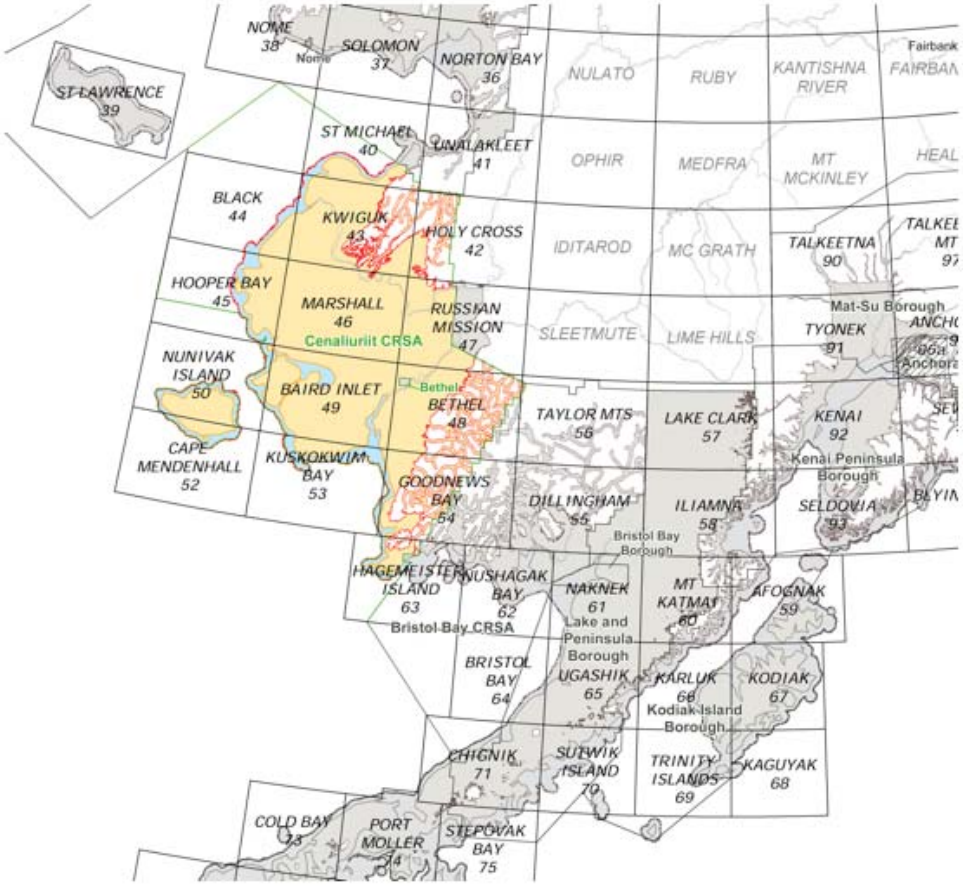
PROJECT CONSISTENCY WITH CIAP AUTHORIZED USES.
This project is consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetland.

Because many of the communities in the Ceñaliulriit CRSA are also in-holders in federal managed systems, a critical part of maintaining a healthy coastal regime is "Best Practices" by the occupants and users of the environment. It is the aspiration of Ceñaliulriit that this project will help them to be better partners with Coastal Resource Managers by being better stewards of the land.

Benefits to the Environment.
The assessment of 20 coastal villages will identify an average of four measures that will be taken to reduce leaks and spills for fuel oil into the environment. This estimate is based on the four common source points for fuel spills in the rural community:
Source 1: Lightering. This is offloading the fuel for transfer to the community storage unit.
Source 2: Transfer to Storage Units. Often time these are multiple site units: 1 at the Generator Plant; 1 at the Village Corporation resale site; and 1 at the school. Each of these sites represents an opportunity for spill.
Source 3: Transfer to customer premise.
Source 4: Customer premise storage.

Petroleum-derived diesel, which is another name for heating oil, is composed of about 75% saturated hydrocarbons (primarily paraffins including *n*, *iso*, and cycloparaffins), and 25% aromatic hydrocarbons (including naphthalenes and alkylbenzenes). The aromatic hydrocarbons are highly soluble in water and each spill generates a significant volume of the chemicals into the coastal environment.
The assessments in these 20 villages will result in the aggregate reduction of 1,000 gallons of fuel "migration" into the coastal environment per year. The actual impact will be documented after the assessments are complete.
COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.
Multiple federal agencies will be involved in the collaboration on the formation of 'best practices'; The Environmental Protection Agency through its Tribal Environmental Program and IGAP-funded environmental staff in the region will be an important partner in the 3CI.

COST SHARING OR MATCHING FUNDS. (If so, include the following language)
No cost sharing is involved in this project



STATE OF ALASKA

COASTAL IMPACT ASSISTANCE PROGRAM

Ceñaliulriit Coastal Resource Service Area (CCRSA)

PROJECT TITLE: Ceñaliulriit Clean Coast Initiative (3CI):
Subsistence Camp Clean-Up and Best Practices

PROJECT CONTACT:

Contact Name: Vincent Beans, Board Chair
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Fax number: 907-279-7788
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PROJECT LOCATION:
Ceñaliulriit Coastal Resource Service Area (CCRSA)
(See Attached Map) The Ceñaliulriit Coastal Resource Service Area includes the greater Yukon-Kuskokwim Delta region including Nunivak Island. The CRSA includes 8,933 miles of coast, and a coastal zone of 15,364 square miles. Forty communities are located in the Ceñaliulriit CRSA: Akiachak, Akiak, Alakanuk, Aniak, Atmautluak, Chefornak, Chevak, Eek, Emmonak, Goodnews Bay, Hooper Bay, Kasigluk, Kipnuk, Koliganek, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nunam Iqua, Nunapitchuk, Oscarville, Pilot Station, Pitka's Point, Platinum, Quinhagak, Russian Mission, Scammon Bay, St. Mary's, Toksook Bay, Tuluksak, Tuntutuliak, and Tununak.

PROJECT DURATION
The project will take two years (2) years to complete.

ESTIMATED COST

Spending Estimate $				
Total	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
$125,000	$100,000	$25,000	$0	$0

Funding Per Allocation Year of CIAP ($)				
Total	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$125,000				$125,000

PROJECT DESCRIPTION

Problem Statement.

***Ceñaliulriit CRSA tries to fill a jurisdictional void created by the lack of borough government in western Alaska. The absence of borough government leaves a gap in the governmental hierarchy that removes a local level of control most Americans take for granted.* –Ceñaliulriit Coastal Management Program (1985)**

The impact of a lack of regional government, like a county or a borough government in rural areas is that area-wide services, such as planning, are not available, except through non-profits and NGOs like **Ceñaliulriit CRSA**. In the absence of regional governmental planning, the 41 communities of the CRSA (see below) continue to provide services that have, to a greater or lesser degree, an impact on the environment. According to reports by Tribal environmental staff funded by the federal Environmental Protection Agency's (EPA's) IGAP program, three areas that warrant special concern are:

- **Solid Waste Disposal and Management**
- **Fuel Oil and Gasoline Distribution and Management**
- **Practices of Subsistence Users While in Camp**

- **Practices of Subsistence Users While In Camp**

Caninermiut/Qualuyatt-Llu Nunmamta Menuitangnaqlerkanun Nunam Caliarat (the Nelson Island consortium of Tribal environmental specialists noted in the 2005 report that there was a need to assess how much waste is produced in subsistence camps. At a meeting in Tununak, the consortium agreed that clean-up of subsistence camps was a priority and, in connection with that effort, various alternatives for haul-out and consolidation for recycling should be considered. Barge logistics are very complicated, but not impossible to organize. One of the monitoring tasks given as an example would be to survey waste that gets caught in fish nets in fish camps and the identify sources of that waste.

The Ceñaliulriit agrees with the consortium that a comprehensive assessment and monitoring and education program would be a valuable contribution to coastal restoration and we propose funding the Nelson Island program with the goal of developing a model for other communities within the Ceñaliulriit District.

METHODOLOGY

The 3CI stands for the **Ceñaliulriit Clean Coast Initiative**, which will focus on the development of **'best practices' standards** for the human community living within the Coastal District. The intent is to develop the template using the site-specific coastal communities **on Nelson Island during the first year** (because they are organized as a consortium with community-based environmental staff) and then, transfer those templates to 20 + communities over the next two years. Each of the 'best practices' modules will be done collaboratively with multiple **federal and state agencies** as well as the **regional non-profits** serving the District. The following identifies each of the modules and their proposed budgets as stand-alone projects.

A 'Subsistence Camp, Hunting and Fishing' *Healthy Practices* information campaign will be developed. This will be a collaborative among a team of subsistence users, Youth and Elders to develop posters, art and a public awareness campaign targeting subsistence users to clean up subsistence camps and maintain environmentally healthy practices during subsistence hunting and fishing activities away from camp. The team will help develop a 'best practices' manual that

will be distributed to every hunter, fisher and gatherer in the CRSA. It will also be available on the UNMI Portal if that resource is available. A publications contractor, meeting costs, and printing/programming costs will constitute the bulk of this 1.5-year budget.

MILESTONES

Key Milestone	Estimated Date	Responsible Party
Receive Approval 3CI	Year 1.0	MMS
3CI/PM hired	Year 1.1.5	ED
Contract with the Subsistence Camp Waste Management Assessment Team	Year 1.3.5	ED/PM
Camp Cleanup Recommendations	Year 1.6.5 (Y1) 2.1.5 (Y2)	Contractors
"Best Practices" Recommendations for Solid Waste, Fuel Handling and Distribution, and Subsistence Camp	Year 1.9.5-2.12	Contractors
Assessments, 100% of Villages will receive training in Subsistence 'Best Practices' (EOY2)	Year 2.12	PM/Contractors
Project Evaluation and Close-out for 3CI	Year 2.12	PM

MEASURABLE GOALS AND OBJECTIVES

Outcome Description	Comment	Metric
Assessment of Subsistence camps	Performed by contractors in collaboration with Tribal TEAs and cooperating agencies	10 Villages assessed in Year 1.0 Templates distributed and training provided to all remaining communities end of year 2
"Best Practices" Available online	Interdisciplinary team	Posted on Ceñaliulriit Portal by 2.0
Workshops for subsistence users and subsistence program staff and general public on Subsistence Camp "best practices"	Subsistence "Best Practices" Workshops held during the Providers Conference and at Village Subsistence Summits. This will also be online for registered subsistence users only.	By the end of the third year, 200 Subsistence users and 40 professional and volunteer staff working wih subsistence-related programs will have completed the "Best Practices" training

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USES.

This project is consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetland.

Because many of the communities in the Ceñaliulriit CRSA are also in-holders in federal managed systems, a critical part of maintaining a healthy coastal regime is “Best Practices” by the occupants and users of the environment. It is the aspiration of Ceñaliulriit that this project will help them to be better partners with Coastal Resource Managers by being better stewards of the land.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS.
Multiple federal agencies will be involved in the collaboration on the formation of ‘best practices’; The Environmental Protection Agency through its Tribal Environmental Program and IGAP-funded environmental staff in the region will be an important partner in the 3CI.

COST SHARING OR MATCHING FUNDS. (If so, include the following language)
No cost sharing is involved in this project

Attachment 1. Map of the Cenaliulriit Coastal Resource Service Area