CITY & BOROUGH OF YAKUTAT

Brief History: The Yakutat area is strategically located between the Interior and southeast Alaska. The local native people apparently used the area to trade copper, furs, and tanned skins from the Athabaskans for shells, slaves, Haida canoes, and Tsimshian carvings. There is a rich history of multiple Native cultures and languages, including Athabaskan, Eyak, and inland and coastal Tlingit, with influence from the Chugach Eskimo and others. It is not known when the first Native peoples settled in the Yakutat area. Attracted by sea otter hunting, the Russian American Co. built a fort in the area in 1805. The Russians refused to pay for the land they were using and would not allow Tlingits access to their traditional fisheries. As a result, in 1805 the fort was destroyed leaving only a few survivors. Relations with settlers improved and by 1886 the black sand beaches in the area were being mined for gold. In 1903 a sawmill, cannery, store, and railroad were constructed. Most residents moved closer to the cannery inhabiting the current site of Yakutat.

Photo by: Bill Lucey

Pronunciation:	(YACK-uh-tat)
Population (2007):	592
Shoreline:	685 miles
Coastal Area:	2,479 square miles
Annual Precipitation:	132"
Annual Snowfall:	219"
Hours of Daylight Summer:	18 hours, 43 min
Hours of Daylight Winter:	6 hours, 0 min
Regional Native Corporation:	Sealaska Corporation
Legislative District:	5 C


Photo by: Bill Lucey


Photo by: Greg O'Correy-Crowe

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

CITY AND BOROUGH OF YAKUTAT
Yakutat Salmon Board
The Borough will be conducting this project as a legislatively named CIAP recipient on behalf of the State of Alaska

PROJECT TITLE: Yakutat Coastal Restoration and Conservation Education Project

PROJECT CONTACT

Contact Name: Bill Lucey
Address: PO Box 160, Yakutat Alaska, 99689
Telephone Number: (907) 784-3329
Fax Number: (907) 784-3281
Email Address: yakutat_salmon_board@yahoo.com

PROJECT LOCATION
The City and Borough of Yakutat is on the northern coast of the Gulf of Alaska. The Borough encompasses about 9,460 square miles. The borough boundaries are the Canadian border to the north, Cape Suckling to the west, a line just northwest of Cape Fairweather to the east and the Gulf of Alaska to the south. Yakutat Borough is within and surrounded by the Tongass National Forest, Wrangell-St. Elias National Park and Preserve, and Glacier Bay National Park and Preserve.

The Community of Yakutat is about 225 miles northwest of Juneau and 220 miles southeast of Cordova. It is at the mouth of Yakutat Bay, one of the few refuges for vessels along this stretch of coast. The Hubbard and Malaspina Glaciers are nearby and the Bering Glacier, the largest icefield in North America, is in the western part of the borough. About 625 people live in Yakutat, which receives some of the heaviest precipitation in Alaska, averaging 132 inches, much of this falling as snow.

PROJECT DURATION
This project will take three years to complete.

ESTIMATED COST:

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$257,079	85,693	85,693	85,693	#

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY 07**	**FY 08**	**FY 09**	**FY 10**
$257,079				$257,079

PROJECT DESCRIPTION:
The Yakutat Coastal Restoration and Conservation Education Project aims to develop a community-based natural resource and conservation education program for the City of Yakutat. The CCIAP funding will support an educator position to develop the program and three restoration projects.

This three-year project will benefit the natural coastal environment of Yakutat's coastal zone through the development and implementation of a field-oriented conservation curriculum that educates the Yakutat community through projects that result in the protection and restoration of Yakutat's coastal environment. Using actual restoration projects, students completing coursework will have a better understanding of the physical, chemical and biotic processes that create the unique ecology of the Yakutat Coastal Plain. This will prepare a new generation of natural resource professionals able to address constantly shifting conservation issues from marine fisheries to climate change**.** In addition, an educated citizenry will not repeat the mistakes of the past that create the need for restoration in the first place.

In addition to the tangible results of this project, the conservation curriculum developed will become central to the Borough's planned Yakutat Coastal Learning Center (YCLC) *(See Yakutat Coastal Learning Center Strategic Plan, page 11.)* The Center will provide a place for visiting researchers to meet and work, collaborate and share information with the community. Though the YCLC is in its planning phase, the Conservation Education Program will manifest the first tangible component of the center. The Yakutat Schools and the Yakutat Tlingit Tribe will be partners in this effort. The CIAP funded educator will support the YCLC steering committee's planning efforts to develop the Center's business plan and site layout as a secondary duty to creating the education program

The Yakutat Salmon Board, an advisory council to the City and Borough of Yakutat, will coordinate this project. The Executive Director of the Yakutat Salomon Board is an employee of the City and Borough of Yakutat (CBY). The mission of the Yakutat Salmon Board is "to improve and protect watersheds and human communities within Yakutat through restoration, education, research, the promotion of sustainable economic development, and cooperation among all interests, using the collective wisdom and professional and civic actions of our community members."

Position Description
The Conservation Educator will develop and implement the place-based natural resource education program. Implementation of the program will occur immediately, but will also establish the future conservation education curricula provided to the Center. The Conservation Educator will develop and implement the natural resource education program by working with local teachers to provide field-oriented education efforts that highlight and explain ecological processes from the "mountains to the sea". This three-year effort's success depends on teaching, planning and curricula-development.

In the course of this project, the Conservation Educator will:

- Develop and publish curricula for Yakutat specific conservation courses
- Work with partners (ADF&G, USFWS, NMFS, etc) to set up professional outreach for the conservation education program
- Create outreach media in the form of a website and descriptive pamphlets
- Teach a school-based Fish and Wildlife Biology course through which coastal protection and restoration projects will act as a hands-on laboratory.
- Coordinate strategic and operational planning efforts for the operation of the YCLC
- Coordinate the finalization of building designs for the YCLC
- Help develop an ordinance requiring research teams to register their projects with the City and Borough of Yakutat and provide community outreach.

YSB staff will work with the educator to organize lectures and field trips with researchers and provide a conduit for local restoration project hires on projects and generally assist with the above list of deliverables.

This project is of great potential value to the community because Yakutat's economy and way of life are entirely dependent on the area's maritime geography and natural resources. An ongoing public outreach and education program in Yakutat is vital to improving and protecting the local ecosystem. Residents who understand and appreciate the coastal functions and its abundant resources become stronger and wiser conservation stewards.

MEASUREABLE GOALS AND OBJECTIVES:

Goal 1: Increase the protection and restoration of Yakutat's coastal area by promoting conservation stewardship in the community through education.

Objective 1a: Hire a Yakutat Salmon Board educator to develop and implement a place-based natural resource education program and serve as a planner for continuing the development of the Yakutat Coastal Learning Center concept

Objective 1c: Develop and publish curricula for current outreach and short courses on habitat restoration, fisheries management, seafood quality, local effects of climate change, coastal processes, wildlife management, alternative energy and forestry to fit Yakutat's future needs.

Objective 1d: Develop a website describing the program and highlighting projects

Objective 1e: Teach a school based Fish and Wildlife Biology course. Coastal protection and restoration projects will act as a hands-on laboratory.

Goal 2: Increase the Yakutat community's conservation awareness of and support development of the Yakutat Coastal Learning Center.

Objective 2a: Hire a Conservation Educator to serve as a steering committee leader for the Yakutat Coastal Learning Center.

Objective 2b: Finalize building designs for the Yakutat Coastal Learning Center.
Objective 2c: Prepare funding proposals for construction of the Yakutat Coastal Learning Center

Objective 2e: Develop and pass an ordinance requiring research teams to register their projects with the City and Borough of Yakutat's planning department and provide project-specific community outreach.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE:
This project is consistent with CIAP Authorized Use Number 1, "*Projects and activities for the conservation, protection or restoration of coastal areas, including wetlands*". The development, and implementation, of a field-oriented conservation education curriculum will result in the protection and restoration of Yakutat's coastal environment. The development of the Yakutat Coastal Learning Center will benefit the natural coastal environment of Yakutat's coastal zone by educating the general population what responsible natural resource management looks like on the ground.

The CBY believes that informed residents make good conservation stewards. The establishment of a Conservation Education Program will help the community's adults and children to understand and appreciate Yakutat's environment. This increased understanding and appreciation is the essential first step to future protection of Yakutat's coastal environment.

Yakutat's abundant rainfall, mild temperatures, high water table, and gravel substrates make the coastal foreland areas within the borough especially productive spawning and rearing habitats for anadromous fish. All five salmon species (king, sockeye, pink, chum and Coho) are present in the area. The Alaska Department of Fish and Game has identified over 90 anadromous fish streams in the borough. This unique and productive coastal environment is exceedingly rare and in need of conservation to ensure its continued vitality.

The final benefit directly related to conservation education is professional training. The information and coursework provided through the education program will utilize several current projects that protect and restore Yakutat's coastal area CIAP monies will fund a $10,000 restoration project each year. The class will prioritize, select, plan, implement and monitor a restoration or conservation project of their choosing over the course of the school year (see list of project categories at bottom of page)

The YSB runs several watershed restoration projects annually, using local hires and student interns. There is a demonstrated need for employees capable of collecting accurate data therefore training local people in proper scientific methodology will result in a larger hiring pool Below are examples of projects that fall under the category of coastal protection and could be part of the curricula of the Conservation Education's in-school program. They include:

1) Watershed scale pre-commercial thinning - Treating and monitoring effects of second growth thinning continuously measured through groundwater wells and a USGS stream gage. The idea is to track stream flow based on silviculture treatments over time to maintain salmon habitat through perennial flow. There are 15 years of data awaiting analysis.

2) Road decommissioning - Several miles of old logging roads are being decommissioned along a significant salmon river. The roads channel water away from natural channels, trapping salmon and dewatering streams. The educator will use students to create a methodology for mapping and restoring impacted streams throughout the road network in a joint project with the USFS, Yakutat Tlingit tribe and CBY.

3) In a partnership with the USFS, US Fish and Wildlife Service and the AK Department of Fish and Game YSB staff are beginning to plan a multi-year project mapping three hundred stream miles for inclusion into the State Anadromous Waters Catalogue. This work will require GPS field computer skills and GIS analytical capabilities. The staff person will offer a short course on GIS, in the school, that uses current projects as examples.

4) Fish Passage - The YSB has completed 10 anadromous fish passage projects over the past 15 years and is planning to partner on future projects including four additional culvert replacements in a partnership with AK Department of Transportation and the USFS.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS:

The National Marine Mammal Laboratory (NOAA) has been conducting annual research programs in Yakutat, for over a decade, and is supportive of the project. Other federal partners include US Forest Service, which supplies a large portion of YSB's annual budget through RACII funded watershed restoration projects. The US Fish and Wildlife Service is a strong partner, which has funded four projects to date from fish passage to decommissioning historic logging roads affecting coastal salmon streams, and the National Park Service collaborates with ATV planning and a beluga whale project in Disenchantment Bay.

COST SHARING OR MATCHING OF FUNDS:

CIAP Funds will not match other federal projects. Any applications for federal funding will not count the educator's time or deliverables toward the match.

There is an ongoing capacity and planning process for the Yakutat Coastal Learning Center funded through the National Forest Foundation with funding from the Gordon and Betty Moore Foundation of $20K.

The CBY supports the efforts of the YSB by paying for the salary and benefits of the YSB Executive Director, providing an office, computers, software, internet, trucks, boats and scientific equipment. The Conservation Educator will be able to take advantage of this existing support.

The CBY has donated waterfront property and a dock for a building site for the Yakutat Coastal Learning Center. Universities and research institutes that have been working in the Yakutat area also support the Community Center. Past letters of support from Harbor Branch Oceanographic Institute at the Florida Atlantic University, the NOAA National Marine Mammal Laboratory and Jean-Michel Cousteau's Ocean Future's Society are included with this application.


2 1:20PM

City and Borough of Yakutat
P.O. Box 160
Yakutat, Alaska 99689
Ph: (907) 784-3323
Fax: (907) 784-3281

RESOLUTION: 10-156

A resolution in support of and in request for $237,000 from the State of Alaska, Department of Commerce, Community and Economic Development, Office of Economic Development, 2010 Coastal Community Impact Assistance Program; and Science Development and Education Program

WHEREAS, the City and Borough is a municipal governmental unit and is located within the Yakutat Coastal District, and

WHEREAS, the 2010 Coastal Community Impact Assistance Program provides assistance for mitigating damage to wildlife and protecting coastal areas, and

WHEREAS, the citizens of Yakutat passed a voter initiative to pursue the creation of a community science center to drive research, education and outreach activities within the borough, and

WHEREAS, the City and Borough of Yakutat, has actively engaged in research and management of marine mammals within the borough boundaries in order to ensure successful management of this resource, and.

WHEREAS, the project will focus on the educational component of the center bringing local applied science and coursework to the school district of Yakutat, and

WHEREAS, discussion with the school superintendant indicated the desire to include Fish and Wildlife Biology as an elective

NOW, THEREFORE BE IT RESOLVED THAT the Science Development and Education Project will meet some of the requirements in the draft strategic plan

BE IT FURTHER RESOLVED THAT the City and Borough of Yakutat fully endorses Science Development and Education Project, and respectfully requests, $237,000 from the 2010 Coastal Community Impact Assistance Program towards the completion of the project.

BE IT FURTHER RESOLVED THAT the Borough Manager of the City and Borough of Yakutat is hereby authorized to negotiate and execute any and all documents required for granting and managing funds on behalf of the City and Borough of Yakutat. The Borough Manager is also authorized to execute subsequent amendments to said grant agreement to provide for adjustments to the project within the scope of services or tasks, based upon the needs of the project.

BE IT FURTHER RESOLVED THAT the City and Borough of Yakutat guarantees successful and timely completion of the project to the satisfaction of the State of Alaska, Department of Commerce, Community and Economic Development, Office of Economic Development.

CERTIFICATION

I, the undersigned, Borough Clerk of the City and Borough of Yakutat, do hereby certify that the Borough Assembly, which is composed of 7 members, of whom 4 constitutes a quorum, were present at a meeting held on 15th day of April 2010 and 5 member(s) voted YES and 0 member(s) voted NO and 1 member(s) were absent.

Signed By: _____
Mayor, City and Borough of Yakutat

Date: _____

Asst.By: _____
Borough Clerk

Date: April 16, 10

CITY AND BOROUGH OF YAKUTAT CORPORATE SEAL ALASKA SEPTEMBER 22, 1992

HARBOR BRANCH
FLORIDA ATLANTIC UNIVERSITY
Ocean Science for a Better World™

Greg O'Corry-Crowe, Ph.D.
Associate Research professor/program leader
Molecular and Behavioral Ecology program
Harbor Branch Oceanographic institute
Florida Atlantic University
5600 U.S. 1. North, Fort Pierce, FL34946

Jill Davis, Grants Administrator
Division of Community Advocacy
Department of Commerce, Community, and Economic Development
211 Cushman Street
Fairbanks, AK 99701-4639
Phone: (907) 451-2717; Fax: 451-2742
e-mail: Jill.Davis@alaska.gov

Dear Jill,

I'm writing to you in regard to the recent Community Block Development Grant proposal that you received from the City and Borough of Yakutat to fund a Community Science Center.

As a marine scientist who has had the fortune of working with the Yakutat community on a long-term study of beluga whales in Yakutat Bay I strongly support the community's plans for a community science center and recommend that your agency fund this worthy and viable endeavor. I believe I also speak for my Institute, a world leading oceanographic institution, in encouraging your support for the Center.

Over the past 15 years I have worked on several marine mammal research studies across the arctic and northern temperate regions of the world, first as a post-doc and group leader with the National Marine Fisheries Service' lab in La Jolla, California, and more recently as a program leader at Harbor Branch Oceanographic Institute in Florida. A key element of our research over the past 15 years has been collaborations with coastal communities, and Alaska Native coastal communities in particular, on applied studies relating to marine mammal management and conservation. In 2004, we initiated a long-term study on beluga whales in Yakutat with the community that is based on the principle of building a lasting investment in marine science and conservation by working with local scientists, Tribal leaders, educators and the broader community.

Since the inception of this study, I have come to know and appreciate the rare opportunities the Yakutat area and entire Gulf coast region offer for meaningful research, learning and education. Yakutat Bay, in many ways is a 'natural laboratory', a dynamic terrestrial and marine system

where major physical and biological processes occur on very large scales over relatively short time frames. The constant advance and retreat of the Hubbard and Turner glaciers is known to all, but many other less-publicized and even less-understood processes are constantly in flux waiting to be investigated and understood. While the area is large enough to accommodate these dynamic systems, it is not so large as to be intractable scientifically and logistically. The latter is due in large part to the strategic location of the city of Yakutat and the foresight of the community with regard to the importance of scientific endeavor.

While I have experienced widespread interest within the Yakutat community in learning more about the forces that dominate the environment, as well as a concern about the health of the region's ecosystems, the facilities are currently not available for science education and outreach or for visiting scientists to stage community-based research projects and participate in educational and instructional programs. To often in these situations research scientists visit from out of town for a brief period in the summer, barely staying long enough in town to get to know the community let alone impart their knowledge.

The concept of a community science center would change all that. Such a center in Yakutat would serve as a resource for the entire Gulf coast from Prince William Sound to Glacier Bay. Harbor Branch Oceanographic Institute is a strong supporter of marine science and education in Alaska and sees the Yakutat Community Science Center as the key element in furthering these goals in the most appropriate and enduring way, that of investment in communities most connected to the ocean. Your agency's funding of the planning and design of this center is the first step forward.

Yours sincerely,

_____

Greg O'Corry-Crowe, Ph.D.

February 25, 2008

Jill Davis, Grants Administrator
Division of Community Advocacy
Department of Commerce, Community, and Economic Development
211 Cushman Street
Fairbanks, AK 99701-4639

Dear Ms. Davis,

I am writing on behalf of the grant proposal for the Community Development Block Grant submitted by Bill Lucey of The City and Borough of Yakutat. I support the community's desire to build the Yakutat Community Science Center and applaud their efforts in seeking funding support to get the project started.

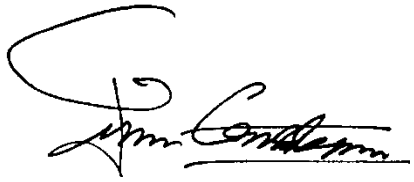
My father, Jacques Yves Cousteau used to say; "People protect what they love;" but how can we protect what we do not fully understand? The Yakutat Community Science Center will be the perfect facility to provide valuable educational and scientific opportunities, as well as provide outreach programs to educate the local community members about the rich and diverse ecosystems that comprise Yakutat Bay. This will not only benefit the local community but the growing tourist industry of Yakutat.

My team and myself have been involved in marine education for over 30 years. I have come to appreciate the need for environmental education programs that are both scientifically valid and tangible to the participants' everyday life. The underwater world provides perfect learning opportunities to teach biological and ecological sciences and how they relate to ecosystem sustainability. This approach provides tangible lessons, taught first and foremost by nature on how ecology functions in a sustainable manner. These lessons can then be directly applied to each individual's own life. One has to feel emotionally connected to nature to want to learn more about it, and most importantly to protect it.

Ocean Futures Society believes that environmental education should emphasize the need to be better stewards of natural resources and teach us how we can live more sustainably on the planet. Our *Ambassadors of the Environment* program is dedicated to creating and nourishing a new perspective for humankind's relationship to its surroundings by focusing on lifestyles that do not undermine the vitality of the planet's life support system. The Yakutat Science Center will inspire a sense of hope and optimism in the youth and provide knowledge and tools to help them take positive action.

I congratulate the community of Yakutat in taking steps toward developing their own science center. I hope the Department of Commerce considers their grant proposal and awards them with the funds needed to commence this project. I look forward to future collaboration with the City and Borough of Yakutat and the Yakutat Tlingit Tribe in implementing this unique, effective and enriching marine education program.

Sincerely,



Jean-Michel Cousteau

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
ALASKA FISHERIES SCIENCE CENTER
NATIONAL MARINE MAMMAL LABORATORY
7600 Sand Point Way NE, Bin C15700
Seattle, Washington 98115-0070
TEL: (206) 526-4045 FAX: (206) 526-6615
E-MAIL (Internet): John.Bengtson@noaa.gov
17 March 2008

Ms. Jill Davis, Grants Administrator
Division of Community Advocacy
Department of Commerce, Community, and Economic Development
211 Cushman Street
Fairbanks, AK 99701-4639

Dear Ms. Davis,

I am writing in support of the proposal for a Community Development Block Grant submitted by The City and Borough of Yakutat. I support the community's effort to build a science center because it would help to build needed infrastructure in Yakutat as well as promoting our own efforts to better understand the marine ecosystem, particularly marine mammals, in the greater Yakutat area. From a broad perspective, Yakutat's effort to support local research would help build diverse ties between scientists and a community that stands to gain much from knowledge about their environment.

Since 2002, the National Marine Mammal Laboratory (NMML) has been conducting research on harbor seal populations inhabiting the glacial fjords near Yakutat. Our annual studies since then stem from of a commitment to addressing the concerns of the community regarding suspected declines in the seal population. To that end, NMML has been studying the environmental factors affecting ice-hauling seals during pupping and molting in Disenchantment Bay and nearby Icy Bay, the largest harbor seal haul out in the world. Our researchers have learned much about the responses of harbor seals to anthropogenic disturbance, and well as details of seal behavior and distribution. We are still seeking answers to questions about trends in abundance and other measures that will help us to assess the long-term health of the seal population. It would certainly facilitate current and future research efforts to have a center that could serve as a logistic base to use for office space, storage, and field preparations.

During the course of our research near Yakutat, NMML has involved the community by employing student interns in our projects. By getting hands-on experience participating in actual research and collecting real data, high school students have learned valuable lessons about environmental stewardship. What better way to teach about conservation than having the community itself involved in learning about the natural world on which it depends? A science center would encourage even greater community involvement by providing a space for scientists to interact with local persons, give presentations, and showcase research – in essence being more accessible and thus further engage the community about important environmental issues.

We look forward to continuing our collaboration with the City of Yakutat and the Yakutat Tlingit Tribe and together fostering a better understanding of the environment. I applaud the foresight of the Yakutat community in supporting local scientific research by seeking to develop its own science center. The more we know as community leaders, as citizens, and as scientists, the better we can direct our efforts to protect what is most important.

I encourage you to consider favorably Yakutat's proposal and to support their efforts to establish a science center. It will promote future research, foster education, and uphold a dialogue between scientists, managers, and the community.

Sincerely,

John L. Bengtson, Director
National Marine Mammal Laboratory

Yakutat Center for Culture and Science
Yak-tat Yan Shuka At.woosku'
Strategic Plan

2009

Table of Contents

Foreword

To be written by the Chair of the Board of Directors
or Steering Committee.

Mission

Bring together the knowledge of past and present relationships between culture and the natural environment by bringing home repatriated art and using this connection to inspire education and research projects that provide information on the current ecosystem upon which the economy and culture of Yakutat can thrive.

**Yak-tat Yan Shuka At.woosku' - learning about Yakutat while camping on the beach*

Vision

We envision a gathering place that promotes learning and creative thought where the center functions as a key player by coordinating local scientific inquiry and preserving cultural knowledge. The foundation for obtaining this knowledge will lie upon a collection of repatriated work of the past inhabitants of the Yakutat area. YCCS will incorporate these cultural relationships to direct and solve complex environmental issues related to scientific questions posed by local people.

YCCS participants will collaborate widely to be at the forefront on the scientific projects and will ensure information disseminates throughout the community. Education will occur on multiple levels that will encompass and engage minds of all ages.

This document will guide and inspire the YCCS and all of its constituencies to their full potential in the search for solutions and understanding of the Yakutat region using the knowledge of the past and science of the future.

Introduction

Yakutat is located along an isolated coastline in the northern panhandle of Southeast Alaska. The borough boundaries extend for 167 miles along the northern Gulf of Alaska encompassing the clan boundaries of the original Yakutat people. The region is a giant canvas of geologic process; surging glaciers, ragged mountains and giant fault lines. With the exception of Yakutat and Icy Bays, this coastline is exposed to the open ocean of the Gulf of Alaska. Several glacial rivers run to the sea where the California current deposits these river born sediments creating over 150 miles of sandy beaches. The majority of the land surrounding the city is federal land. It lays within Wrangell St. Elias national Park to the West, Glacier Bay National Park to the East, Russell Fiord Wilderness and Canadian Kluane National Park to the North and the village itself nestled in 1.2 million acres of Tongass National Forest. The St Elias Coastal Range is the highest in the world, the Piedmont Malaspina Glacier on the far side of Yakutat bay is the largest of its kind and the surging Hubbard Glacier, at the head of the bay is North America's longest tidewater glacier. In short, Yakutat is located in one of the world's largest intact ecosystems creating an ideal laboratory to study how nature works with the role of historic and present people within this vast land.

The Yakutat Center for Culture and Science would provide a centralized access for researchers to study these remote locations. An emphasis on studying natural resources, marine environments and geological processes is essential to individuals who live and work in the Yakutat area. Fishing is the base of Yakutat's economy with the highest per capita permit holding in the State. The system is dynamic and habitat constantly changes through various ecological processes and human activities. Conducting extensive research in and around Yakutat will benefit the greater good by collaborating with other regions that are experiencing these same environmental issues and changes.

To the North the Prince William Sound Science Center has been engaged in community research, specifically fisheries, nearly twenty years with a great amount of success. Building on their model and incorporating a museum and cultural component strengthens the role of the center. The two science centers would be able to collaborate and establish a larger network within the state of Alaska.

Background

In 1986 and 2000, scientists set up a base in Yakutat to study the Hubbard Glacier as it was advancing and getting increasingly close to closing the seaward entrance to the Russell Fjord. The 2000 Hubbard Glacier research team consisted of approximately six researchers who would go into the field and then operate as best as they could from their hotel rooms or the Forest Service bunkhouses. Along with the Hubbard Glacier work, Harbor Seal, Sockeye Salmon, Coho Salmon, Dogfish, Eulachon, and various other investigations began increasing the scientific researcher traffic in Yakutat. This situation spurred on the idea of creating a community science center that visiting researchers could utilize to enhance their research capabilities.

In 2007, the City and Borough of Yakutat held a special meeting on Alaska Day to explore the options for planning a community science center. During the meeting there were several possible sites up for discussion, but quickly narrowed down to a site that locals call, "Little Dock". Little Dock is city owned property, but over the years has been leased out to private industry. The most recent business at Little Dock was a fish packing company and many of the structures used in that operation are still standing, but not all are functional.

The implementation of a cultural and science center has potential for a broad range of successes. The center's purpose would include not only display of artifacts and research of local ecological issues, but education both formal K-12 and community-based. The center would employ outreach to involve citizen science, and to meet the community's specific scientific needs. Finally, cultural displays, theatre, artist workspace and library are a catalyst for centering the growing demand of cultural tourism.

Values

- We value the coastal, marine and river system environments that provide our community with valuable learning experiences, a way of life and recreation.
- We value the past and present culture existing in this complex ecosystem as cherished and important asset.
- We value the significance of local and traditional ecological knowledge and believe that education is paramount to continued vitality of our natural environment.

Summary of Focus Areas

Yakutat is unique. The natural and cultural world specific to Yakutat are virtually untapped as a commodity outside of sport angling and commercial fishing. Reliance on the fishery resource alone creates a boom and bust economy ebbing and flowing with fluid markets and variable runs. The next section will discuss five focal areas that will diversify the economy, knowledge and focus of the community.

Cultural

The following outlined is paraphrased from the 1994 Museum planning effort lead by the Yakutat Tlingit Tribe.

1. To provide a means for understanding and appreciating the Traditional Yakutat Tlingit culture

2. Establish a permanent historic and cultural preservation committee …

3. To identify and Evaluate Traditional Cultural Practices
4. Assemble and retain in a preservation library the documented history of the Yakutat Tlingit people.
5. Establish an appropriate depository system for cultural information.
6. Develop and conduct programs that educate the community to the importance of preservation of the Yakutat Tlingit culture.
7. Develop a comprehensive inventory of the historic and cultural buildings, sites, structures, and objects within the Yakutat community.

Research

Research collaboration and information dissemination is a community priority. Of particular concern are questions pertaining to the commercial fishing industry. There are currently three glacier studies underway; Icy Bay, Hubbard and the Yakutat glacier.

A project that is new to Yakutat is biomass cultivation. Currently there is a focus group meeting weekly to plan a biomass project. The YCCS could assist in this project by providing research and data pertaining to growth analysis, harvest cycles and quantities needed to sustain the community's energy needs.

A community survey conducted in 2007 resulted in a list of questions/projects important to Yakutat's people. The list is attached to the end of the document.

Education

With any program, education is an element that is fundamental to the successes of future generations. The intent is to provide formal and informal education in a place-based format. This idea is captured in the phrase "Yak-tat Yan Shuka At.woosku'" where information passes to younger generations around a campfire. The YCCS plans to create and implement a K-12 curriculum in tandem with the Yakutat School District that empowers our youth to make a difference in our community. Programming that allows high school students to work hand in hand with scientists allows greater understanding and encouragement of new careers for our young people.

Community-based education is a goal of the YCCS giving community members an active role in understanding and working in our ecosystem. Incorporating a community-based research program, putting science in the hands of our community members furthers our mission, strengthens our town and gathers much needed data that otherwise would remain in the realm of universities and agencies.

Outreach

Outreach is crucial to the success of a community center. Staff will be responsible for relaying cultural and scientific information to the community and visitors. Further sharing occurs between other communities and scientific agencies strengthening regional knowledge and ultimately globally. In addition to interagency collaboration, each research project will consult with community members; gathering local and traditional ecological knowledge furthering our understanding of what already exists in people's minds. The visitor's center that will be a part of the YCCS would have an historical/cultural museum housing artifacts, cultural activities, local artwork, and a gift shop selling handmade items. The visitor's center will be open to the public with set hours and staff will be available to answer questions.

The YCCS will create and manage a website that encompasses all current and past projects with photographs and any relative documentation. The website will stay current with the active Board of Directors and their contact information in addition to all staff members.

Restoration

Restoration projects have been ongoing for the past decade focused on forest and fish habitat restoration. These projects have made improvements to the salmon streams and forests while bolstering the local economy and hiring local people to do the restoration work. Some of these projects have included; road decommissioning, tree thinning, beach cleanup and trail maintenance. These projects incorporate further our values as local people who obtain firsthand knowledge of the environment. By diffusion, the work they do is shared with friends and family. The YCCS would continue to support these operations and expand upon them as needed.

Program Goals, Objectives and Strategic Plans:

Overarching Goals and Objectives

Our commitment to repatriation of artifacts and scientific research is at the hub of our operations but it is by no means the only objective. Providing a research center will allow for other needs to occur in tandem with scientific pursuits including; education, outreach and restoration.

Comparative Advantages

The YCCS rests in a unique environment that offers unlimited research opportunities. The geographical location created a nexus of trading that melded several cultures of indigenous peoples. The economic mainstays of historic and current Yakutat are reliant upon the natural resources throughout the Borough. These resources are subject to environmental changes and fluctuations that must be understood for the town's continued sustenance.

Museum Strategic Plan - Pending YTT

Research Strategic Plan

- **Vigorous research applied on all approved scientific inquiries**
  - Researchers will make recommendations for specific research equipment
  - YCCS Staff will seek grant funding as needed
- **Research priorities will be decided by the community members sitting on the Board of Directors**
- **Incorporation of Local Ecological Knowledge (LEK) and Traditional Ecological Knowledge (TEK) in all research quests**
  - Native perspectives will be part of all research

Education Strategic Plan

Education Objectives:

- **Formal and informal education occurring year-round**
  - Curriculum designed for K-12 students
  - Community-based education program implemented with quarterly activities based on community's interests/needs
- **Community projects that allow citizens to experience the unique environment in which we live**
  - Citizen monitoring programs

Outreach Strategic Plan

- **Community involvement in all aspects of YCCS's projects**
  - Community members on YCCS's board of directors
  - Community Forum opportunities quarterly
- **Partnerships with various agencies statewide and nationally**

- Researchers required to present reports to scientific communities
- Board staff will re-evaluate partnerships annually

- **YCCS will be generating revenue within 10 years**
  - Board will create a subcommittee to address revenue generating opportunities
  - The addition of a culturally centered gift shop will be pursued
  - Economic demographics of the City and Borough of Yakutat will be considered annually

Restoration Strategic Plan

- **YCCS will improve Yakutat's ecosystem with best practices techniques**
  - Fish passage up to current standards
  - Improved channel function
  - Improved Forest Stands
  - Improved Road Network

2010 Goals:

- Create Board of Directors through the steering committee process to guide the YCCS with a holistic approach to meet community needs.
- Form 501c3 or house within the borough structure
- Secure grant funding from State and Federal sources
- Develop blue prints for new building.

Restoration

Goal	Strategy	Activities	Background	Outcomes
Through combined efforts of Kwaan, Forest Service, Fish and Game and City and Borough of Yakutat; create project list of restoration projects.	Implement project priority requirements based on need and intensity of project.	Center staff compiles all information from various entities and supports facilitating meetings initially with groups gathering information then compiles report for final decision to be made by the Board of Directors.	Restoration projects have been completed/in progress with the YSB including Ophir Creek Restoration Project, road decommissioning, fish passage and tree thinning projects.	Teamwork among stakeholders will identify critical restorations needs in the Borough. Measure: Project list will be complete in 2014. Measure: Work on projects identified will begin field season 2015.
Improve the environment of the Yakutat area through science-based restoration practices.	Develop strategies designed to improve the environment based off of the priority list which is approved by the Board of Directors. Support the up to date research that applies to restoration projects.	Center will collect necessary data to monitor restoration efforts. Center will engage in scientific research findings that pertain to each identified project.		The Yakutat area will see improvements in water, air, and soil health by 2020 based off of collected data from various restoration projects. Measure: Data will be used to support the improvement of water, air and soil quality in the Yakutat area. Measure: Center will have opportunity to write a case study on practices employed on restoration projects in Yakutat.

Education

Goal	Strategy	Activities	Background	Outcomes
Increase student expose to scientific research.	Create K-12 curriculum. Offer summer internship positions for teens at the center.	Support science activities at the school district. Collaborate with school district.	YSB has done classroom projects with school district involving the Northern Pike assessment and also Coho incubation. YSB has also worked with High School Honor Society to do interpretive trail work in previous years.	Students become proficient in scientific methods. Measure: Science Club formed at school. Measure: Local students pursue science degrees.
Increase community-based education regarding significant environmental issues.	Provide opportunities for citizens to access information at the center. Offer community interest workshops.	Promote citizen science training/workshops. Create quarterly community science events.	None	Increased understanding of the significance of environmental issues in Yakutat. Citizens will ask more research questions. Measure: Participation in citizen science programs. That increases in participation each year. Measure: Participation in quarterly environmental education events.

Outreach

Goal	Strategy	Activities	Background	Outcomes
Collaborating with local, state, national and international groups and agencies.	Require all science in the City and Borough of Yakutat to contact and work though the YBSC.	Admin staff coordinates with researchers to plan their stay and schedule time and space in lab. Staff at Center will set up meeting for scientific presentations.	Currently all scientific research that occurs in the area is not reported back to the community.	Citizens are informed of research in the area and can make informed choices through leadership. Measure: Citizens participate in talks given by traveling researchers. Measure: Researchers from a variety of sources seek out the Center to do research.
Keep an update and accurate website reflecting projects and happenings associated with the YCCS	Use college and high school students' talent in managing website.	Promote and advertise intern positions for website development. Staff and researchers provide information to admin personnel to keep current on all projects	None	Information reaches public. Measure: Citizens call and stop in the center to ask questions regarding various projects. Measure: Number of visitors to website increases yearly.

Research

Goal	Strategy	Activities	Background	Outcomes
Research projects identified that have direct impact to community needs.	Gather necessary funding. Create schedule of importance based on public input.	Assign grant writing responsibilities to Director of the center. Use Board of Directors to finalize research projects and priorities.	YSB conducted climate survey top three items to research are:	Ongoing pursuit of knowledge occurs. Measure: Data collected is added to database so each year's information can be analyzed.
Use of Traditional and Local Ecological Knowledge on all projects.	Creating and implementing processes that are applied to all projects. Tribal representation on Board of Directors.	Partnerships with YTT used to identify individuals who have traditional information that would assist particular projects.	Limited use of TEK and LEK has been applied to research in the area.	Research projects are given a holistic and unbiased approach. Measure: Documented information in reports with information received from local elders.
Research new fisheries	Identify potential fisheries. Gather known data.	Search for funding and research partners to conduct bio-assessments.	Getting agencies to put resources towards community priorities has been difficult and slow.	New fishery openings.

Potential Staffing at Center

Position	Director	Outreach Coordinator Curator	Marine Biologist	Fish & Wildlife Biologist	Finance Officer	Facilities Maintenance	Seasonal Crews
Duties	• Overall organization • Grant Fundraising • CQE administration	• K-12 Curriculum • Community Presentations • Museum Displays	• Oceanographic Monitoring • Marine Fisheries • Shellfish • Assist in appropriate Center Projects • Marine Debris Organization	• Forestry • Salmon • Subsistence • Stream • Restoration • Assist in appropriate Center Projects	• Grant writing • Budget • Reception	• Up keep of all buildings on premise	• Work on various projects: Education Restoration Research Museum Displays
FTE	1 FTE Dependent on successful grant funding CQE lease sales	1 FTE Dependent on grant funding Museum fees	1 FTE Dependent on grant funding Possible cruise ship funding Support from NOAA Marine advisory program U of Alaska	1 FTE Dependent on grant funding CBY Fish Tax Ocean cape Interest	1 FTE Dependent on grant funding Current CBY and YTT accountants	1 FTE Dependent on grant funding Fees paid by visiting researchers	10+ FTE for field season depending on project load

Activity	*Match*	*Funding Request*	*Total Cost*
Planning	10,000	80,000	90,000
Property*	1,200,000	0	1,200,000
Site Preparation	10,000	90,000	100,000
Building Construction	0	800,000	800,000
Warehouse Construction	0	200,000	100,000
Office Set up and Supply	5,000	50,000	55,000
Utilities (annual)	10,000	10,000	20,000
Maintenance (annual)	0	20,000	20,000
Museum Climate Control	0	200,000	200,000
Museum displays	0	300,000	200,000
Retaining wall	0	35,000	35,00
Subtotals			
Project Start-up	**1,285,000**	**2,100,000**	**3,385,000**
***Waterfront property donated by CBY estimated value**			
Total request from state =	**2,100,000**		

Appendices:

Appendix A: Through community surveys, and comments at public meetings there has been a list generated for applied research projects of need. This list includes, but not limited to the following:

1.) Analyze dogfish biomass for directed fishery
2.) Initiate Community Quota Entity to lease black cod and halibut IFQ's to local fishermen
3.) Analyze skate biomass for directed fishery
4.) Crab population monitoring and potential for restocking
5.) Create a sea otter management plan for Yakutat Bay
6.) Calculate herring biomass to see if a pound fishery is possible
7.) Initiate a Local Area Management Plan for halibut harvest
8.) Track seasonal halibut and Ling Cod movement in and out of Yakutat Bay
9.) Inventory stream flows and create habitat models for coho rearing potential
10.) Investigate beaver density and salmon rearing potential
11.) Take a census of shellfish population and investigate opportunities to restock beds
12.) Support oyster aquaculture program
13.) Investigate scallop aquaculture potential
14.) Energy modeling disturbance of seal pups by cruise ship traffic.
15.) Acoustic monitoring of vessel traffic and effects on cetaceans and pinnipeds
16.) Hubbard Glacier advancement
17.) Orca and humpback ecology/genetics
18.) Geologic processes of uplift and deglaciation
19.) Contaminant baseline analysis in rivers and bay
20.) Marine debris cleanups and analysis
21.) Determine pacific cod biomass
22.) Hydroacoustic surveys of forage fish in Yakutat and Disenchantment Bay
23.) Salmon genetics for analyzing intercept fisheries
24.) Restoration of forest canopy
25.) Investigate willow biomass for electrical generation and moose browse
26.) Determine bear populations and range patterns
27.) Analyze deer genetics to see if there is bottlenecking keeping population low
28.) Place tide gage and ocean monitoring equipment from Weather Service at the little dock
29.) Put an ocean observer buoy at the head of Yakutat Bay

Education Programs:

1. Sawmill operation
2. GIS mapping and surveying
3. Fish handling
4. Chainsaw maintenance
5. Ornithology

Cultural Programs:

1. Seal camp
2. Skin sewing
3. Carving

Yakutat Center for Culture and Science

Steering Committee

Sam Demmert - Commercial Fisherman

Rosemary Ryman - Yakutat School District Administration

Casey Havens – CEO and President Yak-Tat Kwaan

Tom Faverty – School Teacher

Mary Ann Porter – Environmental Director Yakutat Tlingit tribe

Brian Marston – Area Management Biologist - ADF&G

Judy Ramos – Realty Office Yakutat Tlingit Tribe

Jacquelyn Ashwell – National Park Service - Wrangell St Elias National Park

Dora Jacobson - Yakutat Assembly - Business owner

Dave Negus – Commercial fisherman

Jack Endicott - NOAA - Head of Yakutat Weather Service

Lee Benson - Yakutat District Ranger

Bill Lucey – City Biologist - Coastal Planner

STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM

CITY AND BOROUGH OF YAKUTAT

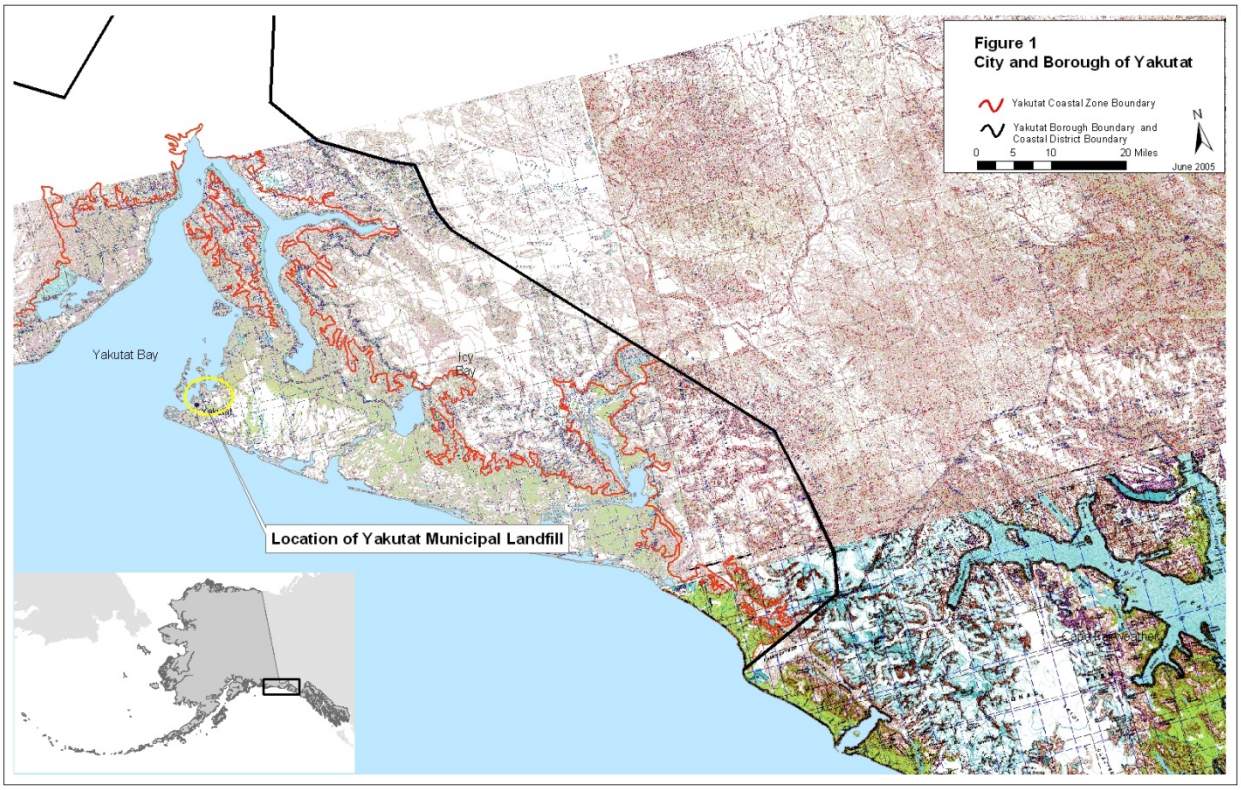
The Borough will be conducting this project as a legislatively named CIAP recipient on behalf of the State of Alaska

PROJECT TITLE: Yakutat Waste Management and Recycling Program

PROJECT CONTACT

Contact Name: Skip Ryman
Address: Po Box 160 Yakutat, AK 99689
Telephone Number: (907) 784-3323
Fax Number: (907) 784-3281
Email Address: sryman@yakutatak.us

PROJECT LOCATION



PROJECT DURATION

One year

ESTIMATED COST

Spending Estimate ($)				
TOTAL	**Year 1**	**Year 2**	**Year 3**	**Year 3.5**
257,000	257,000	0	0	0

Funding per Allocation Year of CIAP ($)				
TOTAL	**FY 07**	**FY 08**	**FY 09**	**FY 10**
257,000	0	0	0	257,000

PROJECT DESCRIPTION

The goal of the Yakutat Waste Management and Recycling Project is to enhance recycling and overall waste management efforts in Yakutat. The 2006 Yakutat Solid Waste Management Plan identified the following community and environmental challenges and health risks at the Yakutat landfill:

•The landfill is nearing capacity;
•Some facilities exist for recycling and hazardous waste management but improvements are needed;
•Smoke and odor produced by burning at the landfill bothers residents and is a potential risk to public health;
•Annual marine debris cleanups bring five to ten tons of platic waste to the landfill
•Local bears use the landfill as a primary food resource.

The City and Borough of Yakutat has been working steadily on improving solid waste management, but funding is required to be able to implement many of the recommendations of the Solid Waste Management Plan. Improving solid waste management, recycling and hazardous waste practices are vital to protecting, preserving and restoring the coastal area, removing marine debris from local beaches is vital to fish and wildlife health. As the landfill is located less than a mile from residences and just over a mile from the school, this project is very important to the community.

The landfill site is not permitted by the Alaska Department of Environmental Conservation (ADEC). The improvements that this CIAP project will fund will help the community to obtain this required permit.

The City dump staff worked with ADF&G in 2009 to experiment with bear deterrent technology. Several bears were radio collared to analyze movement back and forth to the dump before and after various electroshocking experiments. The ADEC has been working with the City and the Yakutat Tlingit Tribe to bring the landfill up to state standards

MEASUREABLE GOALS AND OBJECTIVES

1.Recycling Program
Initiate a pilot project using plastic waste processor designed for the US Navy and modified for small rural community waste management.

2.Bear Management
Removal of plastics will allow for composting efforts. Electric fence is installed to deter bears

3.Develop a program to educate residents about recycling and waste management and to encourage participation.

5.Obtain a Class 3 Landfill permit from ADEC.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE

This project is consistent with authorized use #1, *Projects and activies for the conservation, protection, or restoration of coastal areas, including wetlands*. Cleaning up the Yakutat landfill through the implementation of a recycling program and improved bear managemnt will benefit the natural coastal environment and enhance safety.

The Yakutat landfill is a potential source for contamination of Ophir Creek, a class I salmon stream, which receives groundwater from the surrounding area. Improvements at the landfill will protect Ophir Creek from associated contaminants. Smoke from refuse fires can travel into residential and school areas creating health problems and contaminating the surrounding forest and soils. While burning has been curtailed in recent years, the cost of diesel to run equipment, intense bear presence and diminishing landfill space necessitates occasional burning. Increased recycling will further reduce the need to burn, protecting surrounding coastal areas from associated contamination.

Aggressivbe bears have historically create a public safety concern in Yakatat. For public safety purposes, bears are regularly shot when they become aggressive. This occurs when they are denied access to garbage through burning or hazing. Many are shot in town attempting to break into houses. Over two dozen coastal brown bears have been killed in the past four years because of aggression or injuries sustained at the dump. Increased recycling and improved bear management at the landfill will reduce the landfill's attraction for bears. This will enhance human safety without jeoprodizing the safety of the bears.

The regular cleanup of plastic marine debris reduces risks to fish and wildlife through ingestion and entanglements.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS

The City and Borough is working cooperatively with the federally recognized Yakutat Tlingit Tribe (YTT). The EPA funded environmental program staff at YTT are working concurrently on EPA funding for the recycling education program and one steel shipping container. There is an

additional EPA solid waste grant due in May that may further defray the costs for purchasing bear proof dumpsters.

COST SHARING OR MATCHING OF FUNDS

At this time, there are no plans to use these funds for cost sharing.

City and Borough of Yakutat
P.O. Box 160
Yakutat, Alaska 99689
Ph: (907) 784-3323
Fax: (907) 784-3281

RESOLUTION: 10-152

A resolution in support of and in request for $335,550 from the State of Alaska, Department of Commerce, Community and Economic Development, Office of Economic Development, 2010 Coastal Community Impact Assistance Program; for the City and Borough of Yakutat's Solid Waste Management and Recycling Program

WHEREAS, the City and Borough is a municipal governmental unit and is located within the Yakutat Coastal District, and

WHEREAS, the 2010 Coastal Community Impact Assistance Program provides assistance for mitigating damage to wildlife and protecting coastal areas, and

WHEREAS, the Yakutat Solid waste Committee has prioritized landfill issues including managing toxic contamination and bear safety and,

WHEREAS, the City and Borough of Yakutat, has actively engaged in removing and disposing of marine debris from its beaches to mitigate entanglement and contamination of fish and wildlife resources, and

NOW, THEREFORE BE IT RESOLVED THAT the Yakutat Solid Waste Management and Recycling Program will mitigate damage to wildlife by better handling of toxic and solid waste

BE IT FURTHER RESOLVED THAT the City and Borough of Yakutat fully endorses and supports the Yakutat's Solid Waste Management and Recycling Program ,and respectfully requests, $335,550 from the 2010 Coastal Community Impact Assistance Program towards the completion of the project.

BE IT FURTHER RESOLVED THAT the Borough Manager of the City and Borough of Yakutat is hereby authorized to negotiate and execute any and all documents required for granting and managing funds on behalf of the City and Borough of Yakutat. The Borough Manager is also authorized to execute subsequent amendments to said grant agreement to provide for adjustments to the project within the scope of services or tasks, based upon the needs of the project.

BE IT FURTHER RESOLVED THAT the City and Borough of Yakutat guarantees successful and timely completion of the project to the satisfaction of the State of Alaska, Department of Commerce, Community and Economic Development, Office of Economic Development.

SPONSORED BY S. RYMAN, BOROUGH MANAGER
RESOLUTION 10-152
Page 1 of 2

CERTIFICATION

I, the undersigned, Borough Clerk of the City and Borough of Yakutat, do hereby certify that the Borough Assembly, which is composed of 6 members, of whom 4 constitutes a quorum, were present at a meeting held on 25th day of March 2010 and 6 member(s) voted YES and 0 member(s) voted NO and 0 member(s) were absent.

Signed By:

Mayor, City and Borough of Yakutat

Date: 4-12-10

Asst. By:

Borough Clerk

Date:

CITY AND BOROUGH OF YAKUTAT CORPORATE SEAL ALASKA SEPTEMBER 22, 1992

SPONSORED BY S. RYMAN, BOROUGH MANAGER
RESOLUTION 10-152
Page 2 of 2

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF WILDLIFE CONSERVATION

Sean Parnell, GOVERNOR

Douglas Area Office
PO Box 240020 / 802 Third St
Douglas, AK 99824
PHONE: (907) 465-4267
FAX: (907) 465-4272

March 10, 2010

Bill Lucey
Staff Biologist/Coastal Planner
City and Borough of Yakutat
PO Box 160, Yakutat, AK 99689

Mr. Lucey, thanks for your continuing efforts to address the refuse issues at the landfill in Yakutat, as well as cleaning up other environmental debris that could be harmful to wildlife. As you are aware, we at the Alaska Department of Fish and Game have been concerned about the accessibility of refuse to bears and other wildlife at the Yakutat landfill for years. We have discussed this issue with community a number of times, as well as with the Department of Environmental Conservation. Our main concern has always been the accessibility of refuse at the landfill to brown bears, which at times concentrates several dozen animals in close proximity to the community. This not only alters the natural behavior of these animals but also leads to food conditioning and habituation to humans. This then eventually results in public safety concerns in the nearby community and the unnecessary deaths of many bears at people's doorsteps or other areas within the community.

We support your idea to shred and bail plastics as well as other potentially attractive refuse as one important step in eliminating the attractiveness and therefore harmful effects of this refuse to bears and other wildlife.

Sincerely,

Neil Barten
Region I Wildlife Management Coordinator

Cc: Ryan Scott: ADF&G

Yakutat Tlingit Tribe
606 Forest Hwy. 10 * P.O. Box 418 * Yakutat, Alaska 99689
Phone (907) 784-3238 * Fax (907) 784-3595 * www.ytttribe.org

March 11, 2010

Bill Lucey
Staff Biologist/Coastal Planner
City and Borough of Yaktuat
Po box 160, Yakutat, Ak 99689

Mr. Lucey,

As you are well aware, Yakutat Tlingit Tribes main focus of our Igap grants have been the Landfill reorganization. With these fundings we were able to assist the City and Borough with many Backhauls of old automobiles, Hazardous wastes, Electronic wastes sorting vans as well as some the equipment that is housed in the facility that we help acquired. This landfill is still our main focus and as we address and solve each issue with you we feel that this issue of the brown bears is one of our last big issues. We feel that it is pretty much a time bomb with the tourist season coming on, their visits to land fill are getting bolder and bolder. Installing a shredder will help keep the bulk garbage down and easier to cover. Thank you for your continuing efforts to re-organize this landfill.

Gunalchéesh,

Dáxnáxdusaayi
Suuyuk -Mary Porter
Environmental Director
Yakutat Tlingit Tribe
PO Box 418, Yakutat AK 99689
(907) P 784-3238 X 236 F 784-3640

Plastics Waste Processor - MOD I

The U.S. Navy's Plastics Waste Processor converts shipboard-generated plastic waste into a dense, sanitary disk suitable for long-term storage. This waste stream includes lightly food-contaminated as well as clean plastic. The Plastics Waste Processor is designed to handle other materials that may be combined with, or contain, plastic components that cannot be processed in the normal solid waste stream.

In FY00, the Naval Sea Systems Command (NAVSEA) directed Carderock Division's Environmental Quality Department to take another turn on the spiral development path and improve the PWP design. The initial goal was to reduce operational and maintenance man-hours associated with the equipment by 50 percent without modifying the shipboard interfaces. Assessments were made on the failure rates of all components, corrosion, and system complexity. High failure rate components were removed or replaced. Materials were changed to reduce corrosion issues, and the system was greatly simplified to enhance reliability and ease maintenance. Replacement components and subsystems were designed, fabricated, and then tested for reliability and ruggedness in the laboratory and in the field. Pre-production units were tested in the laboratory for hardware and software functionality and failure modes, safety, reliability, operability, maintainability, and process rate.

The modified plastics waste processor (MOD 1 PWP) has 34 percent fewer components, and the process time is 15 minutes less than the original design with a 300 percent increase in process rate. The electro-mechanical drive system was replaced with a single pneumatic actuator for compression. This allows removal of two motor control contactors and the current transducer from the control panel. The temperature control system was greatly simplified by replacing the resistance temperature detectors with thermostatic switches, which also removed two modules from the programmable logic controller. Additionally, the chamber heaters were removed, allowing a more open lower frame and the removal of a third contactor from the control panel. The lower frame of the unit was redesigned to be more open, allowing easier access for cleaning as well as more efficient waste and liquid flow through. The modified unit also incorporates nine self-cleaning nozzles that are connected to the ship's hot potable water service. This greatly reduces the amount of cleaning time and effort required by ship's personnel. Though the cleaning process has been greatly simplified, success of the new equipment is directly dependent on sailors strictly adhering to daily cleaning and PMS measures. The new direct cooling system used with the auxiliary unit cools in about half the time of the CLCU and does not need a pump or a heat exchanger. It has 84 percent fewer parts than the current closed-loop cooling unit

NAVSEA
NAVAL SEA SYSTEMS COMMAND

Solid Waste Shredder

The U.S. Navy developed the Solid Waste Shredder to process shipboard plastics, metal and glass. The Solid Waste Shredder is designated as a Plastics Shredder for plastic waste use, and as a Metal and Glass Shredder for metal and glass.

Solid Waste Shredders allow the U.S. Navy to comply with the National Defense Authorization Act for Fiscal Year 1997. This legislation allowed for the discharge of shredded metal and glass beyond 12 nautical miles from any shoreline by December 2000.

Plastic Shredders were produced for U.S. Navy ships with the Plastics Waste Processors contracts beginning in 1995. A contract for Metal and Glass Shredders for U.S. ships was awarded in 1997. Metal and Glass Shredder installations aboard U.S. Ships were completed by 31 December 2000, and are installed during the construction period on new vessels.

Glass containers and metal (primarily food cans) are shredded into a sinkable form using the Solid Waste Shredder and then bagged for disposal at sea. Plastic waste is shredded to break down large containers and provide a homogeneous mix prior to being placed in Compress Melt Units for further processing. The Solid Waste Shredder is designed to un-jam itself if hard-to-process or non-shreddable objects are encountered. Specially designed blow-out panels allow the shredder to withstand the unlikely event of an explosion and direct the explosive force away from the operator.

The Solid Waste Shredder is easy to use and is designed to meet rugged shipboard operating conditions.