BRISTOL BAY CRSA

Brief History: Bristol Bay Coastal Resource Service Area's (CRSA) largest city, Dillingham (Nushagak), became a trade center when Russians erected the Alexandrovski Redoubt (Post) in 1818. Two years later, the first Russian settlement was established, and, in 1837, the Russian Orthodox Mission was established at Nushagak. Bristol Bay, a 20 million-acre expanse of water, is estuarine in character, with salinity increasing toward its outer limits. The region contains thousands of rivers, streams, lakes, and tundra ponds. These drainages support huge runs of salmon, resident rainbow trout, char, grayling, and other fish. Beavers, muskrat, otters, and other small mammals also depend on these water bodies. The region's massive brown bears attain their large size by feeding on abundant salmon. Eagles also pluck migrating salmon and salmon carcasses from the streams. Migrating waterfowl and resident birds use the region's lakes for resting, breeding, and staging areas. These freshwater bodies sustain the region's subsistence, commercial, and sport fisheries, which are the basis of the region's economy and lifestyle.

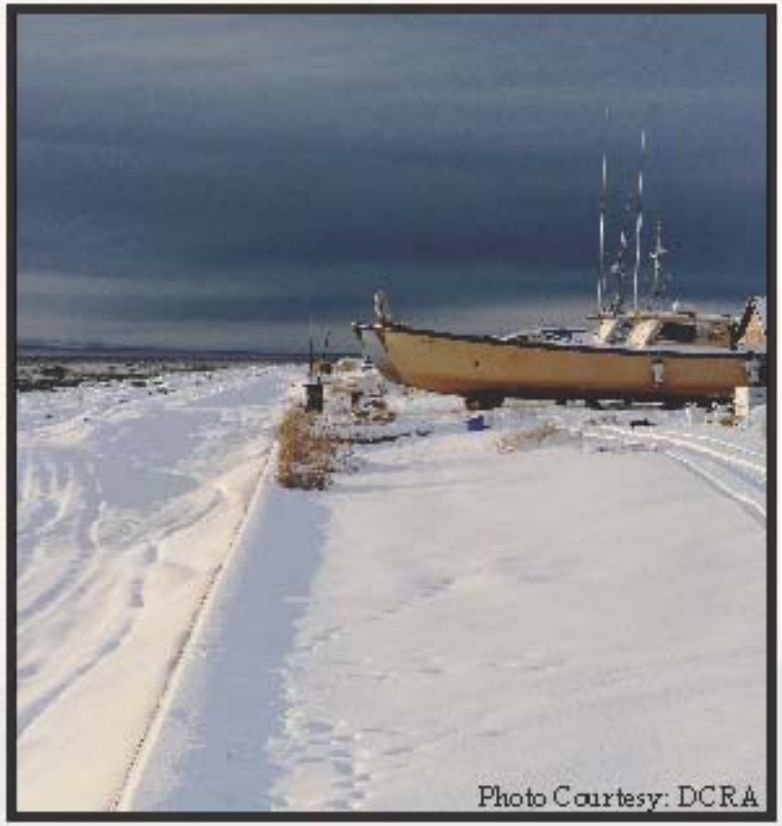
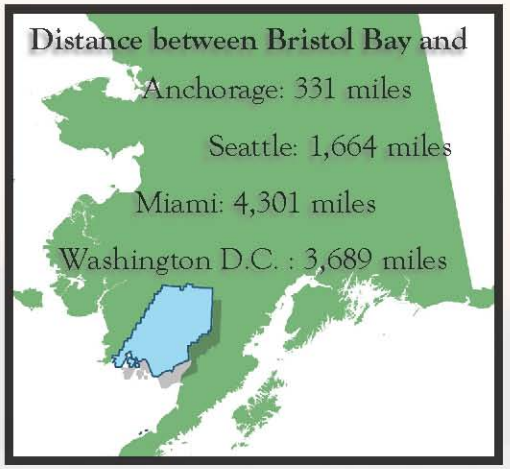


Photo Courtesy: DCRA

Population (2007):	4,755
Shoreline:	984 miles
Coastal Area:	9,462 square miles
Annual Precipitation:	26"
Annual Snowfall:	65"
Hours of Daylight Summer:	18 hours, 31 min
Hours of Daylight Winter:	6 hours, 10 min
Regional Native Corporation:	Bristol Bay Native Corp.
Legislative District:	37 S


Photo Courtesy: DCRA


Photo Courtesy: DCRA



STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Nushagak –Mulchatna Rivers Watershed Anadromous Fish Distribution

PROJECT CONTACT

Contact 1 Name:	Program Director
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Contact 2 Name:	Susan L. Flensburg
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PROJECT LOCATION

This project is within the Bristol Bay Coastal Resource Service Area. Project work will occur in the streams and lakes of the Middle and Upper Nushagak and Mulchatna Rivers. A map and photos are found on page 4.

PROJECT DURATION

This project will be completed within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$80,432	$80,432	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$80,432	$0	$0	$0	$80,432

PROJECT DESCRIPTION

The Alaska Department of Fish and Game (ADF&G) has long recognized the need to survey all potential anadromous streams within Alaska to assess if they should be included in the Anadromous Waters Catalog of Waters Important for the Spanwing, **Rearing or Migration of Anadromous Fishes** (AWC). Field investigation, documentation and addition of anadromous streams to the AWC in this region has been a long-standing need that has not been met because the area is remote and surveys are costly.

The need to accomplish this has become more immediate and pressing because of the real possibility of industrial scale mining and the affect such an activity can have on fish and water resources. The prospect of large scale mineral development in the Nushagak-Mulchatna and Kvichak watersheds of Bristol Bay creates an immediate need to: 1) secure the maximum level of protection available under Alaska law for the salmon bearing streams most likely to be affected by mining activity, and 2) collect independent baseline environmental information (e.g. water quality, surface and groundwater flows, current toxicity, and macroinvertebrates) needed to understand the current ecological condition of the salmon bearing streams most likely to be affected if mining activity is permitted.

The AWC includes a catalogue and atlas of all streams, rivers and lakes are important to anadromous fish species and therefore afforded protection under Alaska Statute 16.05.871. Prior to beginning a use, construction or activity that would take place in water bodies specified in the AWC, individuals or governmental agencies are required to submit plans and specifications to ADF&G and receive written approval in the form of a Fish Habitat Permit.

This project will take place during Year 1 and will:

Goal 1: Conduct field surveys by fisheries biologists using accepted scientific methods to document anadromous fish populations in the middle and upper Nushagak–Mulchatna River watersheds. Streams that are found to be important to anadromous fish species with then be nominated for inclusion in the AWC.

Goal 2: Conduct field ground-truthing of a model the University of Washington is developing of anadromous fish distribution based upon data obtained by ADF&G the in the Nushagak drainage from 2004 to 2010. The model, once completed, can be applied to other watersheds in Bristol Bay and throughout Alaska and will predict anadromous and resident fish distribution and life stages for all Bristol Bay and Alaska rivers, streams and lakes. This will make it possible for Federal and State agencies to more accurately focus efforts to nominate waterbodies for the protection of Alaska's Anadromous Fish Act.

This work is part of a larger, multi-year coordinated investigation that includes adding area streams to the Anadromous Waters Catalogue, determining the anadromy of resident dolly varden populations, in-stream flow monitoring, water sampling to better understand water chemistry, macro-invertebrates and diatoms in the watershed, and development of a scientific model that will allow predication of anadromous fish streams.

The University of Washington is collaborating on fish distribution surveys. To date the following organizations have provided funds or in-kind support for this project: The Gordon and Betty Moore Foundation through the Nature Conservancy, the New Stuyahok Tribal Council, the Ekwok Village Council, the Bristol Bay Regional Seafood Development Assn, Bristol Bay Native Assn., the Southwest Alaska Salmon Habitat Partnership, the U.S. Fish & Wildlife Service, the National Fish and Wildlife Foundation, Trout Unlimited, the Wallace Foundation, the Alaska Department of Fish & Game, and the Nushagak-Mulchatna/Wood-Tikchik Land Trust, and the Aleknagik Tribal Council.

MEASUREABLE GOALS AND OBJECTIVES

Based on comparable work in other parts of the watershed in past years, it is expected that this work will result in:

1. One hundred or more miles of streams surveyed for anadromy.

2. Nominate stream reaches that are found to be important for anadromous fish to the ADF&G Alaska Anadromous Waters Catalogue. (Estimated at 60 to 70 miles.)

3. River zone videography with georeference maps and habitat characterization of baseline conditions of major rivers and tributary streams.

4. A peer reviewed and published model of fish distribution in the Nushagak Watershed that will have application to other watersheds in Bristol Bay and throughout Alaska. The research and analysis of the data collected for the model will be in cooperation with the University of Washington and the Southwest Alaska Salmon Habitat Partnership, a recognized partnership under the National Fish Habitat Initiative.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

This project will fund the necessary data collection to determine if stream reaches are important for the spawning, rearing and migration of anadromous fish. Reaches that are found to be important will be nominated for inclusion in the AWC. Prior to beginning any use, construction or activity that would take place in water bodies protected in the AWC, individuals or governmental agencies are required to submit plans and specifications to ADF&G and receive written approval in the form of a Fish Habitat Permit. This permitting process will result in a review of each project for potential damage to anadromous fish habitat, which will minimize the negative impact related to development and will result in the protection of coastal environments.

The stream reaches that will be surveyed are within the watershed and downstream from the Pebble Mine prospect, which has one of the largest concentrations of copper, gold, molybdenum

and silver in the world. The Pebble Mine project is currently in a pre-feasibility and pre-permitting research stage, conducting environmental studies. A proposed mine development plan to be submitted for government and public review, is expected in 2011 or 2012. The mine is in the watersheds of the Kvichak, Nushagak River and Mulchatna Rivers.

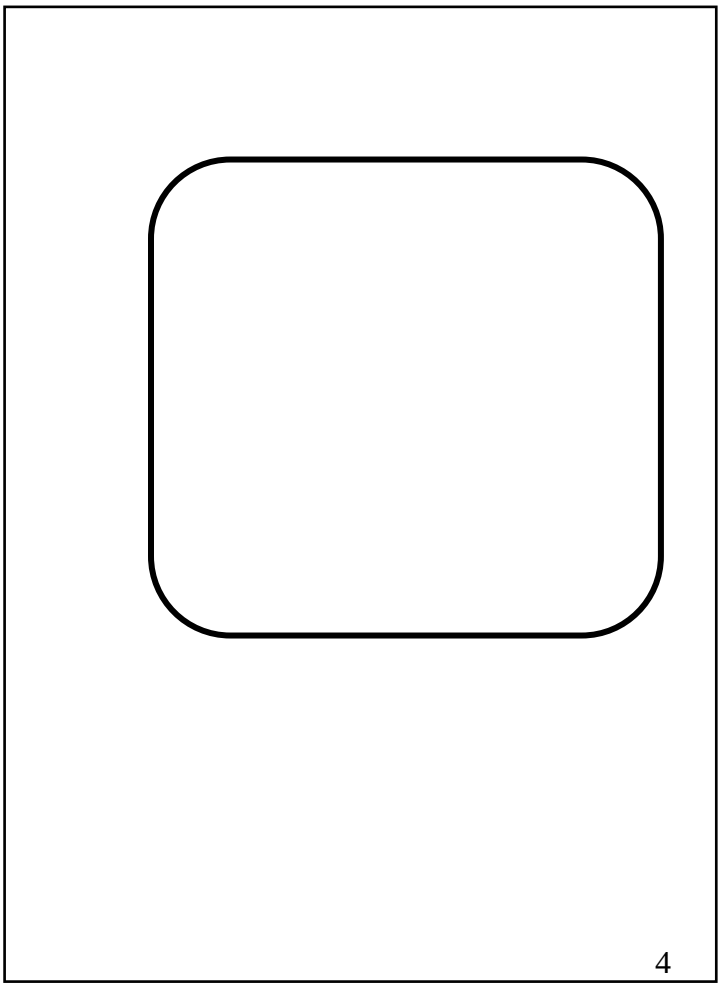
This project's fish distribution model can be used by the Alaska Department of Fish and Game and others to predict the presence or absence of fish species in any given stream reach within the state. This model will make it possible to focus future fish distribution survey efforts on areas that are likely to be important anadromous fish habitat, thus making more efficent use of resources and better enabling conservation and protection of anadromous fish of the Bristol Bay region.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

As noted above, several partners have contributed to this effort. Federal resources or funding has come from the U.S. Fish & Wildlife Service and the National Fish and Wildlife Foundation.

COST SHARING OR MATCHING OF FUNDS

The CIAP will not be used for cost sharing or matching funds.



Middle (top) and Upper (bottom) reaches of Nushagak –Mulchatna Rivers. Photos by Mike Weidmer, as published in Nushagak River Watershed Traditional Use Area Conservation Plan

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Nushagak Bay Research and Education Project

PROJECT CONTACT

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PROJECT LOCATION

This project will take place in Nushagak Bay which is the waterbody adjacent to Dillingham, Ekwok, Portage Creek, and Clark's Point, and into which the Nushagak-Mulchatna, Kvichak, Snake, Wood, Igushik and other area rivers empty (see map on page 5).

PROJECT DURATION

This project will be completed within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$28,700	$28,700	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$28,700	$0	$0	$0	$28,700

PROJECT DESCRIPTION

This project will fund the Bristol Bay Environmental Science Lab (BBSEL) to further develop its summer environmental programs for advanced high school and college students. BBESL is located at UAF Bristol Bay Campus in Dillingham and has been involved in summer research and educational activities in Nushagak Bay since 2006. This education and research program will fit with BBESL's place-based scientific research and citizen science programs and will train local students and empower communities to start collecting important baseline data.

This hands-on education and research program will focus on estuaries, the transition zone between rivers and the ocean. The field program will introduce advanced high school and college students from across Bristol Bay to some of the important tools used in environmental science and expose them to complex ecological topics not found in the traditional classroom setting. A range of baseline data will be collected and a GIS database will be developed to allow for the integration and analysis of regional estuarine information. Further, the program will involve rural and Alaska Native students in developing scientifically sound approaches that address local environmental issues in rural Alaskan communities.

The specific goals of this project are to:

- Collect needed baseline data on water quality, benthic habitats, and biodiversity to help to study trends in Nushagak Bay Nushagak Bay;
- Establish a GIS estuary database that includes water quality, species diversity, and habitat maps for Nushagak Bay;
- Teach the scientific method, data collection, and critical thinking skills to the region's high school and college students;
- Train 6-10 students in basic field research methods concentrating on estuaries;
- Involve 2-4 interns in significant research projects in Nushagak Bay that will continue in future years;
- Assist Nushagak Bay communities by promoting science careers and helping to create a rural job workforce;
- Increase the number of Rural Alaskans who obtain a certificate or degree in the sciences; and
- Educate Bristol Bay communities on the economic and environmental importance of estuaries.

This program is part of a larger environmental studies program at UAF Bristol Bay that brings together local organizations including the Togiak National Wildlife Refuge (US Fish and Wildlife Service), Bristol Bay Marine Mammal Council, Qayasiq Walrus Commission, Bristol

Bay Economic Development Corporation, and Bristol Bay Native Association. Working with local organizations means that much of the knowledge learned will remain in the region.

Estuaries, such as Nushagak Bay, are the mixing zones between seawater and nutrient-laden river water and provide habitat for commercially and ecologically important biota. Estuaries are among the most important coastal features in terms of ecology and economics since they comprise an important component of oceanic and riverine food webs. They are an integral component of coastal systems; they serve as spawning and nursery grounds for populations offshore and play important roles in geochemical and physical processes such as sediment reworking and flux of chemicals.

Villages and communities in Bristol Bay use estuaries as safe harbors for commercial shipping, fishing fleets, and recreational boating. They support marine mammals, birds, wildlife and the area's commercial, subsistence, and sport/recreation fisheries and provide nutrient cycling that is important to the ecosystem. Additionally, Bristol Bay estuaries have traditionally been used as convenient disposal sites for sewage and fish cannery waste as many have extreme tides that flush waste away twice a day, which over time will have an impact on coastal habitats and environmental conditions.

One component of the project will employ students and interns to collect needed ecological information in Nushagak Bay through collecting water quality data, trawling, and the use of transects that measure substrate type and analyze functional composition and structure of biota. It will provide both a valuable learning tool for interns as well as important ecological data. All information gathered will be made available via a GIS database to further explore the ecology of Bristol Bay region. These data can then be used answer question concerning biotic change due to factors such as local anthropogenic influences, climate change, or natural variations.

To fill some of the gaps in knowledge of the estuary, this project will also concentrate efforts on collecting Traditional Knowledge from the residents in the adjacent communities. Areas to be investigated will first be identified through interviews with elders asking where and how they have used specifies habitats. Congruently, a literature search will be done to see where other scientists have conducted research. This recent and historical survey data will be plotted using GIS to show what is known. Identification of priority search areas will be identified based on multiple factors including data gaps about the benthic habitat.

UAF BBC Environmental Science methods class (2009) after completing clam survey in Meshik Bay, near Port Heiden, Alaska.

ENVI 260 students collecting water quality data in Meshik Bay, Alaska in 2009.

The field course will be focused in Nushagak Bay and field work will be structured to include some time in area communities where the students will have the opportunity to share their knowledge and findings with the K-12 students. This exchange fosters leadership and confidence in their scientific knowledge base and helps to get local K-12 interested in science.

CIAP funding will cover travel costs for the students to and from Dillingham, field and laboratory supplies and the cost to charter a boat for the field work. UAF Bristol Bay Campus will provide teaching staff salaries, administration support, equipment, supplies, and laboratory and classroom space.

MEASUREABLE GOALS AND OBJECTIVES

The measurable goals of this project are as follows:

- 2-4 interns will work on projects at BBESL during summer of 2011 or 2012 (depending upon when funding is received)
- Data collection (water quality, benthic fauna, shoreline vegetation, and habitat quality) in an important Bristol Bay estuary (for Nushagak Bay);
- 6-10 students will complete intensive one week field course;
- A database containing water quality, benthic fauna, sediments, habitat type for Nushagak Bay will be established; and
- A GIS database of estuarine data will be developed.

In the short term, BBESL staff and students will analyze and interpret the data and write analysis reports during the week long course. Students will share results with community members and/or local K-12 students in the area at the end of the week. A follow-up course will further analyze the data into scientific format and will give students the opportunity to attend a regional science conference to present their findings.

In the long term, data will be integrated with other data collected by BBESL in Bristol Bay to be published in a peer-reviewed scientific journal on the topic of the marine/estuarine ecology and natural history of Nushagak Bay.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

This project will directly result in the conservation and protection of coastal areas by:

1. Collecting, analyzing and interpreting water quality, benthic fauna, shoreline vegetation, and habitat quality in Nushagak Bay will provide researchers with baseline data about the coastal environment as well as local trends and conditions. All the data will be included in a GIS database that will be available to the BBCRSA and other government agencies. This data will allow researchers to track changes in coastal environments over time and will provide a basis for coastal management decisions that increase protection of these environments. This is especially important when responding to environmental accidents or large scale development proposals.

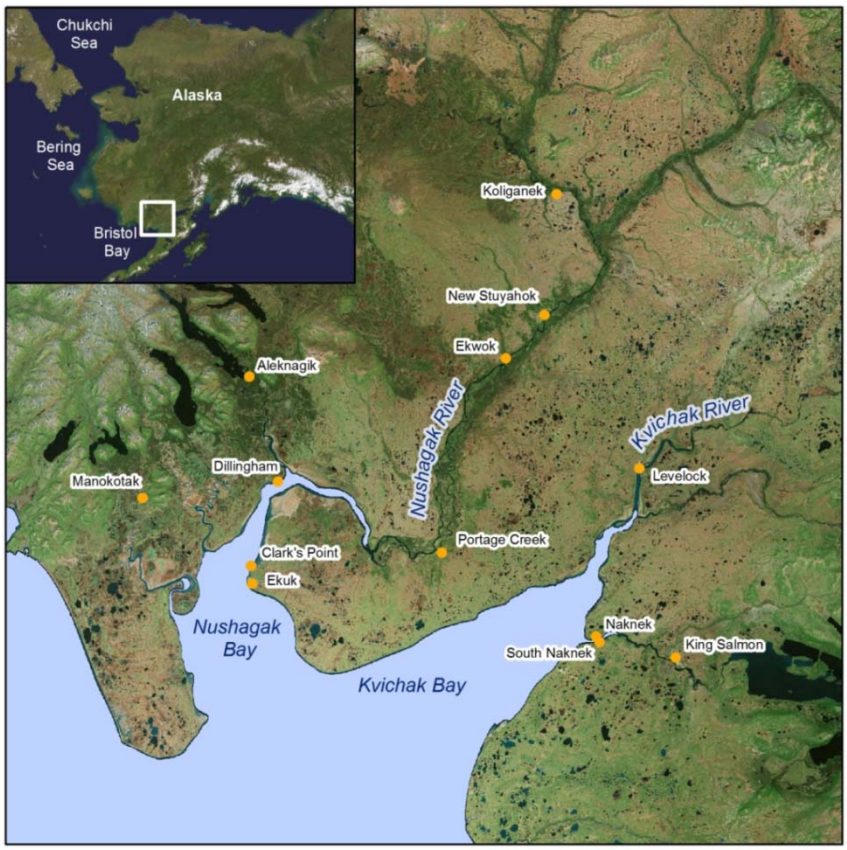
2. The students, local school classes and residents will have a better understanding of the environmental importance of the Nushagak Bay estuary, making them better stewards of the coastal area by their communities. It will help motivate residents to increase conservation, protection and restoration of coastal areas throughout the region.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

This program is part of a larger environmental studies program that brings together Bristol Bay organizations such as Togiak National Wildlife Refuge (US Fish and Wildlife Service), Bristol Bay Marine Mammal Council, Qayasiq Walrus Commission, Bristol Bay Economic Development Corporation, and Bristol Bay Native Association.

COST SHARING OR MATCHING OF FUNDS

UAF Bristol Bay Campus will support his program by providing funding for teaching staff salaries, administration support, equipment, supplies, and laboratory and classroom space.



STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Nushagak River Watershed Instream Flow Protection

PROJECT CONTACT

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PROJECT LOCATION

This work will occur in the Bristol Bay Coastal Resource Service Area in various rivers in the Nushagak-Mulchatna River Watershed.

PROJECT DURATION

This project will be completed in year 1.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$58,500	$58,500	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$58,500	$0	$0	$0	$58,500

PROJECT DESCRIPTION

The Nushagak River Watershed Instream Flow Protection Project will protect key anadromous fish streams that are important for spawning and rearing salmon in the Nushagak and Kvichak River drainages through the establishment of instream flow reservations.

Background

Sufficient amounts of water are required within lotic (flowing) and lentic (lakes) water bodies to support fish and sustain population productivity, stream habitat characteristics, and waterway connectivity. Protection of water flow rates and volumes within rivers and lakes are generally referred to as reservations under Alaska Statue and the Alaska Water Use Act. Other uses of reservations of water include protection of wildlife production and habitat, water quality and sanitation purposes, navigation, recreation, and aesthetics.

A priority use of water within a waterbody for fish is initiated with the filing of an application for an instream flow reservation with the Alaska Department of Natural Resources (ADNR). Once filed (and determined to be complete) an application has priority, but is not enforceable unless five years of flow data is provided to complete the application. Data is collected by installing a stream gauge on a water body and monitoring water levels at different times of the year. Once the data is collected the application is adjudicated and a priority appropriation of water becomes enforceable.

This instream flow program will specifically implement one of the four strategic actions recommended by the 2007 Nushagak River Traditional Use Area Conservation Plan, designed to address the potential threats to the watershed:

1. **Reserve adequate water flow for the Nushagak River and tributaries under existing laws for in-stream flow reservation.**
2. Maintain the vegetative complex that supports moose, fish and other species within and adjacent to the floodplain.
3. Maintain water quality standards that protect wild salmon and other fish.
4. Prevent habitat damage that could result from mining.

Several years ago Bristol Bay Native Association (BBNA) filed an instream flow reservation and installed two stream gauges on the Koktuli River. Data collection will be complete in 2010 and the two gauges used on that project will be available for installation on another waterbody. In 2011 the Bureau of Indian Affairs will fund a Comprehensive Water Resources Management Plan to support and guide this work. An outcome of this work will be, at a reconnaissance level, to determine which other water bodies within the Bristol Bay Coastal Resource Area are priorities for instream flow reservations and the protections of the Alaska Water Act. The USGS have collected flow data in the region in the past, and will be assisting with this project.

The requested CIAP funding will specifically be used to:

1. Support a team of hydrologists to conduct a helicopter supported field survey of water bodies targeted by the reconnaissance effort to affirm suitability and identify specific appropriate locations for the installation of gauges.

2. Relocate and install gauges and supporting instrumentation and initiate flow measurement.

3. File one or more applications to ADNR for instream flow priority rights for selected tributaries of the Nushagak or Kvichak watersheds that are within the Coastal Resource Service Area

The prospect of large scale mineral development in the Nushagak and Kvichak watersheds of Bristol Bay creates an immediate need to: 1) secure the maximum level of protection available under Alaska law for the salmon bearing streams most likely to be affected by mining activity, and 2) collect independent baseline environmental information (e.g. water quality, surface and groundwater flows, current toxicity, macroinvertebrates, etc.) needed to understand the current ecological condition of the salmon bearing streams most likely to be affected if mining activity is permitted.

This work is part of a larger, multi-year coordinated investigation that includes adding area streams to the Anadromous Waters Catalogue, determining the anadromy of resident dolly varden populations, in-stream flow monitoring, water sampling to better understand water chemistry, macro-invertebrates and diatoms in the watershed, and development of a scientific model that will allow prediction of anadromous fish streams.

The University of Washington is collaborating on fish distribution surveys. To date the following organizations have provided funds or in-kind support for this project: The Gordon and Betty Moore Foundation through The Nature Conservancy, the New Stuyahok Tribal Council, the Ekwok Village Council, the Bristol Bay Regional Seafood Development Assn, Bristol Bay Native Assn., the Southwest Alaska Salmon Habitat Partnership, the U.S. Fish & Wildlife Service, the National Fish and Wildlife Foundation, Trout Unlimited, the Wallace Foundation, the Alaska Department of Fish & Game, and the Nushagak-Mulchatna/Wood-Tikchik Land Trust.

MEASUREABLE GOALS AND OBJECTIVES

MEASURABLE GOAL: The protection of instream flow on key tributaries of the Nushagak and Kvichak watersheds most likely to be affected if mining activity is permitted. The requested CIAP funding will specifically be used to:

OBJECTIVES:

1. Support a team of hydrologists to conduct a helicopter supported field survey of water bodies targeted by the reconnaissance effort to affirm suitability and identify specific appropriate locations for the installation of gauges.

2. Relocate and install 2 gauges and supporting instrumentation and initiate flow measurement.

3. File one or more applications to ADNR for instream flow priority rights for potentially threatened stream systems of the Nushagak or Kvichak watersheds that are within the Coastal Resource Service Area

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

A reservation of water for instream use is a water right that protects specific instream water uses, in this case protection of wildlife and habitat. This will be accomplished by the filing a instream flow reservation applications with the Alaska Department of Natural Resources stating that instream flow is required to protection wildlife and habitat. Later users, such as future mining interests, will be prevented from appropriating water that may affect existing priority instream activity. This will ensure that adaquate water flow remains in the Nushagak and Kvichak Rivers, which will ensure the health of local fish and wildlife populations and habitat, which will benefit coastal environments.

This project will provide statutory protection for key streams that are important for spawning and rearing salmon in the Nushagak and Kvichak River drainages. These streams have been targeted because of their proximity to the proposed Pebble mine, which is one of the largest concentrations of copper, gold, molybdenum and silver in the world. The Pebble project is currently in a pre-feasibility and pre-permitting research stage, conducting environmental studies. A proposed mine development plan to be submitted for government and public review, is expected in 2011 or 2012. The mine is in the watersheds of the Kvichak, Nushagak River and Mulchatna Rivers.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

As noted above several partners have contributed to this effort. Federal resources or funding has come from the U.S. Fish & Wildlife Service and the National Fish and Wildlife Foundation.

COST SHARING OR MATCHING OF FUNDS

As noted above there have been several funded contributing to this mutli-year effort. For the time period covered by this request funding has also been requested from the CIAP under the public solicatation, and funds from the USF&WS and the Bureau of Indian Affairs have been proivided to the New Stuyahok Tribal Council to complete data collection for instream flow reservations on the Mulchatana and Stuyahok Rivers within the Nushagak River watershed. The Nature Conservancy has provided funding and technical expertise to the New Stuyahok Tribal Council help match and support the insteam flow data collection on these two river systems.

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Native Lands Conservation Protection

PROJECT CONTACT

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Fax:	(907) 276-2584
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PROJECT LOCATION

This project will occur near the village of Koliganek, Alaska in the Harris Creek watershed, a tributary to the Nushagak River. See map on page 3.

PROJECT DURATION

This project will be completed within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$80,432	$80,432	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$80,432	$0	$0	$0	$80,432

PROJECT DESCRIPTION

CIAP funding will be used to purchase two Native Allotments totaling about 80 acres on the Nushagak River near Harris Creek. The properties are in holdings surrounded by property owned by the Native village corporation, Koliganek Natives Ltd. (KNL). They are located within the Nushagak and Wood River watersheds and include habitat critical for anadromous and resident fish species. Once purchased, ownership would be transferred from the CRSA to KNL. A conservation easement will be established and retained by the Nushagak-Mulchatna/Wood-Tikchik Land Trust to ensure the 80 acres are protection. In exchange for the 80 acres, KNL will place a conservation easement on land surrounding Harris Creek. The amount exact amount of land to be put under conservation easement by KNL is still being negotiated, but it will not be less land then the equivalent value of the purchase of the two Native Allotments.

The Nushagak and Wood River watersheds contain several hundred Native allotments and thousands of acres of land belonging to Alaska Native village corporations, with many lands encompassing habitat critical for anadromous and resident fish species. In 2008 the Nushagak-Mulchatna/Wood-Tikchik Land Trust completed a conservation assessment of more than 300 Native allotments to determine which parcels warranted conservation protection due to their importance to protection of fish and wildlife habitat for subsistence use areas. Allotments were scored by biologists and knowledgeable local residents in order to prioritize the allotments for conservation protection.

Under the conservation easement large commercial developments, subdivision of the lots or permanent residences would not be allowed. Small buildings to support subsistence use or guided recreation may be allowed, but would be set back from waterways. Details of what sort of development would be allowed under the conservation easement are still being worked out. The minimum purchase price will be set by the Bureau of Indian Affairs based on an appraisal of the property. The final price will be subject to negotiation with the holder of the Native Allotment.

Protection of allotments and corporate lands is important for maintaining the vegetative complex within the riparian corridors of the Wood and Nushagak Rivers. This complex creates the in-river and shoreline habitat essential for rearing and migrating salmon. This effort to leverage protection of Native allotments with protection of adjacent Native village corporation lands is an important step in trying to prevent the legal partition of land that has occurred in the Nushagak watershed over the last 40 years from resulting in habitat fragmentation. All landowners in the watershed, village corporations, regional corporations, the state and federal government, have to work together to protect habitat for fish and wildlife along the Nushagak River.

The KNL, Village Council and the Land Trust have been working together on conservation for several years. The KNL and the Land Trust have entered into an MOU in which the Land Trust and its conservation partner The Nature Conservancy are identifying and classifying corporate lands for habitat value, subsistence value and important cultural sites. This information will be used to help the corporation develop a land use plan for that recognizes these values.

MEASUREABLE GOALS AND OBJECTIVES

1. Acquisition of approximately 80 acres of Native Allotment parcels along the Nushagak River that are in holdings surrounded by KNL land, and which were rated by biologists and knowledgeable local residents as priorities for conservation and subsistence protection. Ownership of the in holdings will be transferred to KNL. The Nushagak-Mulchatna/Wood-Tikchik Land Trust will retain a Conservation Easement on the 80 acres to ensure the land is protected in perpetuity.

2. A Conservation Easement will be placed on an additional area (yet to be determined) of KNL lands along Harris Creek. The area will be no less than the equivalent value of the purchase price contributed by the Land Trust. This will prevent habitat fragmentation and protect area salmon habitat in this tributary to the Nushagak River system.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

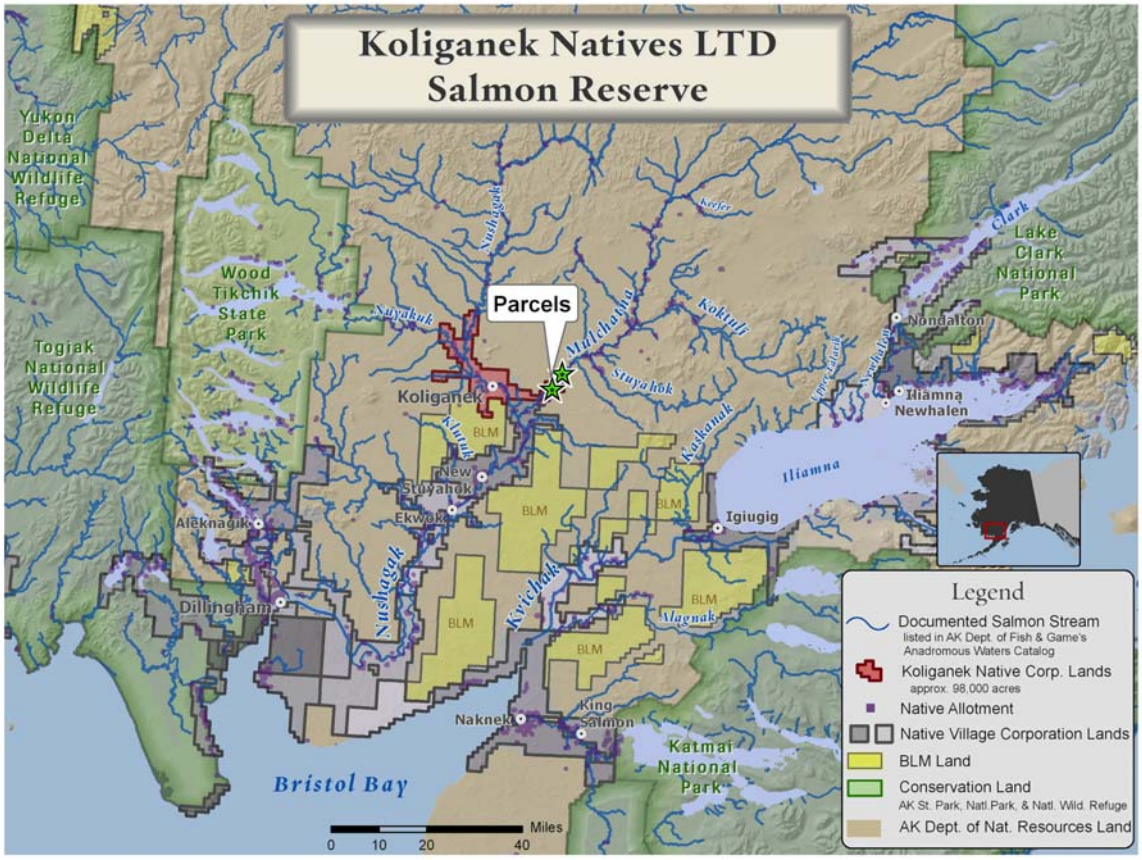
The project will result in the placement of a conservation easement over a large area along the Harris Creek, an andromous stream corridor and tributary of the Nushagak-Multchatna River system. This is an important spawning and rearing area for salmon and is used by locals for subsistence purposes. The conservation easement will protect the coastal habitat by preventing large commercial development, subdivision and permenant residents and will require any development to be set back from waterways.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

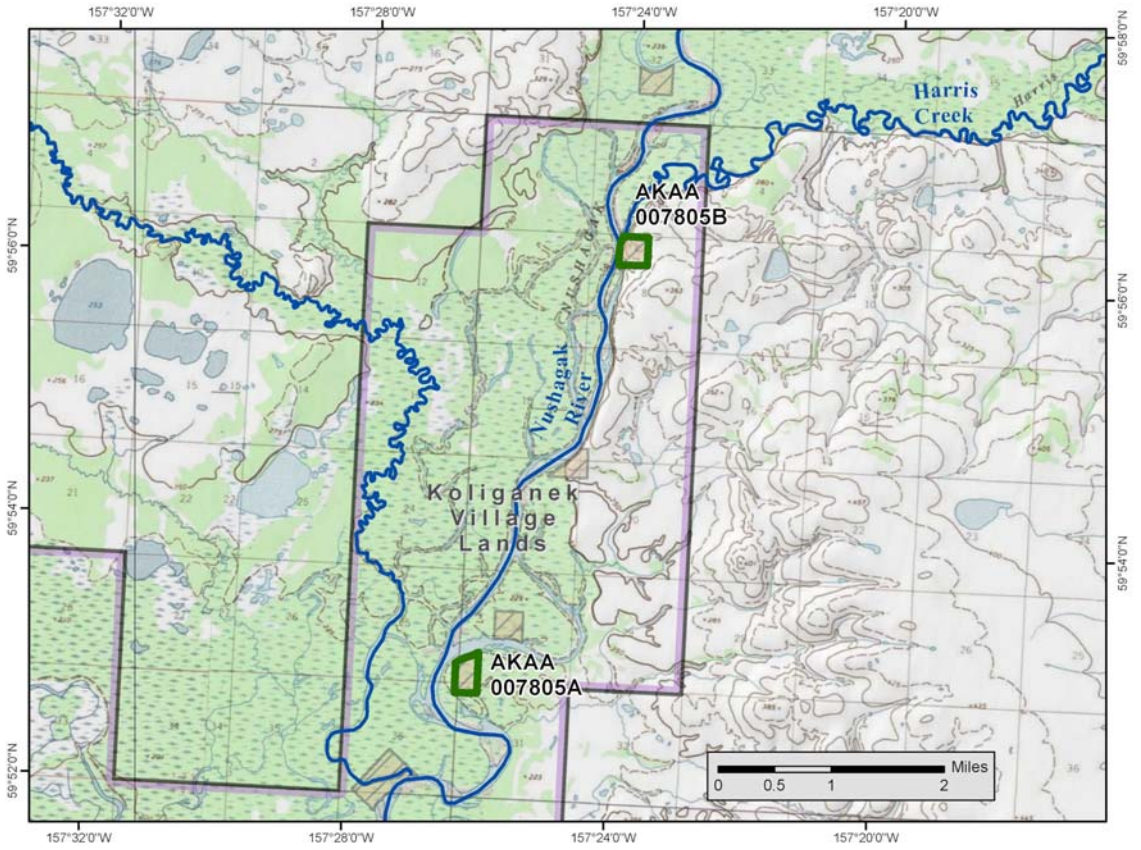
There are no federal resources or programs to coordinate with at this time.

COST SHARING OR MATCHING OF FUNDS

CIAP funds are not being used to meet cost sharing or matching funds of other agencies. Additional funding for the larger program of strategic land acquisition for salmon habitat protection is being sought from several sources. For this specific project, KNL has committed to donate funds to the Land Trust to help with the purchase of the Native Allotments, and Tikchik Narrows Lodge has committed $5,000.



Nushagak_base_LandMngt_Koliganek.mxd



STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Dillingham Watershed Ecosystem Research and Learning Project

PROJECT CONTACT

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PROJECT LOCATION

The project will take place in Dillingham classrooms and local field sites which include rivers, streams, tributaries and beaches.

PROJECT DURATION

This project will be completed within two years of receipt of funding.

ESTIMATED COST:

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$17,600	$8,800	$8,800	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$17,600	$0	$0	$0	$17,600

PROJECT DESCRIPTION

The Dillingham Watershed Ecosystem Research and Learning Project is designed as a cooperative place-based hands-on learning project for educational organizations and natural resource management agencies to foster environmental awareness and coastal resource conservation principles in Dillingham students.

The project will be a partnership between the Bristol Bay Native Association's (BBNA) Partners for Fisheries Monitoring Program, Togiak National Wildlife Refuge, UAF Bristol Bay Campus, Alaska Department of Fish & Game and other related agencies to implement a coastal education program in Dillingham classrooms. The partners will work cooperatively to provide educational presentations, demonstrations and classroom activities relating to aquatic sciences, watershed protection and fisheries management. BBNA's Subsistence Fisheries Scientist and/or Fisheries Education Coordinator will work with all partners to coordinate outreach activities and presentations based on each agencies area of expertise and scheduling availability.

The Dillingham Watershed Ecosystem Learning Project is modeled after the successful Squaw Creek Project that was a partnership between the school district, Togiak National Wildlife Refuge and ADF&G. Through the late 1990's project partners worked with science teachers to educate students on watershed processes and aquatic sciences using classroom and field activities. Activities included presentations, demonstrations and lessons relating to stream ecology, fish and invertebrate biology and field trips to Squaw Creek for stream sampling, water quality monitoring, kick net sampling and stream life inventories.

Project staff will work in Dillingham classrooms to educate students on coastal ecosystem dynamics, conservation and protection practices, as well as fisheries and natural resource management. After introductory classroom presentations and instruction, students will then spend time collecting related aquatic data in the field. There are currently over 300 students in the Dillingham City School District and all students in the school will participate in the program, both in the classroom and in the field. Materials and equipment purchased will be available for use in other school-based activities. BBNA is pursuing other funding opportunities to sustain the program and continue it in future academic years.

MEASUREABLE GOALS AND OBJECTIVES

- Develop curriculum and lesson plans on coastal ecosystem dynamics, conservation and protection practices, fisheries and natural resource management will be developed for each age group in the Dillingham City School District.
- Deliver curriculum annually to all 300 students in the Dillingham City School District students. This will involve both classroom lessons and trips to the field at each age level.

- Collect and compile baseline data on local coastal ecosystems.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

This project will result in conservation and protection of the coastal areas because Dillingham students will learn about coastal ecosystem dynamics, conservation and protection practices, fisheries and natural resource management. A hands-on, place-based approach is needed in the schools to augment classroom science education and has been shown to be highly effective in reaching young people. An educated population, with an understanding of coastal environmental systems, will be better coastal stewards and motivated to participate in conservation, protection and restoration of coastal areas.

In addition, the baseline data collected by the students will be available for local researchers, government agencies and conservation groups to use. Baseline data is required to track changes in coastal environments over time and will provide a basis for coastal management decisions that increase protection of these environments. This is especially important when responding to environmental accidents or large scale development proposals.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The project is a partnership between several local organizations including the BBNA Partners for Fisheries Monitoring Program, Togiak National Wildlife Refuge, UAF Bristol Bay Campus, Alaska Department of Fish & Game, and the Dillingham City School District.

COST SHARING OR MATCHING OF FUNDS

The project is a partnership between several local organizations including the BBNA Partners for Fisheries Monitoring Program, Togiak National Wildlife Refuge, UAF Bristol Bay Campus, and Alaska Department of Fish & Game. Wages and salaries of scientists and educators are covered by their respective employers and can be looked at as cost sharing for this project.

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Composting Toilets for Coastal Water Quality Improvement

PROJECT CONTACT

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PROJECT LOCATION

This project will take place in Clark's Point, and other locations including seasonal fish camps and fishing cabins, and popular sport fishing areas.

PROJECT DURATION

This project will be completed within one year of the receipt of funding.

ESTIMATED COST:

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$14,600	$14,600	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$14,600	$0	$0	$0	$14,600

PROJECT DESCRIPTION:

The proposed project aims to reduce pathogenic and bacterial water contamination of coastal marine environments by building and installing composting toilets were no facilities currently existing.

CIAP funding would be for materials, tools and travel costs to hold a workshop in Clark's Point to teach people how to make a composting toilet and how to keep them operating. Funding will allow for the construction and installation of five composting toilets.

The toilets will be simple to build and maintain, and can be built for $100/unit. The toilets will use bokashi, a Japanese system were the compost is usually started with fermented wheat or rice bran with a culture of natural lactic acid bacteria and yeasts, similar to those in yoghurt and sourdough bread starter.

Once completed, the toilets will be installed at Clark's Point, seasonal fish camps, and busy sport fishing areas. Clark's Point is a good location for the workshop because most people still rely on "honey buckets" for sewage disposal. A honey bucket is a bucket that is used in place of a flush toilet or outhouse in communities that lack a water-borne sewage system. Honey buckets are typically dumped in unregulated sites, often leading to water contamination as the sewage either seeps into the water table of flows into downstream freshwater or marine waters. In addition, Clark's Point residents have been using bokashi for indoor composting of kitchen scraps and the project organizers feel that this will help make the project a success

The University of Alaska Fairbanks Bristol Bay Campus can play a strong collaborative role in this project through the following:

- Utilization of the Bristol Bay Environmental Science laboratory for water testing;
- Workshops on manufacture and use of bokashi for composting toilets and for indoor composting of kitchen scraps;
- Facilitating dialogue with local construction contractors in an effort to encourage them to collect their sawdust for production into bokashi; and
- Serving as a clearinghouse of information relating to proper composting and aging of humanure, site considerations, and construction of composting toilets for use with bokashi.

The project could be carried out in the future as a workshop through the Marine Advisory Program, in conjunction with the Construction Trades Certification at the Bristol Bay Campus. This would give participants hands-on construction experience on a very small project, and would teach more people how to construct composting toilets, therefore disseminating the knowledge widely. The hope is that the concept spreads and becomes self-sustaining as a preferred alternative to the honey bucket system.

MEASUREABLE GOALS AND OBJECTIVES

1 - A workshop will be held in Clark's Point to teach residents to build composting toilets.

2 - Five composting toilets will be constructed and installed in Clark's Point or nearby fish camps that are busy.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

The construction and installation of composting toilets in remote areas where there are currently no sanitation facilities will protect coastal environments by reducing pathogenic and bacterial water contamination that occurs from unregulated dumping of raw sewage. A community workshop will be held in Clark's Point to teach residents to build composting toilets. Five composting toilets will be constructed during the workshop and the necessary skills and tools will remain in the community. Each composting toilet that is built, installed and used will reduce the potential that the coastal environment will be contaminated by raw sewage.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS:

This project will be coordinated by staff from the Dillingham Marine Advisory Program. This program is part of the University of Alaska Fairbanks School of Fisheries and Ocean Sciences. Funding comes from the State of Alaska and the National Sea Grant College Program, a research, education, and outreach program in the U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

COST SHARING OR MATCHING OF FUNDS:

CIAP funds will not be used to meet cost sharing or matching requirements.

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Nushagak Watershed Invasive Species Project

PROJECT CONTACT

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PROJECT LOCATION

The project will occur along the Nushagak-Mulchatna River, on Native Allotments and within the villages of Aleknagik, Dillingham, Portage Creek, Ekwok, New Stuyahok, and Koliganek.

PROJECT DURATION

This project will be completed within two years of the funding award. Field work will occur both years during April through September and follow-up education, outreach and data entry will occur during the fall and winter of both years.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$23,500	$11,750	$11,750	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$23,500	$0	$0	$0	$23,500

PROJECT DESCRIPTION

The Nushagak Watershed Invasive Species Project will protect coastal areas by implementation a program involving education, prevention, detection, control and eradication, monitoring, and restoration.

Background

As southwestern Alaska becomes more accessible by the air and water, the potential for invasive plants is increasing. Baseline surveys conducted by the Bristol Bay Native Association (BBNA) Forestry Program have shown that in Dillingham and Aleknagik, invasive plants have taken hold along public traveled areas. Working in cooperation with the Natural Resource Conservation Service (NRCS) and the Alaska Association of Conservation Districts (AACD), the BBNA has interviewed for an Invasive Plant Coordinator to be stationed at the BBNA office.

During the summer of 2010, the Invasive Plant Coordinator will conduct an invasive species assessment in the villages of Aleknagik, Dillingham, Portage Creek, Ekwok, New Stuyahok, and Koliganek. The Coordinator will identify the specific education needs of each village, conduct an initial documentation of known invasive species and develop an eradication plan for known populations of invasive species. Working with each village on invasive species will mean that after this project is over, a network will be in place to continue coordinating efforts to control the spread of invasive species.

In order to be effective, an invasive species management program needs to address education and prevention, detection and monitoring, control and restoration. This project will take the follow steps to address invasive species throughout the Nushagak River Watershed:

1. **Education –** Spring Year 1
   The BBNA Forestry Program will conduct an invasive plant workshop in the spring of 2011 to educate the IGAP personnel, regional invasive plant technicians and AACD coordinator on plant identification, ground survey techniques, and methods of involving the local communities on the effects of invasive plants on the region. Specific topics will be based on the needs as determined through initial worked carried out in 2010.

2. **Prevention** – Year 1 and 2
   BBNA will conduct surveys at entry points within rural communities such as airports, barge ports, cemeteries, and local gardens. The BBNA will work with local villages, schools, and the general public to understand how invasive species are spread and to work on preventing the introduction of invasive species into the area.

3. **Detection –** Field work Year 1 and Year 2
   Results of the survey will be compiled and sent to the Alaska Exotic Plant Information Clearing House to be entered into their database by the AACD coordinator. BBNA Forestry Program would assist in forming Cooperative Weed Management Districts for those communities that have multiple land management agencies, making it easier to manage invasive plants that might cover a wide range of land ownership.

4. **Control and Eradication** – Field work Year 1 and Year 2
Specific eradication and control projects will be identified based on currently known invasions and invasive species identified during the first field season. Specific timing will depend on the eradication method that will be used and the size of the affected area. BBNA will work with the University of Alaska Fairbanks Cooperative Extension Service to train local individuals to become licensed pesticide applicators. An infestation of Toadflax has already been discovered near Twin Lakes in Aleknagik; eradicating this invasive will be one of this project's priorities.

5. **Monitoring** – Year 2
A long range training and outreach program will be set up in the communities for ongoing monitoring of future infestations of invasive species.

6. **Restoration** – Year 2
Areas where eradication has taken place may need to be restored. Research will be done into how this restoration should take place, and possible sources of funding for required restoration projects.

MEASUREABLE GOALS AND OBJECTIVES:

Education: Community members in each village will understand the importance of preventing the spread of invasive species, understand how invasive species are spread and will be able to identify the most common or potentially destructive species. IGAP staff in each village will work with the BBNA program manager to coordinate efforts throughout the watershed.

Prevention: Community members in each village understand how to prevent the spread of invasive species into the area.

Detection: During the first field season, surveys will be conducted along entry points in villages near stream banks where barges, small boats, and other watercraft reach landing sites. The stream bank will be surveyed 100 yards up and down stream and 50 yards inland from the stream bank from these identified sites. Village sites away from the stream bank will be surveyed at a distance of 30 yard radius around all buildings. Airports will be surveyed by using the same criteria as the stream banks on those areas the public has access. The following area will be surveyed in each village:

Aleknagik – 10 acres	Dillingham – 20 acres
Portage Creek – 5 acres	Ekwok – 5 acres
New Stuyahok – 5 acres	Koliganek – 5 acres

Control: If invasive species are located during the survey work that can be eradicated by hand pulling, this will be completed in the first year of the project. Larger areas affected by the invasive species will be eradicated in year two after the best management practice has been determined. The known infestation of Toadflax in Aleknagik will be eradicated as part of this project.

Below are a few of the invasive plants that will be targeted for eradication if found during the initial surveys:

- Reed Canarygrass *Phalaris arundinacea*- impedes waterways
- Orange Hawkweed *Hieracium aurantiacum*- shades out land vegetation (see photo below)
- Oxeye Daisy *Chrysanthemum Leucanthemum*- spreads rapidly and kills off native vegetation
- Yellow Toadflax *Linaria vulgaris*- creates dense mats that can reduce native berry production (see photo below)
- Canada Thistle *Cirsium arvense*- creates dense mats that can reduce native berry production

Monitoring: By the end of year two, a plan will be in place for the long range training and outreach to help communities with ongoing monitoring of future infestations of invasive species. This will involve a network of community members working together.

Restoration: Restoration plans will be in place for the areas that were damaged during the eradication of invasive species.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

It has been shown that invasive plants grow rapidly, mature early and effectively spread seeds that can survive a long time in the soil. Invasive plants often lack predators, and can hybridize or cross-pollinate with local plants, compromising the genetic makeup of native species. Invasive species can outcompete native plants for resources and result in loss of habitat and lowered species diversity resulting in damage to the coastal environment. Coastal areas, wetlands and waterways are particularly sensitive to invasive species. Aquatic invasive plants can alter water pH, turbidity and light availability, thus damaging fish habitat and impeding fish migration. Aquatic invasive plants can choke waterways, restricting recreational and transportation corridors.

This project will protect coastal areas by detecting and eradicating existing invasive plant populations, setting up a network that will monitor for the spread of invasive species and prevent the future invasions through an outreach and education program.

Invasive species can also have a significant impact on local subsistence activities. Toadflax for example has a toxic poison in its roots, which can kill local native medicinal plants, berries, moose and caribou and have a significant impact on the local community.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The BBNA will work with the Environmental Indian Assistance Program, the Natural Resource Conservation Service and the Alaska Association of Conservation Districts on this project.

COST SHARING OR MATCHING OF FUNDS

These funds will be used to enhance the invasive plant project that is currently funded by Bureau of Indian Affairs with OSG monies. OSG money is not considered Federal grant money and can be used as a match for other Federal funding.

Yellow Toadflax
Linaria vulgaris

Orange Hawkweed
Hieracium aurantiacum

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Wood-Tikchik Park Clean-Up and Pollution Prevention Program

PROJECT CONTACT

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PROJECT LOCATION

This cleanup project will take place at Grant Lake, Overflow Lake and Tikchik Lake in the Wood-Tikchik State Park. See maps and photos attached on pages 4 and 5.

PROJECT DURATION

The project will be completed within a year of the receipt of funding.

ESTIMATED COST:

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$11,700	$11,700	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$11,700	$0	$0	$0	$11,700

PROJECT DESCRIPTION:

This project will protect and restore the coastal area of Wood-Tikchik Park by the cleanup of debris and contaminants that could flow into the local waterways and wetlands and from there into the coastal environment. Two sites will be completely cleaned and the third will have at least one airplane load of materials removed.

Background

The largest state park in the nation, at 1.6 million acres, is named for the two major watersheds that are partially within the park's boundary - the Wood River and the Tikchik River. The Park represents almost half the acreage in the entire Alaska State Park System. Located in the Bristol Bay region of southwest Alaska, the park was established to protect fish and wildlife populations and to support traditional subsistence and recreational activities.

Important fish and wildlife species include sockeye salmon (the park's waters are thought to contribute 20 percent of the Bristol Bay sockeye salmon run, the largest in the world), other Pacific salmon, rainbow trout, moose, caribou, black bear, and grizzly bear. Traditional activities in the park include subsistence fishing, hunting, and trapping, as well as recreational fishing and hunting. The number of recreational wilderness-travel activities has grown in the park, including kayaking, river floating, hiking and some mountain climbing.

Consistent with the Legislature's purposes for establishing the park, primary management objectives of the Division of Parks and Outdoor Recreation will be to: 1) protect and conserve the area's fish and wildlife populations and breeding systems; 2) provide for the continued use of the area for traditional subsistence and recreational purposes; and 3) protect the area's recreational and scenic resources.

Proposed Clean-Up

All sites are remote and access is by aircraft. The CIAP funding will be used to fund flight costs to and from the sites, the costs associated with hiring two short-term Alaska Conservation Corps personnel, and disposal fees.

Site One and Two will be cleaned completely as a result of this project. They are located on north shores of Overflow and of Grant Lake. The site on the north shore of Overflow Lake is the site of illegal cabin construction activity in the 1980's. The cabin was never constructed when builders discovered their activity was prohibited by state law. They abandoned the stockpiled building materials as well as a snowmachine and miscellaneous tools. The second site is located on the north shore of Grant Lake. This site has an abandoned tent platform and boat. The goal of the project is to remove these materials and haul non-biodegradable materials to the landfill. The completion of this project will result in the removal of the debris and restoration of these public lands to its natural condition.

Site Three is an abandoned fishing site located on the north shore of Tikchik Lake. During the 1960's this site was used as a base camp for commercial fishing activities and was abandoned a

few years later. The operator left behind most of the equipment and debris. The goal of the project is to disassemble, remove and haul out the dilapidated metal building, numerous 55 gallon petroleum barrels, fuel cans, batteries, scrap snowmachines, engines and miscellaneous metal scrap. Funding will allow at least one airplane load of debris to be removed from the Tikchik Lake site.

The results of this project will be shared with the public and stakeholders through a series of community outreach publications such as the Bristol Bay Times Newspaper, State of Alaska/Division of Parks and Outdoor Recreation website, Wood-Tikchik State Park (WTSP) Management Council, Nushagak-Mulchatna Wood-Tikchik Land Trust newsletter and the WTSP annual commercial operators newsletter.

MEASUREABLE GOALS AND OBJECTIVES:
The completion of this project will result in the removal of the debris, potential contamination source and restoration of three sites on public lands to its natural condition. Sites at Overflow Lake and Grant Lake will be will be completely cleaned up and restored to pristine conditions. At the Tikchik Lake site, funding is not sufficient to removal all the debris, therefore the clean-up will focus on debris, such as barrels or machinery containing oil and gas, that have the potential to contaminate the surrounding environment. Please see photos on pages 4 and 5 that show a sample of the debris to be removed.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE:
The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

The project will result in the complete or partial clean-up and restoration of three sites, each less than an acre is size, within the coastal zone. If the debris is left where it is, contaminants could flow into the local waterways and wetlands, harm local wildlife and fish species, and degrade coastal environments. Each of the three sites is either within the coastal zone, or on a lake that is just outside the coastal zone boundary and directly connected to waterbodies that are within the coastal zone.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS:
There are no federal agencies or resources involved.

COST SHARING OR MATCHING OF FUNDS:
Alaska Department of Natural Resources park rangers will be contributing their time to oversee project activities.

Tikchik Lake Site

Overflow Lake Site

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Togiak Coastal, Subsistence and Recreation Access (Phase 1)

PROJECT CONTACT

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PROJECT LOCATION

This project will take place in and around the City of Togiak in the Bristol Bay Coastal Resource Service Area. See map on page 4.

PROJECT DURATION

Phase 1 of this project, for which we are requesting CIAP funding, will be finished within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$25,800	$25,800	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$25,800	$0	$0	$0	$25,800

PROJECT DESCRIPTION

This project will protect and restore the coastal area of Togiak through the development of a trail that will concentrate foot and ATV access to areas away from vulnerable coastal bluffs, tundra and wetlands.

Background

Togiak residents and visitors to nearby Round Island, Togiak and the fishing grounds, freely access all parts of the coast and surrounding area for subsistence activities, fishing, hunting, recreation, picnicking, and other purposes. The coastal bluffs, tundra and wetlands surrounding the community however are environmentally fragile highly and productive fish, bird and wildlife habitat that is underlain by discontinuous permafrost. Surface water gathers and pools in ATV tracks, sometimes re-channelizing surface drainage. Coastal erosion is a continual challenge and facilities must be protected with sheet pile walls and rip rap. A warming climate and thawing permafrost is another issue affecting where and how people use the surrounding area. This project will address these concerns by providing access trails to concentrate where people tread, thereby protecting surrounding areas and allowing focused protection and hardening (where appropriate) of the trail to protect the coastal environment.

This trail will have community benefits in addition to providing environmental protection. It will assist elders in accessing traditional subsistence areas and provide a recreational asset for Togiak families and visitors.

Requested funds will allow completion of Phase 1 of the four phases of this project. Phase 1 includes: working with residents and land owners in Togiak to better define and map the proposed trail route and special locations to which the trails will provide access. A report will be completed that includes trail design and costs for trail construction. Phase 2 will involve soliciting funding for construction funding, funds, Phase 3 is obtaining all relevant permits and building the trail, and Phase 4 is installation of interpretative signage and displays and picnic areas in appropriate locations. Separate non-CIAP funding will be pursued for Phases 2 through 4.

MEASUREABLE GOALS AND OBJECTIVES

1. A map using GPS technology in the field and GIS software that defines the proposed trail route and identifies special locations for which it will enhance access.

2. Project report describing trail routes and distances, materials to be used and detailed cost estimates. The report will also include specific design features that specific design features that will control coastal erosion in order to protect coastal environments.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

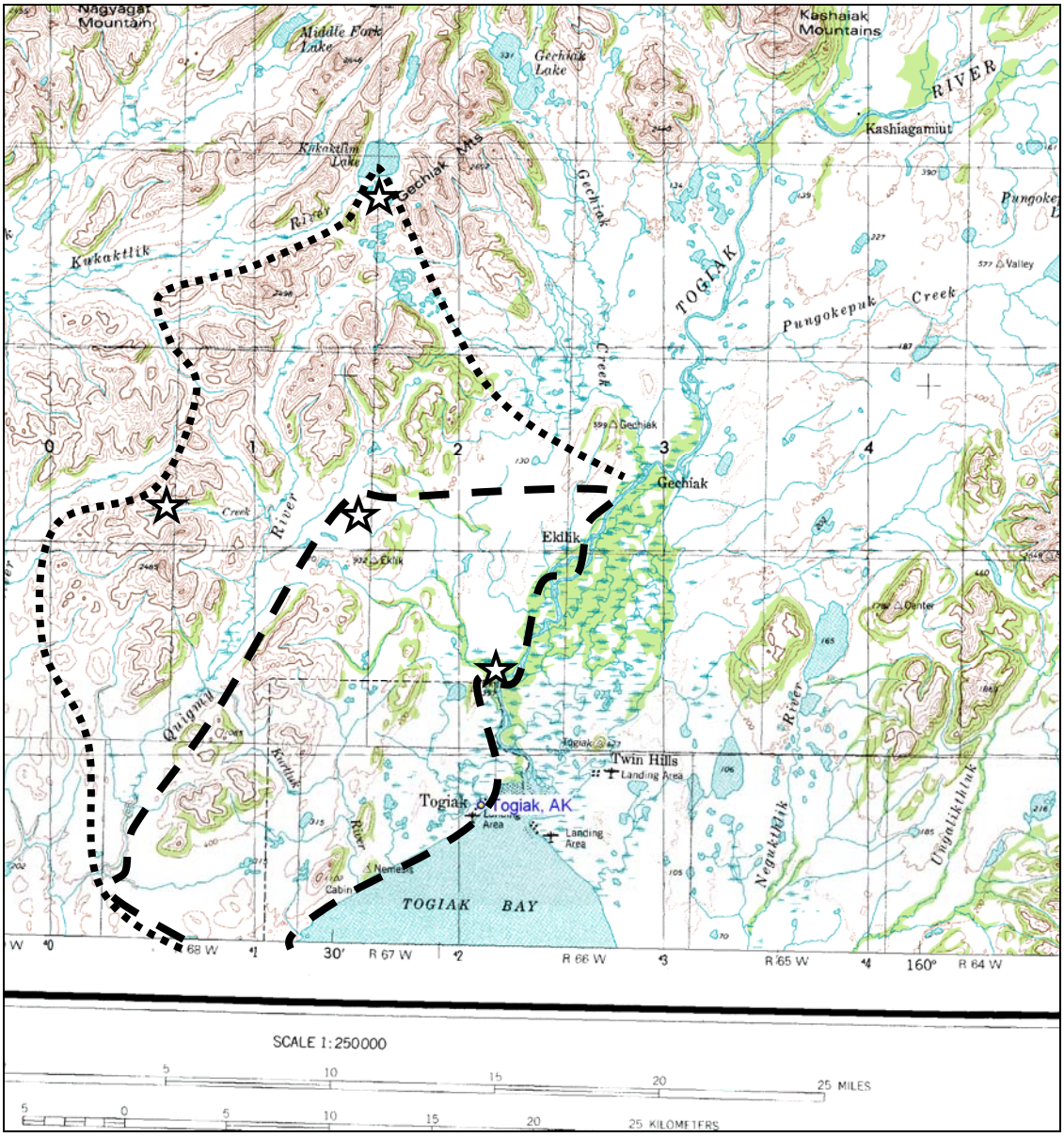
Currently informal public access to popular recreation and subsistence areas is damaging fragile coastal bluffs, tundra and wetlands and leading to coastal erosion, which has a negative impact on coastal environments. This project will result in the selection of a specific trail routes that will formalize access to the key community destinations while minimizing impacts on fragile habitat. The report will also include specific design recommendations such as trail surfacing materials, drainage systems, and other design features that will minimize coastal erosion and impacts on permafrost areas.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

During work on Phase I of this project federal resource agencies and landowners will be consulted to assist with project routing and identify environmental issues of concerns and natural hazards.

COST SHARING OR MATCHING OF FUNDS

There is no cost sharing or matching funds involved in Phase I of this project.



ROUTE OPTIONS

☆ Camping & picnic areas

– – – Route working with Togiak Natives Ltd land

..... Route working with TNL and Togiak Wildlife Refuge

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Bristol Bay Round Island Youth Stewardship Program

PROJECT CONTACT

Contact1 Name:	Program Director
Address:	P.O. Box 1464 Dillingham, AK 99576
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Fax:	(907) 842-2776
Email Address:	bbcrsant@nushtel.com

Contact 2 Name:	Helen M. Chytblook, Marine Mammal Coordinator
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Phone:	(907) 842-5257
Fax:	(907) 842-5932
Email Address:	hchythlook@bbna.org

PROJECT LOCATION

This project will take place on Round Island in Bristol Bay.

PROJECT DURATION

This project will be completed within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$13,800	$13,800	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$13,800	$0	$0	$0	$13,800

PROJECT DESCRIPTION

The Bristol Bay Summer Youth Stewardship Program (BBSYSP) Round Island Internship Project has been in existence since 1998. The program is a cooperative educational effort designed to provide Alaska Native students with the opportunity to experience the science and research of natural resource management.

The BBSYSP places two interns on Round Island (Qayassiq in Yu'pik) each summer. The interns work with the Alaska Department of Fish and Game on walrus haulout monitoring techniques, seabird monitoring techniques, and other sanctuary related field operations such as Steller sea lion monitoring and the visitor program. Interns are mentored and receive hands-on training with all the equipment and techniques necessary to conduct these duties. Alaska Native traditional ecological knowledge literature is provided which includes information on traditional walrus subsistence uses including hunting, preservation techniques and local edible plants. The intern will have the option of earning college credit.

The program has been a priority of the Qayassiq Walrus Commission as they would like to have Alaska Native biologists, natural resource, marine mammal management career opportunities. The Qayassiq Walrus Commission has supported this Program since it began in 1998. Due to funding cuts, Bristol Bay Native Association (BBNA) is soliciting additional funds to support the continuation of this Program. The CIAP funds will pay for travel, equipment and a stipend for two interns for one season.

The Bristol Bay Native Association, the Qayassiq Walrus Commission and the US Fish and Wildlife Service are committed to the conservation of natural resources in Bristol Bay and working together to provide educational opportunities to the Native community

MEASUREABLE GOALS AND OBJECTIVES

Hire two interns for the summer. The interns will work with the Alaska Department of Fish and Game and/or the US Fish and Wildlife Service biologists to learn about walrus haulout monitoring techniques, seabird monitoring techniques, Steller sea lion monitoring and the Round Island visitor program.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

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

This project will result in conservation and protection of the coastal areas by allowing two interns to participate in Round Island (Qayassiq in Yu'pik) research for a summer learning about walrus haulout monitoring techniques, seabird monitoring techniques, and other sanctuary related field operations such as Steller sea lion monitoring and the visitor program. Interns with an understanding of coastal environmental systems and will be better coastal stewards and motivated to participate in conservation, protection and restoration of coastal areas.

Round Island is one of seven small islands protected as part of the Walrus Islands State Game Sanctuary. The Sanctuary was created to protect the last remaining terrestrial haulout for pacific walruses and provides important habitat for many marine mammals, and marine and terrestrial

birds. This area is managed primarily to protect these habitats and species, and secondarily to provide public access for education, viewing and photography. Interns will monitor the populations of walruses, seabirds, Steller sea lions and other species on Round Island each year throughout the summer months. Accurate information on the health marine mammal and bird populations is required to manage the Sanctuary effectively, and changes in species numbers over time will guide decisions about regulations, access permitting or other management strategies to ensure adequate protection of key habitat.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The Bristol Bay Native Association, the Qayassiq Walrus Commission, the US Fish and Wildlife Service and Alaska Department of Fish and Game are committed to working together to provide educational opportunities to the Native community and ensure wildlife monitoring continues at Round Island to support the ongoing protection of habitat and species. While on the island, interns will work closely with the Alaska Department of Fish and Game seasonal staff and the UAF Bristol Bay Campus Environmental Science Department.

COST SHARING OR MATCHING OF FUNDS

Bristol Bay Science Research Institute will be providing some additional funding for this project.

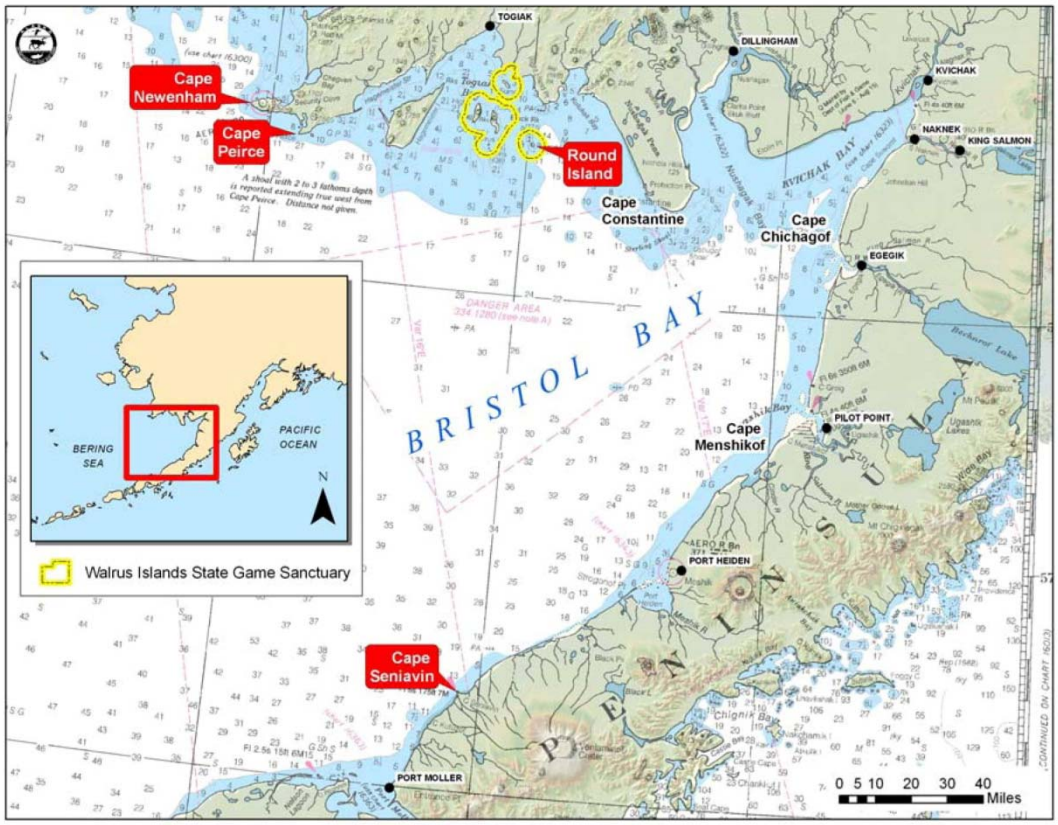

Figure 1 - Map Showing Round Island (Alaska Department of Fish & Game)

Figure 2 - Walrus Haulout on Round Island (BBNA)

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM
BRISTOL BAY COASTAL RESOURCE SERVICE AREA
TIER 1, PROJECT 11

PROJECT TITLE: Ekwok Landfill Bridge Engineering and Environmental Design

PROJECT CONTACT

Contact1 Name:	Program Director
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Phone:	(907) 842-4370
Fax:	(907) 842-2776
Email Address:	bbcrsant@nushtel.com

Contact Name:	Lorraine King, Environmental Coordinator
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Phone:	(907) 464-3336
Fax:	(907) 464-3378
Email Address:	king2lorraine@yahoo.com

PROJECT LOCATION

This project will take place in the village of Ekwok, located on the northwest shore of the Nushagak River, between New Stuyahok and Portage Creek. It is 285 miles southwest of Anchorage, and 43 miles northeast of Dillingham. The community's population is currently 120 and is primarily accessible by air or boat. Bulk goods are typically barged up at the Nushagak River to Ekwok. See aerial photograph on page 4.

PROJECT DURATION

This project will be completed within one year of the funding award.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$11,700	$11,700	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY 08**	**FY 09**	**FY10**
$11,700	$0	$0	$0	$11,700

PROJECT DESCRIPTION

This project will provide partial funding for an environmental study and engineered design for a bridge across the Klutuk River, an anadromous fish stream where spawning occurs for five species of salmon and a resident rainbow trout population. The bridge is needed to access the new Ekwok Landfill site. The bridge is the last part of the project design phase that must be completed before construction of the road to the new landfill can begin. An engineered design is needed in order to ensure the project minimizes negative impacts on the anadromous fish stream and adjacent wetlands. All parts of the project are within the coastal zone. The total required funding for the environmental study and engineered design of the bridge is $55,000. The Ekwok Village Council is currently working to secure the remaining funds.

Ekwok currently uses an unpermitted open dumpsite for solid waste disposal and has a limited recycling program. In 2005, the community completed an Integrated Solid Waste Management Plan to identify future needs and opportunities to improve the solid waste system. This plan recommended that a new solid waste disposal facility be developed. This new site would be permitted, would be in compliance with the FAA minimum separation distance from "wildlife attractants", and would reduce the risk residents could face of potential health problems from contact with bacteriological or chemically contaminated wastes, and emissions to air and groundwater from the existing dumpsite.

A new landfill site has been selected, that is located on a hill approximately 6,000 feet northwest of town, across Klutuk Creek. This new site will move the landfill away from the community's shallow aquifer drinking water source, has limited impacts on wetland, does not impact allotments or BLM lands and will open up land for subsistence activity near the community. The proposed landfill will include a separate area for storing and organizing recycling and hazardous waste. An access road (14 feet wide) and a bridge (14 feet wide by 100 feet long) across Klutuk Creek must be developed. Klutuk Creek provides important spawning habitat for all five species of salmon and also supports resident fish (rainbow trout) that are harvested by village residents.

The preliminary engineering and environmental work has been completed and Phase I, the road construction from the village up the bridge is ready for construction. Phase II of the project includes the Klutuk Creek bridge and the road from the creek to the site. This phase requires a more detailed study to ensure that construction does not impact the fish resources and stream habitat of Klutuk Creek. This technical study into the potential impacts of the bridge and appropriate mitigation measures is a critical step towards the relocation of the in Ekwok landfill. The study will identify project design, construction and operation elements that will minimize the impact on both fish habitat and wetlands.

A total of $835,000 in funding has been secured from USDA for the larger project of designing and constructing the road to the new land fill and closing the existing landfill. In order to access these funds, the detailed environmental and engineering study for this bridge must be completed and the total funding required for the project must be secured.

This CIAP request is for $11,500 that will be a contribution toward the total $55,000 needed to complete the environmental design and engineering study for the bridge. The funds will be held by the Bristol Bay CRSA and will only be released when the rest of the funding for this project is secured by the Ekwok Village Council. If the sufficient funds are not secured, this funding will be put towards a Tier 2 project.

MEASUREABLE GOALS AND OBJECTIVES

The goal of this project is to complete the environmental study and engineered design for a 100 foot bridge crossing the Klutuk River an anadromous fish stream that supports spawning for all 5 species of salmon and residents rainbow trout population. The design will ensure that the bridge will be built with minimal negative impact on the critical fish habitat.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

The environmental study and design for the new bridge will ensure that the bridge can be constructed across the Klutuk River without having a negative impact salmon spawning habitat, rainbow trout habitat and water quality in general. Protecting such coastal habitats and healthier local fish populations will have a long term benefit for the coastal environment.

In addition, the construction of this bridge will allow a new landfill to be developed and the existing one to be closed down. Closing the existing landfill will minimize the potential for contamination of drinking water wells and other local waterways. The new landfill will be designed to protect local drinking water and ground water and will allow for the diversion of recyclable materials and hazardous waste from the landfill. Effectively pursuing and managing solid waste and anti-pollution projects will prevent and mitigate damage to and help protect coastal habitats and the fish, plants and wildlife they support.

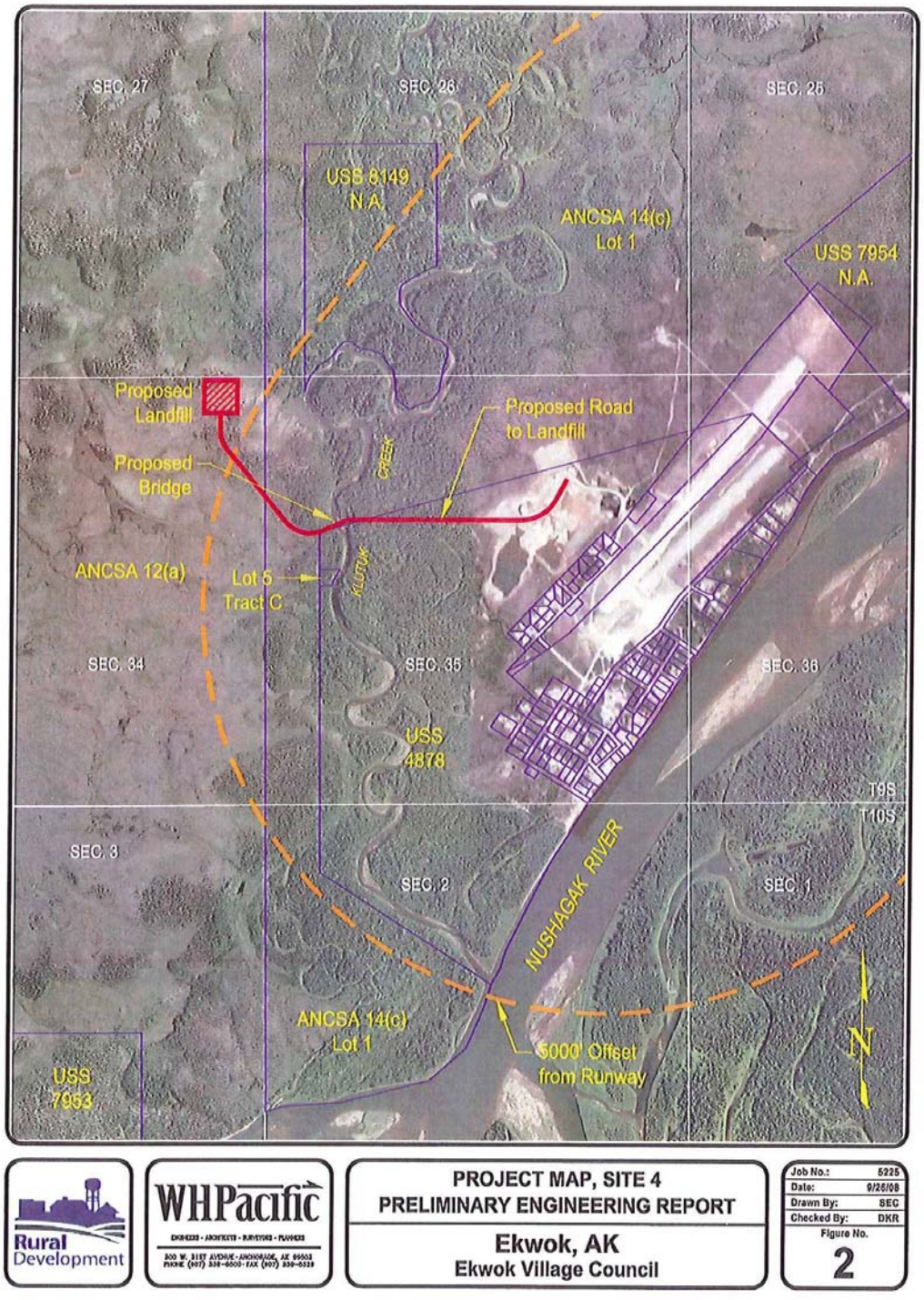
COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The US Department of Agriculture (USDA) has committed approximately $800,000 to fund construction of Phase I of the road to and new landfill project. This funding will not be released until the environmental study and design work for the bridge has been completed.

The project will be coordinated by the Indian General Assistance Program (IGAP) staff in New Stuyahok. The IGAP is funded through the EPA to provide assistants to Tribal governments and intertribal agencies for planning, developing, and establishing the capability to implement environmental protection programs in Tribal communities. The goal of the program is to assist Tribes in developing the capacity to manage their own environmental protection programs which are tailored to each Tribe’s individual needs.

COST SHARING OR MATCHING OF FUNDS

The bulk of the funds required for this new landfill are being provided by USDA. Funding to coordinate all work related to the new landfill is through the IGAP program. The CIAP funds will not be used as a matching or cost sharing.



STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: New Stuyahok Landfill Improvement to Protect the Coastal Environment

PROJECT CONTACT

Contact1: Program Director
Address: P.O. Box 1464
Dillingham, AK 99576
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Fax Number: (907) 693-3241
Email Address: nsigap@starband.net

PROJECT LOCATION
New Stuyahok is located on the west shore of the Nushagak River, between Ekwok and Koliganek. It lies 275 miles southwest of Anchorage, and 43 miles northeast of Dillingham. The community is primarily accessible by air via a 3,800-foot gravel runway, or by boat. Bulk goods are typically barged up the Nushagak River to New Stuyahok. The community has no docking facilities, but a barge loading site is available. Limited travel is achieved during the winter by snowmobile and all-terrain vehicles. The current population is approximately 550.

PROJECT DURATION
This project will be completed within one year of the funding award.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$11,700	$11,700	0	0	0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$11,700	$0	$0	$0	$11,700

PROJECT DESCRIPTION

This project will fund planning and construction of a small building at the landfill site, which will improve the community's recycling and hazardous waste program in order to protect coastal areas and wetlands.

The New Stuyahok landfill was constructed in 1993 on a hillside, one-third of a mile northwest of town and has a footprint of 2.4 acres (see aerial photo on page 4). It is a trench-and-fill type landfill, with the trench dug into the hill using a bulldozer or backhoe. Waste is placed in one end at the bottom of the trench, compacted and covered with the soil that was excavated during the landfill construction. The landfill is operated by the City with assistance provided through the Indian General Assistance Program.

Two studies focused on improving conditions at the landfill were completed in 2008; the New Stuyahok Integrated Solid Waste Management Plan written by Bristol Environmental and Engineering Services Corporation and the Department of Environmental Health Solid Waste Disposal System Survey written by the Bristol Bay Area Health Corporation. These documents each recommend a series of improvements to local solid waste management practices, with both highlighting the importance of minimizing the hazardous wastes that are burned or buried in the landfill.

The City has two burn boxes that are used for burning materials such as paper, cardboard, inert construction debris and household food waste. In order to prevent the creation of toxic smoke, it is important that highly flammable or explosive wastes, hazardous wastes, plastics and rubber be separated out prior to burning. Currently, much of sorting of burnable and non-burnable items is done by residents who do not always have the expertise to sort thoroughly.

In order to ensure that hazardous or explosive items are not burned, a small building is required. Residents would then deposit waste in the building, where it would be protected from rain and wildlife before being sorted by staff. Staff will then remove all hazardous waste and non-burnable items before moving the burnable waste to the burn box. The building will also provide an area to store hazardous waste and recyclables before being transported out of the community for proper disposal.

Hazardous wastes that are burned can produce toxins that make their way into the land, air and waterways throughout the coastal environment. Hazardous wastes that are buried in the landfill can form a toxic leachate that can be move through the environment by surface or ground water flow. As the New Stuyahok landfill is located on a hillside, there is potential for this leachate to be carried through runoff into the Nushagak River and to spread to the area's coastal environments.

It is estimated that the New Stuyahok landfill has the capacity to be used for 5 more years. Increasing the amount of material that is recycled will prolong the life of the existing landfill and prevent additional coastal areas from becoming landfills.

CIAP funding will be used to build a simple building at the landfill site and to ship electronics, other hazardous waste and recyclables outside for processing.

MEASUREABLE GOALS AND OBJECTIVES

1. Construction of a small building at the landfill to provide covered space for staff to remove hazardous and non-burnable material before waste is moved to the burn box or landfill. Recyclable material and hazardous waste will also be stored in this building prior to being shipped for proper disposal.

2. Shipment of a 20 foot container van of electronic waste and appliances to Seattle for processing. The van will be shipped back to the community so it can be refilled.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

The construction of a new landfill building will allow staff to sort through all waste before it is burned or placed in the landfill. This thorough sorting by staff will minimize the amount of hazardous waste that is burned or buried and will reduce the contamination of local air and water, thus protecting the coastal environment, wetlands and fish habitat. Protecting hazardous waste from the rain during sorting and storage will minimize the potential that toxins will enter surface water runoff and flow in to the Nushagak River. The building will also allow for increased recycling which will prolong the life of the landfill and prevent other coastal areas from being used as landfill sites.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The project will be coordinated by the Indian General Assistance Program (IGAP) staff in New Stuyahok. The IGAP is funded through the EPA to provide assistants to Tribal governments and intertribal agencies for planning, developing, and establishing the capability to implement environmental protection programs in Tribal communities. The goal of the program is to assist Tribes in developing the capacity to manage their own environmental protection programs which are tailored to each Tribe's individual needs.

COST SHARING OR MATCHING OF FUNDS

The request CIAP will not be used as matching funds or for cost sharing. The portion of this project covered by this funding is one piece of a long term plan for improvements to the community's landfill. Coordination and assistance for this work will be provided through IGAP. The community has also applied for additional funding from EPA to coordinate backhauling of hazardous waste from local villages, preparing cars for shipping, training staff to package items for shipping and other components of the solid waste management plan.


Landfill
New Stuyahok
Nushagak River
1000 ft
500 m
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Report a problem

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Nushagak –Mulchatna Rivers Watershed Water Quality Data

PROJECT CONTACT

Contact 1 Name:	Program Director
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Fax:	(907) 842-2776
Email Address:	bbcrsant@nushtel.com

Contact 2 Name:	Susan L. Flensburg
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Phone:	(907) 842-6241
Fax:	(907) 842-5932
Email Address:	sflensburg@bbna.com

PROJECT LOCATION

This project is within the Bristol Bay Coastal Resource Service Area. Project work will occur in the streams and lakes of the Middle and Upper Nushagak and Mulchatna Rivers. A map and photos are on page 4.

PROJECT DURATION

This project will be completed within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$40,250	$40,250	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**Year 10**
$40,250	$0	$0	$0	$40,250

PROJECT DESCRIPTION

This funding would augment a Tier I funded project that will allow field investigation, documentation and addition of anadromous streams to the Anadromous Waters Catlaogue (AWC) in the Nushagak-Mulchatna area. As these water flows flow directly into coastal areas, impacts to these waters will have an impact on coastal waters.

The AWC includes a catalogue and atlas of all streams, rivers and lakes are important to anadromous fish species and therefore afforded protection under Alaska Statute 16.05.871. Prior to beginning a use, construction or activity that would take place in water bodies specified in the AWC, individuals or governmental agencies are required to submit plans and specifications to ADF&G and receive written approval in the form of a Fish Habitat Permit.

This project will fund independent baseline environmental information to be gathered and analyzed (e.g. water quality, surface and groundwater flows, current toxicity, macroinvertebrates, etc.) simultaneous with the anadromus stream investigations. Together this information is helpful to understanding the current ecological condition of the salmon bearing streams most likely to be affected if Pebble Mine activity is permitted. The need to accomplish this has become more immediate and pressing because of the real possibility of industrial scale mining and the affect such an activity can have on fish and water resources in the Nushagak-Mulchatna and Kvichak River watersheds. The prospect of large scale mineral development in the Nushagak-Mulchatna and Kvichak watersheds of Bristol Bay creates an immediate need to: 1) secure the maximum level of protection available under Alaska law for the salmon bearing streams most likely to be affected by mining activity, and 2) collect independent baseline environmental information needed to understand the current ecological condition of the salmon bearing streams most likely to be affected if mining activity is permitted.

The proposed project will increase understanding of water quality, surface and groundwater hydrology, macroinvertebrate and diatom populations and copper bioavailability for waters in the Nushagak and Kvichak watersheds that are most likely to be affected if mining activity is permitted in Bristol Bay. Understanding to be achieved through field sampling, modeling, river zone mapping, scientific literature review and analysis of data collected and released in conjunction with any applications for mining permits.

To date the following organizations have provided funds or in-kind support for this project: The Gordon and Betty Moore Foundation through the Nature Conservancy, the New Stuyahok Tribal Council, the Ekwok Village Council, the Bristol Bay Regional Seafood Development Assn, Bristol Bay Native Assn., the Southwest Alaska Salmon Habitat Partnership, the U.S. Fish & Wildlife Service, the National Fish and Wildlife Foundation, Trout Unlimited, the Wallace Foundation, the Alaska Department of Fish & Game, and the Nushagak-Mulchatna/Wood-Tikchik Land Trust, and the Aleknagik Tribal Council.

MEASUREABLE GOALS AND OBJECTIVES

Measurable goals and objectives include:

- Characterization of baselines data including water quality, surface and groundwater hydrology, macroinvertebrate and diatom populations, copper bioavailability and others for waters in the Nushagak and Kvichak watersheds. The focus will be on water quality parameters that are most likely to be affected if mining is permitted in the watershed.

- A peer reviewed paper describing the local conditions will be written and submitted for publication.

- Distribute the baseline data to researchers, permitting agencies and regulators to promote protection of coastal environments.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

The activities outlined will result in the conservation and protection of coastal areas by documenting baseline water and other environmental conditions prior to the issuance of mining permits. This data will allow researchers, regulators, and permitting agencies to track changes in coastal environments over time and will provide a basis for coastal management decisions that increase protection of these environments.

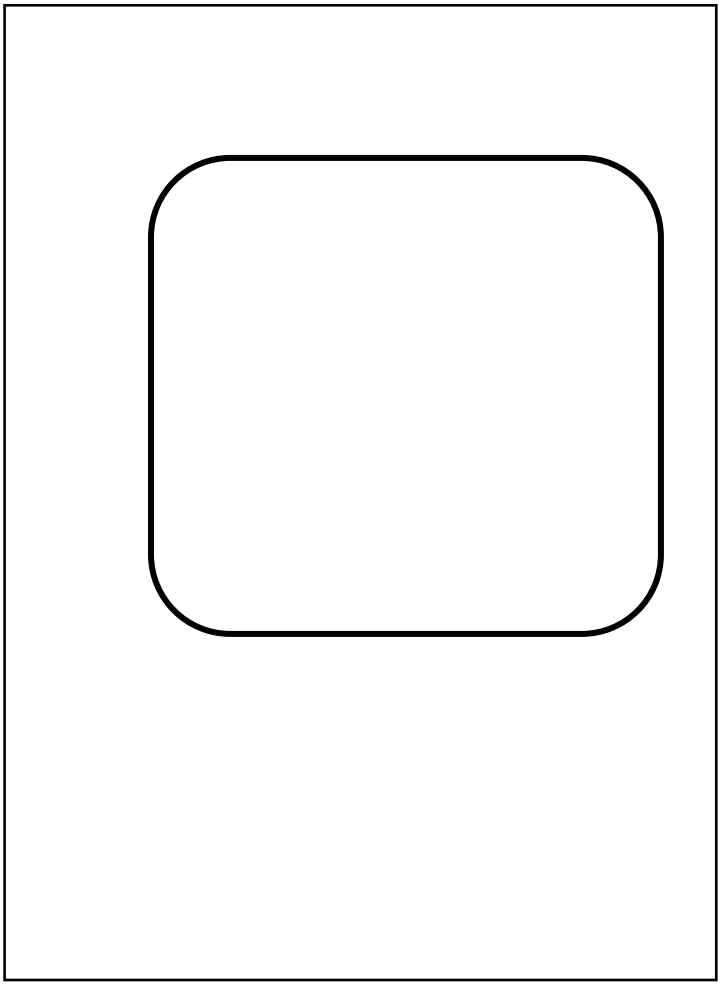
The results from these activities may also be useful for determining the type of protective conditions that should be placed as conditions on any mining permits. The stream reaches from which data will be collected are within the watershed and downstream from the Pebble mine prospect, which is one of the largest concentrations of copper, gold, molybdenum and silver in the world. The Pebble project is currently in a pre-feasibility and pre-permitting research stage, conducting environmental studies. A proposed mine development plan to be submitted for government and public review, is expected in 2011 or 2012. The mine is in the watersheds of the Kvichak, Nushagak River and Mulchatna Rivers.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

As noted above, several partners have contributed to this effort. Federal resources or funding has come from the U.S. Fish & Wildlife Service and the National Fish and Wildlife Foundation.

COST SHARING OR MATCHING OF FUNDS

As noted above, there have been several funders contributing to this multi-year effort. For the time period covered by this request funding has also been requested from the CIAP under the public solicatation, and the US Fish & Wildlife Service under the National Fish Habitat Initiative.



Middle (top) and Upper (bottom) reaches of Nushagak –Mulchatna Rivers. Photos by Mike Weidmer, as published in Nushagak River Watershed Traditional Use Area Conservation Plan

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Native Lands Conservation Protection

PROJECT CONTACT

Contact 1 Name:	Program Director
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Email Address:	bbcrsant@nushtel.com

Contact 2 Name:	Tim Troll Executive Director
Address:	Nushagak-Mulchatna/Wood-Tikchik Land Trust P.O. Box 1388, Dillingham, AK 99576
Phone:	(907) 276-3133 x 120
Fax:	(907) 276-2584
Email Address:	ttroll@tnc.org

PROJECT LOCATION

This project will occur near the village of Koliganek, Alaska and the confluence of Old Man Creek and the Mulchatna River. See map on page 3.

PROJECT DURATION

This project will be completed within one year of receipt of funding.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$184,000	$184,000	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$184,000	$0	$0	$0	$184,000

PROJECT DESCRIPTION

CIAP funding will be used to purchase a 120 acre Native Allotment near the village of Koliganek at the confluence of Old Man Creek and the Mulchatna. The property is an in holding surrounded by property owned by the Native village corporation, Koliganek Natives Ltd. (KNL). It is located in an area with habitat critical for anadromous and resident fish species. Once purchased, ownership would be transferred from the CRSA to KNL. A conservation easement will be established and retained by the Nushagak-Mulchatna/Wood-Tikchik Land Trust to ensure the 120 acres are protection. In exchange for the 120 acres, KNL will place a conservation easement on land surrounding Harris Creek. The amount exact amount of land to be put under conservation easement by KNL is still being negotiated, but it will not be less land then the equivalent value of the purchase of the two Native Allotments.

This watershed contains several hundred Native allotments and thousands of acres of land belonging to Alaska Native village corporations, with many lands encompassing habitat critical for anadromous and resident fish species. In 2008 the Nushagak-Mulchatna/Wood-Tikchik Land Trust completed a conservation assessment of more than 300 Native allotments to determine which parcels warranted conservation protection due to their importance to protection of fish and wildlife habitat for subsistence use areas. Allotments were scored by biologists and knowledgeable local residents in order to prioritize the allotments for conservation protection.

Under the conservation easement large commercial developments, subdivision of the lots or permanent residences would not be allowed. Small buildings to support subsistence use or guided recreation may be allowed, but would be set back from waterways. Details of what sort of development would be allowed under the conservation easement are still being worked out. The minimum purchase price will be set by the Bureau of Indian Affairs based on an appraisal of the property. The final price will be subject to negotiation with the holder of the Native Allotment.

Protection of allotments and corporate lands is important for maintaining the vegetative complex within the riparian corridors of the Old Man and Mulchatna Rivers. This complex creates the in-river and shoreline habitat essential for rearing and migrating salmon. This effort to leverage protection of Native allotments with protection of adjacent Native village corporation lands is an important step in trying to prevent the legal partition of land that has occurred in the Nushagak and Mulchatna watersheds over the last 40 years from resulting in habitat fragmentation. All landowners in the watershed, village corporations, regional corporations, the state and federal government, have to work together to protect habitat for fish and wildlife along the rivers.

The KNL, Village Council and the Land Trust have been working together on conservation for several years. The KNL and the Land Trust have entered into an MOU in which the Land Trust and its conservation partner The Nature Conservancy are identifying and classifying corporate lands for habitat value, subsistence value and important cultural sites. This information will be used to help the corporation develop a land use plan for that recognizes these values.

MEASUREABLE GOALS AND OBJECTIVES

3. Direct acquisition of approximately 120 acres of Native Allotment parcels near the confluence of Old Man Creek and the Mulchatna River and which were rated by biologists and knowledgeable local residents as priorities for conservation and subsistence protection.

4. A Conservation Easement will be placed on an additional area (yet to be determined) of KNL lands along Old Man Creek and the Mulchatna River. The area will be no less than the equivalent value of the purchase price contributed by the Land Trust. This will prevent habitat fragmentation and protect area salmon habitat in this area.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

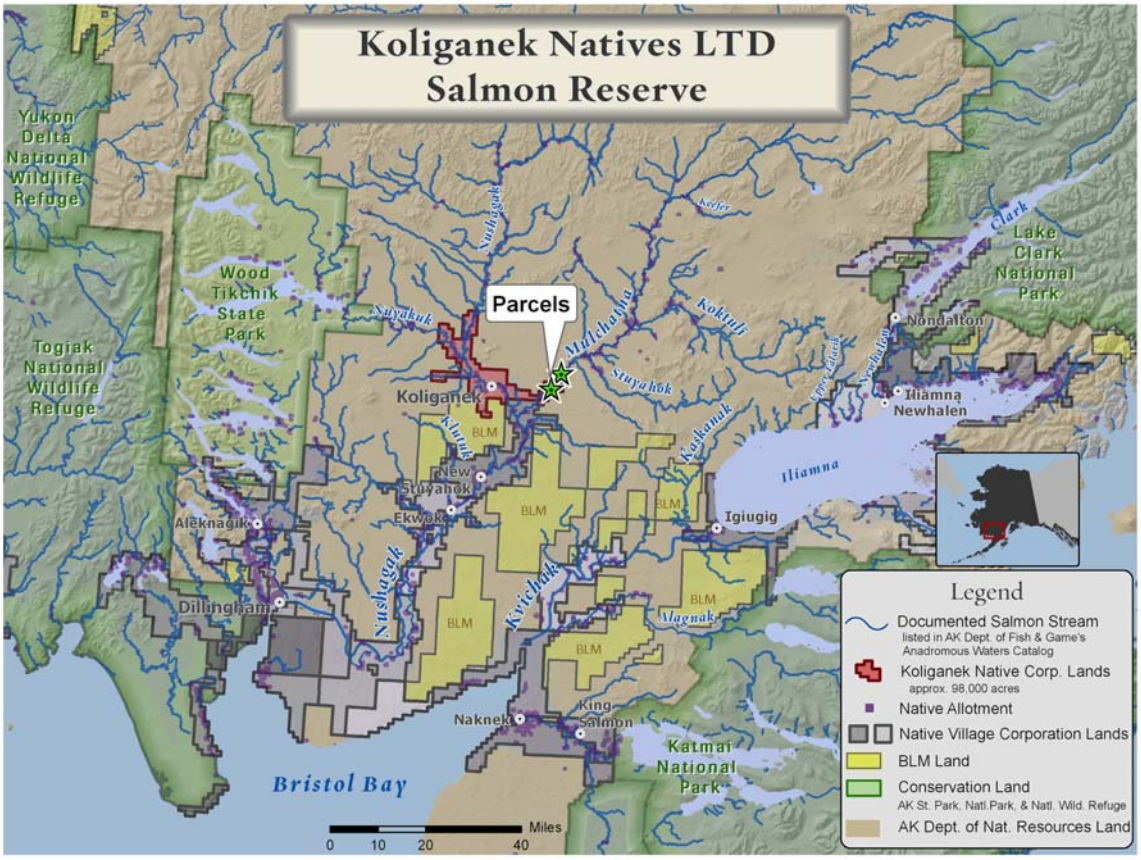
The project will result in the placement of a conservation easement over a large area around the confluence of Old Man Creek and the Mulchatna River Harris Creek, an andromous stream corridor and tributary of the Nushagak-Multchatna River system. This is an important spawning and rearing area for salmon and is used by locals for subsistence purposes. The conservation easement will protect the coastal habitat by preventing large commercial development, subdivision and permenant residents and will require any development to be set back from waterways.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

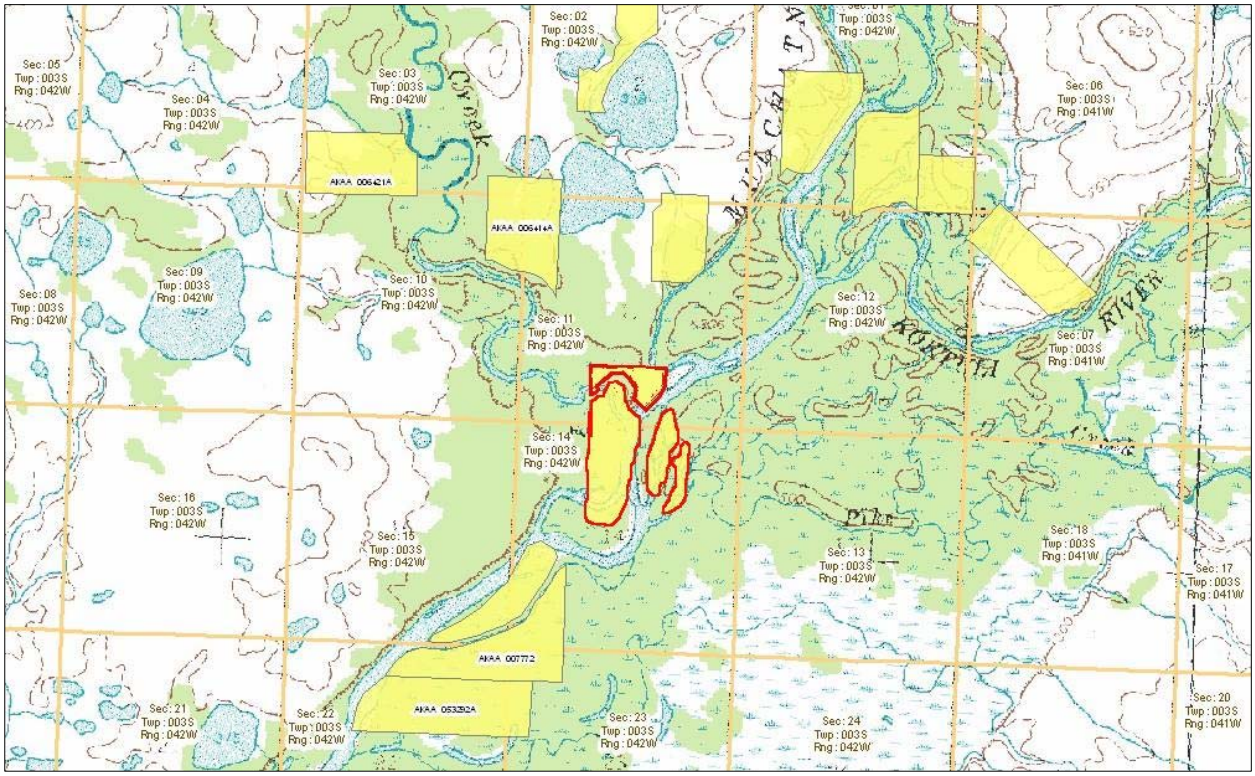
There are no federal resources or programs to coordinate with at this time.

COST SHARING OR MATCHING OF FUNDS

CIAP funds are not being used to meet cost sharing or matching funds of other agencies. Additional funding for the larger program of strategic land acquisition for salmon habitat protection is being sought from several sources. For this specific project, Koliganek Natives Limited has committed to donate funds to the Land Trust to help with the purchase of the Native Allotments, and Tikchik Narrows Lodge has committed $5,000.



Nushagak_base_LandMngt_Koliganek.mxd



Subject Parcels are Highlighted in Red, near the Confluence of Old Man Creek with the Mulchatna River

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Ekwok Landfill Bridge Engineering and Environmental Design

PROJECT CONTACT

Contact1 Name:	Program Director
Address:	P.O. Box 1464 Dillingham, AK 99576
Phone:	(907) 842-4370
Fax:	(907) 842-2776
Email Address:	bbcrsant@nushtel.com

Contact Name:	Lorraine King, Environmental Coordinator
Address:	Ekwok Village Council P.O. Box 70, Ekwok, Alaska 99580
Phone:	(907) 464-3336
Fax:	(907) 464-3378
Email Address:	king2lorraine@yahoo.com

PROJECT LOCATION

This project will take place in the village of Ekwok, located on the northwest shore of the Nushagak River, between New Stuyahok and Portage Creek. It is 285 miles southwest of Anchorage, and 43 miles northeast of Dillingham. The community's population is currently 120 and is primarily accessible by air or boat. Bulk goods are typically barged up at the Nushagak River to Ekwok. See aerial photograph on page 4.

PROJECT DURATION

This project will be completed within one year of the funding award.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$51,750	$51,750	$0	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$51,750	$0	$0	$0	$51,750

PROJECT DESCRIPTION

This project will provide partial funding for an environmental study and engineered design for a bridge across the Klutuk River, an anadromous fish stream where spawning occurs for five species of salmon and a resident rainbow trout population. The bridge is needed to access the new Ekwok Landfill site. The bridge is the last part of the project design phase that must be completed before construction of the road to the new landfill can begin. An engineered design is needed in order to ensure the project minimizes negative impacts on the anadromous fish stream and adjacent wetlands. All parts of the project are within the coastal zone. The total required funding for the environmental study and engineered design of the bridge is $63,250. $11,500 of the cost of the work has been submitted separately as a Tier 1 project. This Tier II project is for the remaining funding to allow complete environmental study and design of the bridge.

Ekwok currently uses an unpermitted open dumpsite for solid waste disposal and has a limited recycling program. In 2005, the community completed an Integrated Solid Waste Management Plan to identify future needs and opportunities to improve the solid waste system. This plan recommended that a new solid waste disposal facility be developed. This new site would be permitted, would be in compliance with the FAA minimum separation distance from "wildlife attractants", and would reduce the risk residents could face of potential health problems from contact with bacteriological or chemically contaminated wastes, and emissions to air and groundwater from the existing dumpsite.

A new landfill site has been selected, that is located on a hill approximately 6,000 feet northwest of town, across Klutuk Creek. This new site will move the landfill away from the community's shallow aquifer drinking water source, has limited impacts on wetland, does not impact allotments or BLM lands and will open up land for subsistence activity near the community. The proposed landfill will include a separate area for storing and organizing recycling and hazardous waste. An access road (14 feet wide) and a bridge (14 feet wide by 100 feet long) across Klutuk Creek must be developed. Klutuk Creek provides important spawning habitat for all five species of salmon and also supports resident fish (rainbow trout) that are harvested by village residents.

The preliminary engineering and environmental work has been completed and Phase I, the road construction from the village up the bridge is ready for construction. Phase II of the project includes the Klutuk Creek bridge and the road from the creek to the site. This phase requires a more detailed study to ensure that construction does not impact the fish resources and stream habitat of Klutuk Creek. This technical study into the potential impacts of the bridge and appropriate mitigation measures is a critical step towards the relocation of the in Ekwok landfill. The study will identify project design, construction and operation elements that will minimize the impact on both fish habitat and wetlands.

A total of $835,000 in funding has been secured from USDA for the larger project of designing and constructing the road to the new land fill and closing the existing landfill. In order to access

these funds, the detailed environmental and engineering study for this bridge must be completed and the total funding required for the project must be secured.

MEASUREABLE GOALS AND OBJECTIVES

The goal of this project is to complete the environmental study and engineered design for a 100 foot bridge crossing the Klutuk River an anadromous fish stream that supports spawning for all 5 species of salmon and residents rainbow trout population. The design will ensure that the bridge will be built with minimal negative impact on the critical fish habitat.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

The environmental study and design for the new bridge will ensure that the bridge can be constructed across the Klutuk River without having a negative impact salmon spawning habitat, rainbow trout habitat and water quality in general. Protecting such coastal habitats and healthier local fish populations will have a long term benefit for the coastal environment.

In addition, the construction of this bridge will allow a new landfill to be developed and the existing one to be closed down. Closing the existing landfill will minimize the potential for contamination of drinking water wells and other local waterways. The new landfill will be designed to protect local drinking water and ground water and will allow for the diversion of recyclable materials and hazardous waste from the landfill. Effectively pursuing and managing solid waste and anti-pollution projects will prevent and mitigate damage to and help protect coastal habitats and the fish, plants and wildlife they support.

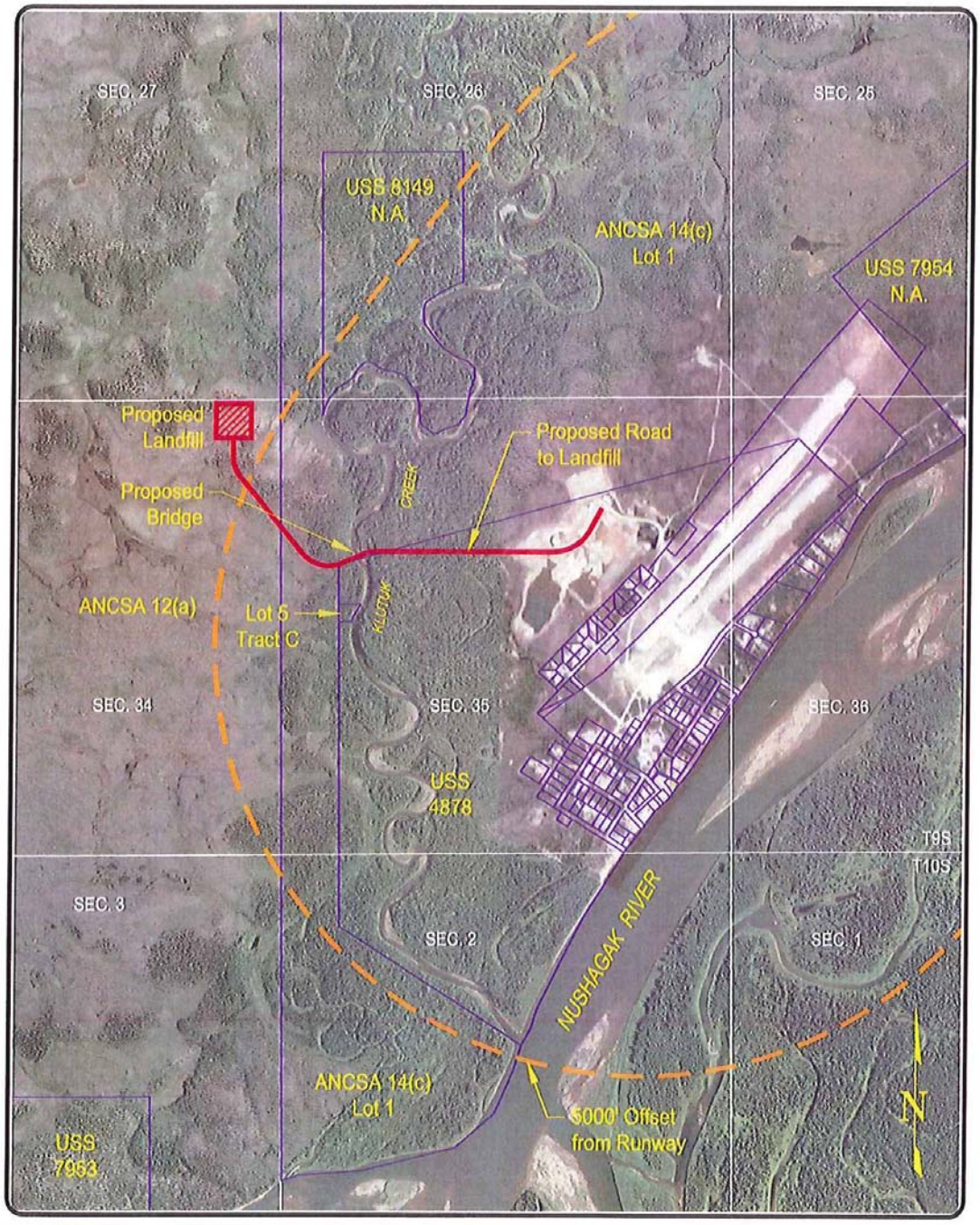
COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The US Department of Agriculture (USDA) has committed approximately $800,000 to fund construction of Phase I of the road to and new landfill project. This funding will not be released until the environmental study and design work for the bridge has been completed.

The project will be coordinated by the Indian General Assistance Program (IGAP) staff in New Stuyahok. The IGAP is funded through the EPA to provide assistants to Tribal governments and intertribal agencies for planning, developing, and establishing the capability to implement environmental protection programs in Tribal communities. The goal of the program is to assist Tribes in developing the capacity to manage their own environmental protection programs which are tailored to each Tribe’s individual needs.

COST SHARING OR MATCHING OF FUNDS

The bulk of the funds required for this new landfill are being provided by USDA. Funding to coordinate all work related to the new landfill is through the IGAP program. The CIAP funds will not be used as a matching or cost sharing.


SEC. 27
SEC. 26
SEC. 25
USS 8149
N.A.
ANCSA 14(c)
Lot 1
USS 7954
N.A.
Proposed
Landfill
Proposed Road
to Landfill
Proposed
Bridge
CREEK
KLUTUK
ANCSA 12(a)
Lot 5
Tract C
SEC. 34
SEC. 35
SEC. 36
USS
4878
T9S
T10S
SEC. 3
SEC. 2
SEC. 1
NUSHAGAK RIVER
ANCSA 14(c)
Lot 1
5000' Offset
from Runway
USS
7963
N
Rural
Development
WHPacific
ENGINEERS • ARCHITECTS • SURVEYORS • PLANNERS
PROJECT MAP, SITE 4
PRELIMINARY ENGINEERING REPORT
Ekwok, AK
Ekwok Village Council
Job No.: 5225
Date: 9/26/08
Drawn By: SEC
Checked By: DKR
Figure No.
2

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: New Stuyahok Landfill Improvement Project

PROJECT CONTACT

Contact1: Program Director
Address: P.O. Box 1464, Dillingham, AK 99576
Phone: (907) 842-4370
Fax: (907) 842-2776
Email Address: bbcrsant@nushtel.com

Contact 2: Peter Gumlickpuk
Address: PO Box 136, New Stuyahok, Alaska 99636
Phone: (907) 693-3242
Fax: (907) 693-3241
Email Address: nsigap@starband.net

PROJECT LOCATION

New Stuyahok is located on the west shore of the Nushagak River, between Ekwok and Koliganek. It lies 275 miles southwest of Anchorage, and 43 miles northeast of Dillingham. The community is primarily accessible by air via a 3,800-foot gravel runway, or by boat. Bulk goods are typically barged up the Nushagak River to New Stuyahok. The community has no docking facilities, but a barge loading site is available. Limited travel is achieved during the winter by snowmobile and all-terrain vehicles. The current population is approximately 550.

PROJECT DURATION

This project will be completed over two years.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$57,500	$35,000	$22,500	$0	$0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$57,500	$0	$0	$0	$57,500

PROJECT DESCRIPTION

This project involves the construction of a system to prevent surface water from entering the New Stuyahok landfill and a plan to determine how best to coordinated with other Nushagak River villages to share the cost of backhauling of recyclable materials and hazardous wastes. Both of these actions are aimed at improving conditions at the landfill in order to protect coastal environments.

The New Stuyahok landfill was constructed in 1993 on a hillside, one-third of a mile northwest of town and has a footprint of 2.4 acres (see aerial photo on page 4). It is a trench-and-fill type landfill, with the trench dug into the hill using a bulldozer or backhoe. Waste is placed in one end at the bottom of the trench, compacted and covered with the soil that was excavated during the landfill construction. The landfill is operated by the City with assistance provided through the Indian General Assistance Program.

Two studies focused on improving conditions at the landfill were completed in 2008; the New Stuyahok Integrated Solid Waste Management Plan written by Bristol Environmental and Engineering Services Corporation and the Department of Environmental Health Solid Waste Disposal System Survey written by the Bristol Bay Area Health Corporation. These documents each recommend a series of improvements to local solid waste management practices and the projects listed below following the direction of these plans.

The community landfill is placed on a hillside and during periods of heavy rain, erosion channels form. A gravel berm is required to prevent surface water from entering the landfill (both rain and snowmelt). A stabilized drainage channel will need to be constructed uphill of the berm to divert surface water away from the facility. A surface water collection pond is also needed to collect surface water flowing from the active landfill cell. Ditches lined with gravel and geofabric would be constructed to divert surface water to the pond.

Backhauling, salvaging and recycling are effective means to reduce the amount of solid waste that enters the landfill. In this part of Alaska, transportation costs are very high and year-round shipping of goods in not an option. Approximately half this funding would be to assess various options to coordinate the backhauling of recyclables from New Stuyahok and nearby villages including Ekwok and Koliganek. Working together to book shipping, prepare, package, load and unload material, will reduce the costs for all community and will increase the amount of material that can be recycled.

MEASUREABLE GOALS AND OBJECTIVES

Construct a berm, trenches and storage pond to decrease surface water that runs through the New Stuyahok landfill site and out into the environment. The berm will be approximately 1 foot high and the trench would be approximately 1 foot deep.

Coordinate with other villages to haul recyclable material and hazardous wastes that are diverted from landfills from communities along the Nushagak River.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

Surface water currently runs through the landfill, in to local waterways and into the Nushagak River, potentially carrying contaminants directly to the coastal environment. The construction of a berm will direct surface water flow away from the landfill, keeping the water free from pollution and protecting the coastal environment. Increasing the amount of recyclable material diverted from the landfill will prolong the life of the landfill and prevent other coastal areas from being used as landfill sites.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The project will be coordinated by the Indian General Assistance Program (IGAP) staff in New Stuyahok. The IGAP is funded through the EPA to provide assistants to Tribal governments and intertribal agencies for planning, developing, and establishing the capability to implement environmental protection programs in Tribal communities. The goal of the program is to assist Tribes in developing the capacity to manage their own environmental protection programs which are tailored to each Tribe's individual needs.

COST SHARING OR MATCHING OF FUNDS

CIAP funds will not be used as required cost sharing or matching.


Landfill
New Stuyahok
Nushagak River
1000 ft
500 m
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Report a problem

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

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

PROJECT TITLE: Bristol Bay Coastal Resource Service Area Community Outreach and Education

PROJECT CONTACT

Contact1: Program Director
Address: P.O. Box 1464
Dillingham, AK 99576
Phone: (907) 842-4370
Fax: (907) 842-2776
Email Address: bbcrsant@nushtel.com

PROJECT LOCATION

This project will take place throughout the Bristol Bay Coastal Resource Service Area (CRSA). The Bristol Bay Coastal Resource Service Area is located in Southwestern Alaska on the north shore of Bristol Bay, just above the Alaska Peninsula. The Bristol Bay CRSA has a coastal area of 9,462 square miles, and 984 miles of shoreline. (see map last page).

PROJECT DURATION

This project will be completed over four years.

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$32,000	$8,000	$8,000	$8,000	$8,000

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY07**	**FY08**	**FY09**	**FY10**
$32,000	$0	$0	$0	$32,000

PROJECT DESCRIPTION

The Bristol Bay Coastal Resource Service Area (BBCRSA) Coastal Management Plan is a state and federally adopted Coastal Management Plan. It was last updated and approved in 2003. There are two primary themes in the Bristol Bay CRSA coastal management plan:

1) Subsistence hunting, fishing and other activities are extremely important to the region's residents, and
2) Maintaining healthy fish and wildlife populations and habitat are important for recreation, commercial fishing and subsistence uses.

The BBCRSA Plan addresses eight key issues:

1. **Subsistence:** Competition for fish and wildlife resources has increased since the original CMP was written. Maintaining the availability of these resources for subsistence use is the most important issue for the CRSA.
2. **Fish and Wildlife:** Fish and wildlife are essential to life in Southwest Alaska. Any threat to fish and wildlife availability and habitat is a direct threat to the people of the region.
3. **Oil and Gas:** Oil and gas development has the potential to drastically affect the region and its subsistence resources.
4. **Minerals:** Mineral development could affect anadromous fish streams and could profoundly affect the region's habitat through increased access and population pressure.
5. **Recreation:** Increasing pressure on recreation resources make it necessary to determine the capacity of the region to maintain a high-quality wilderness experience.
6. **Historic and Archaeological Resources:** These resources are spiritually and culturally significant to the region. Undiscovered and undocumented historic sites along waterways, coasts and lakes are vulnerable to increased visitor use.
7. **Settlement and Coastal Development:** There are few efforts to ensure development of private lands to ensure adequate protection of coastal resources and uses.
8. **Social and Cultural Issues:** Development has the potential to adversely affect the unique lifestyle of CRSA residents.

The purpose of this CIAP Project is provide consistent education and outreach to residents of the CRSA to explain the coastal program, the BBCRSA Plan, and how residents can use the plan to protect coastal resources important to them, especially subsistence hunting, fishing and related activities, and, maintaining healthy fish and wildlife populations and habitat.

This funding will allow the BBCRSA to prepare brochures, update and maintain the BBCRSA website, prepare flyers to be posted in villages, and support use of the internet and faxing technology to 'get the word out' and allow better assistance with project permitting. It will allow staff and board members to travel to villages to offer such assistance.

MEASUREABLE GOALS AND OBJECTIVES

1) Keep BBCRSA website maintained; update and refresh at least quarterly. Explore development of a Facebook page for the BBCRSA.

2) Support travel by one-two board members each year to at least one community in the CRSA. Board members will hold a meeting/workshop to teach residents how to use the plan to protect coastal resources.

3) Prepare and distribute new and updated materials each year on the BBCRSA Coastal Management Plan and how it can assist residents.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

The activities outlined for this project are consistent with CIAP Authorized Use 1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetlands.

Residents in coastal areas will understand the BBCRSA Coastal District Program and Plan, and will be able to implement actions in the plan, resulting in the conservation and protection of coastal areas.

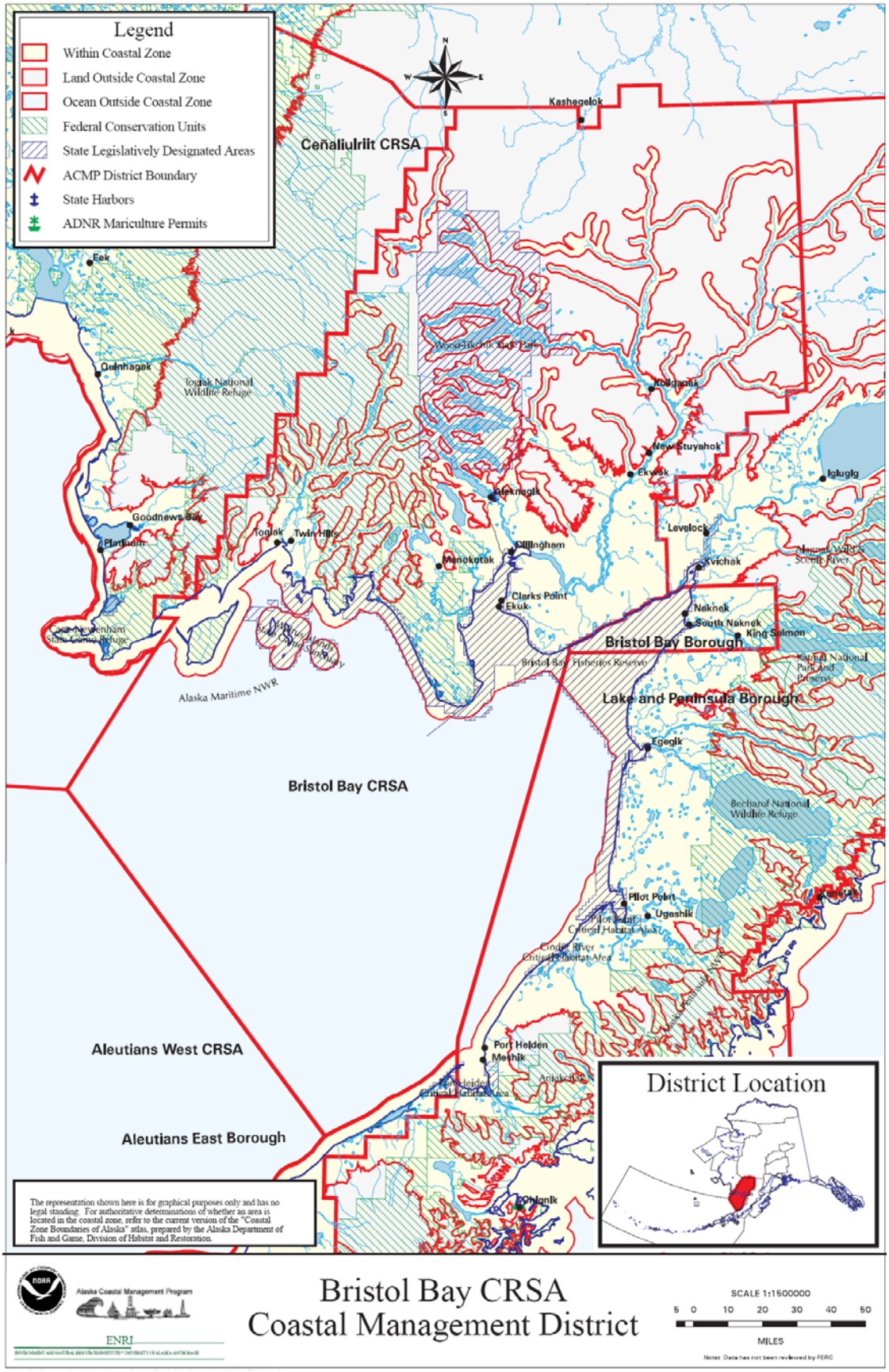
An educated population, with an understanding of their state and federally adopted coastal management plan, will be better coastal stewards and motivated to participate in conservation, protection and restoration of coastal areas.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

There is no coordination with federal resources or programs.

COST SHARING OR MATCHING OF FUNDS

These CIAP will not be used for cost sharing or matching funds.


Legend
Within Coastal Zone
Land Outside Coastal Zone
Ocean Outside Coastal Zone
Federal Conservation Units
State Legislatively Designated Areas
ACMP District Boundary
State Harbors
ADNR Mariculture Permits
Ceñaliulriit CRSA
Kashegelok
Eek
Quinhagak
Togiak National Wildlife Refuge
Goodnews Bay
Platinum
Togiak
Twin Hills
Manokotak
Clarks Point
Ekuk
Dillingham
Koliganek
New Stuyahok
Ekwok
Igiugig
Nleknegik
Levelock
Kvichak
Naknek
South Naknek
King Salmon
Bristol Bay Borough
Bristol Bay Fisheries Reserve
Katmai National Park and Preserve
Lake and Peninsula Borough
Alaska Maritime NWR
Egegik
Bristol Bay CRSA
Becharof National Wildlife Refuge
Pilot Point
Ugashik
Aleutians West CRSA
Port Heiden
Meshik
Aleutians East Borough
Ivanof Bay
Ivanof Bay Critical Habitat Area
Cinder River Critical Habitat Area
Chignik
District Location
The representation shown here is for graphical purposes only and has no legal standing. For authoritative determinations of whether an area is located in the coastal zone, refer to the current version of the "Coastal Zone Boundaries of Alaska" atlas, prepared by the Alaska Department of Fish and Game, Division of Habitat and Restoration.
Alaska Coastal Management Program
ENRI
Bristol Bay CRSA
Coastal Management District
SCALE 1:1500000
5 0 10 20 30 40 50
MILES