11,19,03

# EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

May 1, 2008 – 6:30 p.m.

Cordova, AK

1

# Exxon Valdez Oil Spill Trustee Council

441 W. 5<sup>th</sup> Ave., Suite 500 • Anchorage, AK 99501-2340 • 907 278 8012 • fax 907 276 7178



DRAFT AGENDA EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL May 1, 2008 6:30 p.m.

DRAFT 4/28/08

Trustee Council Members

TALIS COLBERG Attorney General Alaska Department of Law

LARRY HARTIG Commissioner Alaska Department of Environmental Conservation

DENBY S. LEOYD Commissioner Alaska Department of Fish and Game

## JAMES BALSIGER Administrator, Alaska Region National Marine Fisheries Service

RANDALL LUTHI Director U.S. Minerals Management Service

JOE MEADE Forest Supervisor U.S. Department of Agriculture Forest Service

Meeting at Mount Eccles Elementary School Auditorium, 200 Adams Street, Cordova, Alaska Teleconference number: 800.315.6338 (contact EVOS for code) Federal Chair: Randall Luthi

- 1. Call to Order 6:30 p.m.
- 2. Consent Agenda
  - Approval of Agenda\*



- Approval of Meeting Notes\* March 17, 2008
- 3. Public Advisory Committee comments
- 4. Public comment -6:45 p.m. (5 minute per person)

Michael Baffrey

Michael-Baffrey

Executive Director

- 5. Executive Director's Report
- 6. Status of Herring Restoration Plan
- 7. Cordova Community Center\*

Adjourn

\* Indicates action items

March 17 Meeting Notes

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# Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, AK 99501-2340 • 907 278 8012 • fax 907 276 7178



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TRUSTEE C	COUNCIL MEETING NOTES			
Anchorage, Alaska				
March 17, 2008				
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Trustee Council Members Present:				
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Joe Meade, USFS	Talis Colberg, ADOL			
Hans Neidig, USDOI *	• Denby Statistical Coordination	&G		
Craig O'Connor, NOAA **	Earry Hartig, ADEC			
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	i dan Angela Maria Maria Maria			
* Hans Neidig alternate for Randal				
Craig O Connor alternate lorg Jan		<u>-</u>		
The meeting convened at 8:40 a m	March 17, 2008 in Anchorage at the F	VOS		
Conference Room				
المعالي المحالي محال	wst Y			
1. Approval of the Agenda				
And and a second a				
APPROVED MOTION:	Motion to approve the draft agenda da	ated March		
**252*********************************	17, 2008 amended to include; (1) disc	ussion of a		
	potential \$50,000 to NOAA and other	federal		
	agencies for an analysis of the sufficient	ency of the		
	1994 programmatic Environmental Im	pact		
	Statement during the FY '09 Invitation	discussion;		
	and (2) discussion of a potential contr	ibution by the		
	Trustee Council to the 2009 Alaska Fo	orum on the		
	Environment at the end of the agenda	l		

Federal Trustees U.S. Department of the Interior U.S. Department of Agriculture National Oceanic and Atmospheric Administration



Motion by Neidig, second by Meade

6. <u>Small Parcel KEN 3002</u> Motion to authorize \$629,000 for the purchase of the reconfigured Russell/Long parcel, Lot 1 containing three acres and fronting the Kenai River by the State of Alaska

APPROVED MOTION: Motion by Neidig, second by O'Connor

7. <u>Mutch/Jacobs Anchor River Small Parcels</u>

APPROVED MOTION:

Motion to reauthorize \$175,000 in matching funds to be used in conjunction with North American Wetlands Conservation Act grant funds for the purchase of the Mutch/Jacobs parcels located at the mouth of the Anchor River by the State of Alaska

Motion by O'Connor, second by Hartig

8. Valdez Duck Flat Small Parcel, PWS 05



Motion that the Council approve the \$125,000 as authorized in the past to move forward with securing the property and be able to provide that commitment to The Conservation Fund while continuing shared stewardship with the State of Alaska and explore opportunities to meet the value of the wetlands in association with the Forest Service facilities that are in proximity at Crooked Creek

Motion by Meade, second by O'Connor

## 9. North Afognak Conservation Package

APPROVED MOTION:

Motion to authorize \$10,000,000 for the purchase of lands in the Perenosa Bay region of Northern Afognak, including lands owned by the Shuyak and Uganik previously authorized in Resolution 03-01, and the Portage Lake parcel owned by Natives of Kodiak, subject to a variety of terms and conditions including (1) the purchase price be based upon fair market values as determined on approved appraisal; and (2) final approval of each purchase by the Trustee Council

Motion by Neidig, second by O'Connor

### 10. Port Graham Habitat Protection

APPROVED MOTION:

Motion to authorize \$32,700 for due diligence activities associated with the Port Graham PTG 01 located in Aialik Bay in Kenai Fjords National Park to be conducted by the National Park Service

Motion by O'Connor, second by Hartig

11. <u>20<sup>th</sup> Anniversary Media Roll-out</u>

APPROVED MOTION:

Motion to approve \$50,000 to develop a public relations media strategy for the 20<sup>th</sup> Anniversary of EVOS.

Motion by O'Connor, second by Hartig

Off the record: 10:17 a.m. On the record: 10:30 a.m.

12. Public Advisory Committee Charter Renewal

APPROVED MOTION:

Motion to endorse the Public Advisory Committee Charter renewal for 2008-2010

Motion by O'Connor, second by Meade

13. Public Advisory Committee Nomination Process

APPROVED MOTION: Motion to approve the Public Advisory Committee nomination process for the 2008-2010

Motion by Meade, second by O'Connor

#### 15. Herring Restoration Plan

**APPROVED MOTION:** 

Motion to authorize formulation of an integrated herring restoration plan that is community based, will integrate the various current and future herring projects, and will be based upon the herring restoration plan.

Motion by O'Connor, second by Meade

### 14. FY 09 Invitation

APPROVED MOTION:

Motion to finalize the EY 09 Invitation as described, underscoring the value of the integration and the human resources components, recognizing that some projects will need to be expedited for the 20<sup>th</sup> Anniversary and that lingering oil and herring projects should be expedited.

Motion by Meade, second by Hartig

## 16. Supplemental Analysis of the 1994 EVOS Restoration Plan EIS



Motion to approve \$50,000 for NOAA to conduct an analysis of the continuing adequacy of the programmatic environmental impact statement that was prepared in connection with the Trustee Council's adoption of the 1994 EVOS Restoration Plan

Motion by O'Connor, second by Meade

17. FY 08 Projects

APPROVED MOTION:

Motion to approve funding PJ 070808-A – Ballachey, Nearshore Synthesis: Sea Otters and Sea Ducks, without objective 5; PJ 080759-A – Rosenberg, \$40,600, Amendment to Harlequin Duck Population Dynamics in Prince William Sound: Measuring Recovery from the Exxon Valdez Oil Spill; and 080839 – Hollmen, \$148,600, Evaluating Injury to Harlequin Ducks (Histrionicus histrionicus) Caused by Sub-lethal Hydrocarbon Exposure in Prince William Sound Using Species-Specific Cell Lines

Motion by O'Connor, second by Hartig

## 18. Project Management Fees

APPROVED MOTION:

Motion to approve the appropriate management fees for PJs 070808-A, 087059-A and 080839

Motion by O'Connor, second by Hartig

19. 2009 Alaska Forum on the Environment

**APPROVED MOTION:** 

Motion to approve contributing \$15,000 to the 2009 Alaska Forum on the Environment

Motion by Meade, second by Hartig

Meeting adjourned at 11:36 a.m. without motion.

## PAC Chair Comments to EVOS Trustee Council on May 1, 2008 by Stacy Studebaker

Good Evening and greetings from Kodiak,

I hope the TC all made it to Cordova without any plane cancellations and that you have a productive meeting tonight.

Since the PAC hasn't had a full, face-to-face meeting since December 6<sup>th</sup>, I really don't have much to report at this time.

The PAC did meet for a short teleconference on January 21<sup>st</sup> for a briefing on the 2008 Marine Symposium and the status of the Herring Restoration Plan. We reconvened on March 5<sup>th</sup> for a short briefing on the FY09 Invitation and to discuss a few projects that Michael wanted our feedback on.

With so many delays for the FY09 Invitation, I hope to get an update tonight as I'm sure many others are anxiously waiting.

The public is also very interested in the outcome of the Herring Steering Committee's work on the Herring Restoration Plan and hope to hear more tonight. They've had a massive mission to accomplish and the outcome of their efforts will certainly be of global significance.

I'm sure that I speak for all the PAC by saying how appreciative we are that you all took the time for your retreat on March 17<sup>th</sup> to develop a vision for the future of the Restoration program and I certainly want to thank Craig O'Connor for his excellent overview that I listened to with great interest on the TC website. For those of you in the audience that haven't listened to it yet, I encourage you to do so. By make our job as representatives of the public a lot easier.

Without a roadmap for quite some time, our job has been very difficult. Once the new vision is published and made available to the public, I hope that the clarifying your vision and communicating it to the public, you are helping to PAC and the TC can meet together to discuss it. Our next meeting is scheduled for the end of August or early September and perhaps that would be a good time to do so as we haven't had the opportunity for a joint PAC and TC meeting in many years.

As the PAC Chair it's my job to mention that the majority of PAC members have not been in favor of bricks and mortar projects in the past. This is mainly in respect to being fiscally conservative and keeping the annual budget within close range of the amount earned from the interest on the invested EVOS account and the desire to use what remains of the restoration funds on projects that are directly connected to oil spill restoration projects. That being said, (these are my own comments) I also need to point out that restoring human services is an important part of the EVOS mission and Cordova certainly hasn't fared as well as other oiled communities such as Kodiak and Seward with funding for capital improvement projects that address loss of services. Perhaps it is time for Cordova to get what is due to them.

Thank you very much.

Stacy Studebaker PAC Chair.  $\sim$ 

Full Herring Restoration Plan available at:

www.evostc.state.ak.us/Universal/Documents/Publications/PWSHerringRestoration.pdf

## Exxon Valdez Oil Spill Trustee Council

## PRINCE WILLIAM SOUND HERRING RESTORATION PLAN

DRAFT Issued February 28, 2008



Exxon Valdez Oil Spill Trustee Council

441 W. 5th Ave., Suite 500 • Anchorage, AK 99501-2340 • 907 278 8012 • fax 907 276 7178

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If you believe you have been discriminated against in any program, activity, or facility please write:

- ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526.
- The department's ADA Coordinator can be reached via phone at the following numbers: (VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078.
- U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington, VA 22203
- Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240.

## PLEASE COMMENT

You can help the Trustee Council by reviewing this draft restoration plan and providing your comments. Please provide comments by the close of business on April 8, 2008. You can comment by:

Mail:	Exxon Valdez Oil Spill Trustee Council 441 W. 5 <sup>th</sup> Avenue, Suite 500 Anchorage, AK 99501 Attn: PWS Herring Restoration Plan
Telephone:	1-800-478-7745 (within Alaska) 1-800-283-7745 (outside of Alaska) Collect calls will be accepted from fishers and boaters who call through the marine operator.
Fax:	907-276-7178
E-mail:	michael_baffrey@alaska.gov



## Acknowledgements

I am pleased to acknowledge the hard work and dedication of the authors of this restoration plan: Robert Spies, Mark Carls, Stanley "Jeep" Rice, Doug Hay, and Steven Moffitt. I would also like to extend my thanks to the members of the Herring Steering Committee whose commitment to the restoration of Pacific herring in Prince William Sound continues to drive this initiative.

Michael Baffrey, Executive Director

PWS Herring Restoration Plan DRAFT February 28, 2008

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Appendix C – Management Review

## **EXECUTIVE SUMMARY**

## PLAN GOALS

The Exxon Valdez Oil Spill (EVOS) Trustee Council has classified the Prince William Sound (PWS) population of Pacific herring (*Clupea pallasi*) as a resource that has not recovered from the effects of the 1989 oil spill. The PWS herring population was increasing prior to 1989 with record harvests reported just before the spill. The 1989 year class was one of the smallest cohorts of spawning adults recorded, and by 1993, the fishery had collapsed with only 25% of the expected adults returning to spawn. The PWS fishery was closed from 1993 – 1996 but reopened in 1997 and 1998 based on an increasing population. Numbers again declined and the fishery was closed from 1999 through 2006. Reasons for the population collapse and failure to recovery remain largely unknown.

The main goal of this plan is to determine what, if anything can be done to successfully recover Pacific herring in Prince William Sound from the effects of the *Exxon Valdez* Oil Spill. In order to determine what steps can be taken, this plan will examine the reasons for the continued decline of herring in the Sound, identify and evaluate potential recovery alternatives, and establish a course of action for achieving restoration.

#### BACKGROUND

The Pacific herring is one of 180 species of fish classified within the family Clupeidae and the order Clupeiformes. They occur in waters of the continental shelf from northern Baja California to arctic Alaska, westward to Russia and south to Japan and the west coasts of Korea. They also occur along the Arctic Ocean from the White Sea eastward to Ob Inlet (Hay 1985) (Fig. 1).



Fig.1. Global distribution of Pacific herring (adapted from Hay 1985)

The four Pacific herring life stages, eggs, larvae, juveniles and adults, are all found in PWS in various seasons and locations (Brown and Carls 1998). Spawning in PWS typically takes place in April and the spawning season varies from five days to three weeks. Pacific herring typically spawn along the same beaches each year, although the volume of eggs and shoreline distances varies (Brown and Carls 1998; Carls et al. 2002). For example, from 1994 to 1997, the annual spawning beach length ranged from 23.3 to 68.5 km (Willette et al. 1998). Figure 2 shows Pacific herring spawning beds located throughout PWS based upon 1973 - 2006 data from the Alaska Department of Fish and Game (Moffitt 2006, pers. comm.)







Fig.2. Pacific herring spawning beds located throughout PWS based upon 1973 - 2006 data from the Alaska Department of Fish and Game (Moffitt 2006, pers. comm.)

During spawning, the eggs attach to eelgrass, rockweed (*Fucus* sp) and kelp in shallow subtidal and intertidal areas. The eggs hatch in May, about 24 days after spawning depending on temperature (Hart 1973; Brown and Carls 1998). After hatching the larval herring migrate to the surface, congregate nearshore and continue to grow. Initially, the larvae have yolks that will last a few days, are poor swimmers and currents significantly affect their distribution. The larvae become juveniles in July, about 10 weeks after hatching. In the fall, the juveniles move into deeper water but nearshore habitat remains important for at least the first year, and they may spend up to two years in nearshore areas or bays before joining the adult population residing in deeper waters (Brown and Carls 1998).

In PWS, adult Pacific Herring rarely spawn before their third year and may live up to 15 years. The average life span of a PWS herring is 9 years. After spawning in the spring, adult Pacific herring disperse from the spawning aggregations to multiple schools in deeper waters, presumably close to the entrance of PWS (Brown and Carls 1998). In the fall, adult and two year old fish return from summer feeding areas and over-winter in central and eastern PWS.

Newly hatched larvae carry a yolk sac that is typically depleted in the first week. The earliest larval stages begin feeding on invertebrate eggs and small zooplankton such as copepods. While the larval Pacific herring grow and congregate nearshore through their first summer, they continue to live mainly on copepods but may also eat other crustaceans, barnacle larvae, mollusk larvae or young fishes (Brown and Carls 1998). As they move into deeper waters, copepods remain an important food for both juvenile and adult pacific herring, but adults also feed on larger crustaceans and small fish. During winter, as temperature and light decrease, food supply becomes limited and both young and adult year classes stop feeding functionally. Survival of young herring through the winter depends on the amount of food that was available in the preceding summer and their ability to store sufficient lipid reserves to sustain them over the winter. For the older age classes, winter is less limiting on direct survival, but may affect their reproductive condition and spawning capacity in the spring (Carls et al. 2001).

#### The Exxon Valdez Oil Spill

The PWS herring population was increasing prior to 1989 with record harvests reported just before the oil spill (Fig. 3).

PWS Herring Restoration Plan DRAFT February 28, 2008 Page 2



Fig. 3. Pacific herring fishery catches in the Gulf of Alaska (blue line) and estimated annual biomass of herring in PWS (red line) (Brown, 2007).

After the oil spill, the 1989 year class of herring was one of the smallest cohorts of spawning adults recorded, and by 1993, the fishery had collapsed with only 25% of the expected adults returning to spawn.

The population collapse stopped the commercial fishery, and ignited debate about the cause. Some are convinced that the spill was the cause; others believe it was caused by natural systems (Rice and Carls 2007). Unfortunately, we will never know with certainty what the cause was or when it started, as the there is a conflict between data interpretations (Hulson et al. 2008, Thorne and Thomas 2008). Unhealthy fish were detected at the same time as the crash, but disease surveillances were not underway in the previous years. Hydro-acoustic estimates of over wintering populations were initiated in 1993, after the decline in population was detected, and hence are not available during or prior to the decline or crash. The spill certainly affected the 1989 year class, as eggs and as larvae, resulting in one of the poorest recruitments ever observed. While oil continues to linger on some beaches in PWS, lingering exposures to new year classes is not suspected because there is little or no overlap of present day spawning sites with lingering oil. There is no known mechanism for continued oil exposures to this species. Direct oil effects were no longer detectable after 1990 in herring (Pearson, Elston et al. 1999; Carls, Marty et al. 2002) and strong recruitment of the 1988 year-class (in 1991) suggested that oil effects were restricted to the 1989 year class. No plausible oil-related mechanisms have been developed to explain a delayed response after intervening years of no response. Understanding the cause of the population decline or crash, and when it started, is no longer possible with certainty.

#### FACTORS POTENTIALLY LIMITING RECOVERY

Many herring populations ebb and flow, but only a few remain depressed for long time periods. Many factors likely contribute, so this is a complex issue. Natural factors, including climate changes, interspecies competition, sub-optimal recruitment, disease, and predation may be reasons for the continued population depression.



PWS Herring Restoration Plan DRAFT February 28, 2008 Page 3

#### Disease

A significant factor in the inability of the Pacific herring population in PWS to recover is age-dependent mortality from three pathogens: mesomycetozoan Ichthyophonus hoferi, viral hemorrhagic septicemia virus (VHSV), and filamentous bacteria (associated with cutaneous ulcers). Beginning in 1993 with a severe outbreak of VHSV and ulcers, epidemics have cycled through the Pacific herring population in PWS about every 4 years. Epidemics of VHSV-ulcers in 1993 and 1998 were followed by epidemics of I. hoferi that peaked in 2001 and 2005. Unfortunately there are no long-term disease data sets for other herring populations, or other species with which to make comparisons.

Prince William Sound Pacific herring had a major VHSV-ulcer disease outbreak in 1993, moderate disease in 1997–1998, and mild disease in 2002. However, as the VHSV-ulcer outbreaks have decreased in severity, the significance of I. hoferi has increased. An original hypothesis was that disease was a sporadic event associated with exceeding carrying capacity (Marty et al. 1998), but the 1998, 2001, 2002, and 2005 disease events occurred when the population was relatively low.

The causes for sustained disease problems are not apparent. Immune suppression can be caused after acute exposure to oil, but no herring living today in PWS were alive and exposed in 1989, and no continuing exposure to lingering oil is suspected. At present, the relationship among disease and other factors, such as the lack of food, is not apparent. The PWS Pacific herring population remains too low to allow commercial fishing and there is no hypothesis to explain the continuing disease or adequate information to predict when disease problems will abate.

#### Predation

Previous research has not eliminated predators as a potential factor in limiting Pacific herring recovery in PWS. Herring are of great importance in the PWS ecosystem; as roughly second- or third-order consumers, they transfer energy from zooplankton to a wide variety of consumers including humpback whales, harbor seals, birds, and other fish. Herring may also significantly influence or control the grazing pressure exerted on lower trophic levels (Cole & McGlade 1998). The relationships between herring and multiple predators is complex, with ample opportunity for large or increasing predator populations to significantly influence the herring population.

#### **Oceanographic changes**

Pacific herring stocks have been shown to respond to climatic changes, with increases in populations during warm conditions when plankton production is generally better than during cold years. The Gulf of Alaska populations have increased during the positive phase of the Pacific Decadal Oscillation, when the Gulf of Alaska is stormy, warm and the water is well-mixed (Brown 2006). The favorable conditions for these populations appear to be related to higher plankton production, as there are larger fish at equivalent ages when zooplankton are more abundant. However, anomalously cold conditions have been detected in PWS beginning in 2006 which may have a negative impact on herring populations (Weingartner 2007).

#### **Contaminants in habitat**

The waters and majority of the PWS shoreline are among the cleanest habitats in the world. Polynuclear aromatic hydrocarbon loads in the water are very low (Carls et al. 2002). Less than 0.2% of the shoreline has evidence of oil contamination, the current and historical human habitation sites and areas where *Exxon Valdez* oil remains (Boehm et al. 2004; Short et al. 2002 report). Only trace concentrations of persistent organic pollutants (e.g., pesticides and polychlorinated biphenols) are detectable in intertidal areas (Short et al. 2006 report).





Lingering oil toxicity does not appear to be limiting Pacific herring recovery in PWS. For oil exposure to be a cause of the current population depression, 1) lingering oil must have continued to exert new effects, or 2) the oil exposures of 1989 must have caused a persistent biological effects.

- 1. Lingering oil effects are not suspected. There is no evidence of significant herring exposure to oil in PWS after 1990. Unlike the habitat of certain other species (pink salmon, sea otters, and harlequin ducks), oil did not persist in herring habitat (open water and intertidal shorelines), thus the herring population is not affected by a chronic source of lingering oil. Northeastern spawning areas were not affected by the *Exxon Valdez* oil spill, nor were north-central spawning grounds (which are not currently utilized by the herring). There was little overlap between shoreline oiling and herring spawning on Montague Island and in the Naked Island group (another area not currently utilized by herring).
- 2. Persistent effects from the initial oil spill in 1989 are speculative. For oil exposures in 1989 to have a continuing effect in PWS herring, either of two criteria would have to be met: a) long-term oil impacts in exposed individuals, or b) a possible cascade effect. Potential long-term impacts include morphological defects, genetic changes, poorer growth, and immune suppression. Fish with morphological defects, such as reduced cardiac function, were probably eliminated by natural selection rather quickly. Reduction in genetic diversity as a result of exposure to oil is unlikely; the population had little time to adapt to oil because exposure was not chronic for the PWS herring population. There is no evidence of reduced genetic diversity in PWS herring. Long term growth reductions were not evident; mass at age increased for several years after 1992. The remaining hypothesis, long-term immune suppression is also unlikely. While disease continues to cycle in PWS herring and is probably limiting herring recovery, there are no studies (in PWS or elsewhere) linking a long-term immune suppression in fish to contaminant exposure. The plausibility of immunecompromised individuals surviving for long periods is small. Disease challenge would likely remove impaired individuals from the population, particularly after annual winter starvation events when fish are least resistant. Each fall VHSV drops to undetectably low levels only to rebuild in the spring. This natural cycling does not require individuals damaged as a result of oil exposure to introduce disease into the population.

Possible cascade effects are highly speculative. We are unaware of any reports of oil-related cascade effects in pelagic fish species or their prey. The primary support for a cascade effect is the persistent population depression, coupled with the persistent association with disease. The causes for the persistent disease are not understood, suggesting an unknown cascade effect. Also supporting a cascade effect is the simultaneous collapse in the pink salmon population in PWS in 1992 - 1993. Populations of two species with very different life histories and survival strategies collapsed in the same localized region (PWS) but did not collapse elsewhere in Alaska. Thus, these collapses appear to be a PWS phenomenon. This fuels speculation of a cascade effect linked to the oil spill with no known mechanism.

#### Lack of recruitment

Following a population crash in 1993, Prince William Sound herring experienced very low recruitment from the 1995 through 1998 year classes. The current history of low herring recruitment in PWS is not without precedent in other west coast herring populations, though these consecutive low recruitment events are relatively rare. Simultaneous poor recruitment was not observed in other North American herring populations during the late 1990s. However, four-year to six-year runs of low recruitment have occurred at other times in other herring populations, including Togiak (2000-2003), Sitka (1971-1973) and Craig (1971-1975) in Alaska, Prince Rupert (1963-1966), Queen Charlottes (1990s), Vancouver (1960s), Strait of Georgia (1960s) in British Columbia, and Cherry Point (1970s) in Washington. The timing of low recruitment events appears to vary randomly among the sampled North American herring

PWS Herring Restoration Plan DRAFT February 28, 2008 Page 5 populations.

The low recruitment events in PWS in the 1990s broke down a strong correlation between PWS and Sitka recruitments. Prince William Sound has experienced 3 modest recruitment events since the 1993 population collapse (the 1993, 1994, and 1999 year classes), but biomass has yet to increase above low levels. Strong recruitment from the lowest biomass levels has not been observed at PWS or Prince Rupert, but five of the ten examined herring populations (Togiak, Sitka, Craig, Queen Charlotte Islands, and West Coast of Vancouver Island) have generated extremely strong recruitment events from the lowest biomass levels. While the low recruitments from the 1995 to 1998 year classes are within the range of natural variability, recovery of PWS herring will require further recruitment events, combined with increased adult survival from disease and other sources.

The continued existence of herring populations is threatened when the number of consecutive low recruitments approaches the reproductive lifespan. Herring in PWS came dangerously close to the reproductive lifespan threshold with 4 successive years of near-zero recruitment in the late 1990s, following previous low recruitment in the early and mid-1990s. Moderate recruitment in 1999 may sustain the population provided adult mortality is not excessive, at least for the short term. Recovery of PWS herring will require further above-average or strong recruitment events, combined with increased adult survival from disease and other sources. Because we do not know the cause of the current series of low recruitment events, it is not possible to predict if recruitment will get better or worse.

## **CURRENTLY FUNDED HERRING RESEARCH**

## **Predators**

Predation is likely contributing to the suppression of herring populations in Prince William Sound and marine mammals and seabirds are major predators on these fish. Any restoration effort must understand whether or not increased herring production will merely result in more predators rather than more herring. Fisheries management models currently use broad and highly uncertain estimates of natural mortality. Predation is the major source of mortality, even if underlying causes are disease or starvation.

Juvenile herring are heavily predated by multiple species of seabirds including five species injured by the EVOS (Bishop 2007). Research will focus on the spatial and temporal abundance of seabird predators in and around juvenile herring schools, as well as the physical and biological characteristics of the schools used for feeding. The estimates of juvenile herring consumption produced by this work will aid in planning future restoration efforts as well as in assessing the role of seabird predation on herring recruitment by providing data to both herring and ecosystem modeling.

Ongoing studies of killer whales and their effect on Pacific herring will be broadened to include a satellite tagging program to examine habitat preference and to aid in a more extensive examination of feeding habits using observational and chemical techniques (Matkin 2007). Killer whale research will more clearly delineate the role of killer whales in the nearshore ecosystem and possible effects on the restoration recovery of herring.

Long-term systematic disease monitoring and research since 1994 has suggested a relationship between disease and the continuing population decline of herring in the Sound. A comprehensive three-year Herring Disease Program will begin in 2007 to examine the epizootic mortality resulting from infectious and parasitic diseases (Hershberger 2007). This program will provide predictive metrics that can forecast future disease epidemics and offer empirical relationships useful in developing adaptive management policies to mitigate the effects of epizootic and chronic diseases.

#### **Ecological Factors**

Any effort to restore or enhance herring production will require understanding of the ecological factors that may be affecting recruitment success including oceanographic changes, food scarcity, chemical pollution/changes, and habitat loss or compromise.

Food may be a limiting factor for juvenile herring. An understanding of the variability in abundance and distribution of herring prey may lead to a greater understanding of why certain nursery bays are more productive than others (Batten 2007). Recent Continuous Plankton Recorder data has shown large differences in mesozooplankton biomass on the Alaskan shelf from 2004 and 2005 (Batten 2006). Understanding changes in herring food supply from year to year, whether a shift in distribution, or timing, of zooplankton abundance could help understand the fluctuations in the population and, in turn, support management of this resource. Recruitment may also be contingent on young of the year herring attaining, from zooplankton, sufficient whole body energy content (WBEC) to survive their first winter (Kline 2007). The high rate of disease, as well as predation pressures, may also require young herring to have an increased energy demand in the winter that is not currently being met. A detailed study of the energy consumption rates of overwintering herring in the Prince William Sound in comparison to herring in other parts of Alaska may provide information on the high level of recruitment failures that will provide valuable information to managers for a recovery strategy (Vollenweider 2007).

Oceanographic factors also play a large role in the success or failure of a herring year class. Recruitment is highly influenced by conditions within nursery sites which affect survival within the first year. Studies of the physical oceanography of nursery fjords has indicated that each site has a unique set of hydrographic conditions that are influenced by both local processes and water exchange between the Gulf of Alaska and Prince William Sound (Gay and Vaughan 2001). A hydrographic time series within nursery fjords will collect high resolution data on currents and hydrography to determine the dominant mechanisms of water exchange and circulation within two experimental fjords; one located in a highly productive sub-region and one located in less productive sub-region influenced by tidewater glacial outflow (Gay 2007). This will provide critical information on where the most productive potential nursery bays would be located if a direct intervention approach is suggested by the Herring Recovery Plan.

The Alaska Coastal Current (ACC) is also an important focus habitat for herring as it links Prince William Sound and continental shelf marine habitats. Terrestrial runoff from around the Gulf of Alaska affects ACC dynamics and its nutrient and sediment load although oceanic processes substantially modify these influxes. The GAK 1 line has been monitoring the ACC continually for 36-years and data collected from provides the long-term temporal context of the natural variability of the ACC and Prince William Sound (Weingartner 2007). The data will also be essential in understanding how herring are affected by variations in temperature, salinity, and density and how this variability could affect recovery.

In addition to the oceanographic data collected, *ShoreZone* mapping will be conducted in the Sound to provide a single mapping protocol that includes geomorphology, substrate type, and biological substrate on all beaches. *ShoreZone* mapping, in addition to the data from research on other ecological factors, will fill data gaps by providing a contiguous data set from across the entire spill area using a standard protocol (Lindeberg 2007). The data set will be useful to the recovery process, as it combines photographs of the entire beach area and provides information that can be sorted by location, substrate type, and other factors.

#### **Global Influence**

Information on abundance, distribution and condition of key herring life stages is a critical part of a successful herring recovery plan. There is, however, a general lack of scientific information on the life

PWS Herring Restoration Plan DRAFT February 28, 2008 Page 7 history of Pacific herring in Prince William Sound. More information is required for the success of future enhancement efforts designed to improve the survival rate of juveniles into adulthood.

Barometers of the PWS herring population are the adult abundance and condition, as monitored in March, and the juvenile abundance and condition going into and coming out of the long winter period (Thorne 2007). A direct capture effort in March 2007 and March 2008 will not only fill data gaps for herring at this important time, but will provide biological samples that can be utilized for disease, marking, and stable isotope research projects that are currently underway.

Chemical analysis of trace element concentrations in herring otoliths will provide key geographic signatures of natal habitats that, in combination with *ShoreZone* mapping and ongoing oceanographic projects, will clearly define where the productive herring habitats are located. This will allow for the protection of the most important populations and identify those environmental variables needed to enhance other populations (Bickford/Norcross 2007). As a comparison to the PWS herring stock, Sitka Sound's herring stocks remain healthy and relatively intact. Otolith chemistry collected from this population will be used as a control group, providing baseline data to compare to the depleted herring stocks in PWS (Meuret-Woody 2007). This comparison will be essential in crafting the herring recovery program as it provides a clear picture of threats effecting the depressed PWS herring population that could potentially be limited or removed.

In addition to otolith chemistry, fatty acid analysis (FAA) of herring cardiac tissue will be help in determining herring stock structure at fine spatial scales and will establish if otolith chemistry methods can be used to corroborate FAA techniques (Otis/Bickford 2007). Results should allow researchers to better define ecologically significant stock boundaries likely affecting how commercially exploited herring populations are assessed and managed.

#### **Databases and Modeling**

The ability to process and make historical and current herring data available to researchers will play a large role in the success of a herring recovery plan. The development of a life-stage specific, ecosystem based model of the PWS herring that will aid in the integration of ecological data that has been gathered on herring over the last two decades and will be able to simulate the processes that cause the chronic decrease in herring stocks (Kiefer 2007). More specifically, it can be used to test the unresolved hypotheses of why the herring have not recovered to pre-spill densities. The model will be housed in a geographic information system developed specifically for marine applications and will be available for interactive viewing and downloading of files over the Internet.

A web portal will provide assess to modeling data and GIS visualizations for the researchers and the pubic (Moffitt 2007). Researchers will utilize the web portal as a resource to assist in consolidating, accessing, and synthesizing herring data. Currently, herring related data sets are not widely available and are not shared among herring researchers. The new web portal will facilitate the sharing of spatial and temporal herring data that will be important during the development and implementation of the herring recovery plan.

#### POTENTIAL RESTORATION ACTIONS

It may be possible to restore herring populations in Prince William Sound through the use of direct restoration or intervention methods such as the moving of fertilized eggs to habitats more favorable for survival or the release of juveniles reared in hatcheries. However, the efficacy of these or other direct restoration methods need to be proven and may be technically infeasible or too costly. Furthermore, the



PWS Herring Restoration Plan DRAFT February 28, 2008 Page 8 use of direct restoration activities may cause unintended adverse environmental outcomes such as the increase in incidence of disease to herring or other fishes.

Regardless of whether active restoration methods are used, monitoring will play an important role in the restoration process. Monitoring will be required as part of any active restoration program to evaluate the efficacy of various active restoration methods, the status of recovery, and the potential occurrence of unintended adverse impacts.

#### No action - allow natural recovery

If direct restoration activities are found to be impractical, too costly, or too risky, then monitoring may be the only viable means of helping to restore herring populations. Monitoring in itself can be an effective restoration tool that enables the natural recovery of populations by detecting and ameliorating impediments to the natural recovery. For example, monitoring might lead to a better understanding of the role of disease, predictability of disease outbreaks, and disease management practices that reduce disease impacts. Monitoring of herring populations and critical life-history attributes might also allow for the development of better predictive models of herring stocks, more protective fisheries management practices, and longer-term sustainability of the stock. Furthermore, monitoring might reveal unknown sources of human-induced impacts on herring that, if identified, could be ameliorated and removed as an impediment to natural recovery.

#### Active enhancement program

Enhancement is the release of cultured herring to supplement natural recruitment so as to assist recovery or restoration of the population to historical levels. Therefore, the purpose of enhancement is to increase numbers and biomass of herring to levels exceeding natural carrying capacity. That is, something is done so that combined effects of disease, food supply and predation are overcome. This usually means adding young herring raised in captivity, where survival rates can exceed those in the wild, back to the environment.

The issue of enhancement of marine fish populations is controversial. There is an influential part of the fisheries science community, mainly from the ecological side, that is steadfastly opposed to the concept of marine finfish enhancement. There is another component, mainly the practitioners, who are comfortable with the concept and worry little about biological implications. However, even the detractors of the concept suggest that the activity may be warranted when all other conventional management procedures fail. Even then there are reservations about the efficacy of the approach if density-dependent factors regulating recruitment occur after the release of cultured fish. This is a focal point for this issue in Prince William Sound.

A decision to investigate the feasibility of enhancement does not necessarily mean that the EVOS Trustee Council is committed to the concept or determined to engage in enhancement activity. Instead, the intention is to examine the implications of the concept, as it applies to herring in Prince William Sound. Full scale enhancement activity would require several years of preparation, mainly to develop and determine some technological issues, such as mass marking of young fish prior to release. Mass marking and other technological activities are fundamental pre-requisites of enhancement activity. Therefore, because the development of these technological issues will take time, it is important that some investigations begin immediately. It also is important to understand that these investigations also could result in a definitive conclusion the enhancement of herring is impractical or far too expensive.

We suggest a sequential three-phase plan that could lead to full scale enhancement within five years. Each phase consists of several concurrent steps of complementary activities. Phase I will consist of three activities, each of which could resulting a conclusion that enhancement of herring is not warranted, because of technological or biological issues. Therefore we reiterate: the first components of a restoration plan are to determine the technological and logistical feasibility of the plan. These steps will not necessarily lead to enhancement activity.

Herring restoration in PWS could proceed in three distinct consecutive phases, each of which has several distinct but concurrent activities or 'steps'. The three phases and suggested durations are:

Year 1 - Justification, decision rules and feasibility Year 2-5 - Pilot scale enhancement and methodology tests Year 5-9 - Full scale enhancement

Each phase would have several steps or activities that could be conducted concurrently within the duration of each phase. Please see Appendix B – Enhancement Review for more detail on each phase.

#### 1. Develop decision rules and reference points

Write and define a contract to prepare a report that: (i) presents data on the past and present state of Prince William Sound herring, with comments on the strengths and weaknesses of the information; (ii) defines criteria, such as abundance levels, that would be a basis for initiating enhancement activity and suspending or stopping such activity following favorable responses of the population; (iii) defines criteria where possible extinction is a concern and that would warrant implementation of 'conservation hatcheries.

#### 2. Assessment and development of mass marking technology

Write and define a contract to prepare a report that will provide definitive approaches and/or methodology to mass marking. This report would include detailed review and analysis of the Japanese work and experience with mass marking of herring. The report(s) should comment on the success rates for establishing marks and the costs related to different marking scenarios, at both ends of the process (marking and reading the marks at later stages).

# 3. Recapture and mark-detection methodology – a pre-application statistical guide concerned with issues of scale.

There is a need for a dedicated report that comments on the feasibility of marking and different markrecapture rates. Some relatively simple modeling and statistical analyses should investigate the options and financial costs of several release-recapture scenarios and relate this to the cost of rearing herring, prior to release.

#### **RESEARCH NEEDS**

Research is in progress on many of the issues addressed above affecting Pacific herring in PWS. These efforts have only begun to address the complex interactions that are affecting herring populations and more questions have come to light as the research progresses. The questions that still need to be answered in order to move herring toward restoration include:

- 1. Are there credible ways, other than cumulative distance (spawn miles and mile-days) that herring spawn may be quantified, or made into an index, that would be biologically realistic?
- 2. Can retrospective analysis of growth during the first and second years of life, estimated from analyses of archival collections of herring scales, be used to comment on inter- and intra-annual variation in growth and survival of herring in PWS? Could such retrospective analyses be used to explain more about the biological events that occurred during the last two decades?

PWS Herring Restoration Plan DRAFT February 28, 2008 Page 10

- 3. What are the key competitor species of herring and how do they affect each life stage?
- 4. What effects are oceanographic changes in PWS having on each life stage of herring?
- 5. What is the distribution of larvae and juveniles and the factors that are quantitatively important to determining year class strength?
- 6. What are the parameters that are significant to herring recruitment?
- 7. Is disease causal and impacting the population, or is it symptomatic and reflecting poor body condition?
- 8. Could their potentially be a relationship between larval release and disease effects in the general population?
- 9. Are there any suitable mass marking techniques for Pacific herring eggs, larvae or juveniles in PWS that are feasible, practical and affordable?
- 10. What ranges of marked animals must be released in order to have sufficient recaptures to evaluate success?
- 11. Can criteria or reference points be established that can be used to govern potential enhancement activity of herring in Prince William Sound? Specifically, biological or assessment what criteria would be used to initiate, suspend or stop enhancement activities?
- 12. How much would it cost to implement a pilot-scale enhancement facility in the spill area?
- 13. How much would it cost to implement a full-scale enhancement facility in the spill area?
- 14. What would be the annual costs of maintaining an enhancement program and would the EVOSTC remain the sole funding source for the program?
- 15. What permitting would be required for an enhancement program?
- 16. Is egg translocation a viable alternative to a hatchery program?

#### A STRATEGY AND DECISION MAKING FRAMEWORK

The restoration program for PWS herring can be managed adaptively as portrayed in Fig. 4, where the problem evaluation, policy decisions, research, monitoring and outcomes are all related in way that leads to logical decision making and provides order and context for the various program activities.

The strategy begins with definition of the problem and establishing objectives for restoration. Next the conceptual model is specified then the options are evaluated along with their uncertainties. If the there are many uncertainties, as there are with herring, then targeted research needs to be carried out, the first step in the restoration ladder. That research then tells us more about the survival of herring in the PWS ecosystem and we can evaluate the conceptual model and possibly change it to complete the loop. At some level of certainty we will perhaps undertake a pilot release of juvenile herring to test predictions of survival from a quantitative version of the conceptual model. The outcome is monitored, results are evaluated, and we complete the adaptive loop again with model revision, take further action, or stop the



program depending on the outcome. Finally we may reach a stage that either the system is on its way to restoration (known from monitoring) or large-scale intervention is implemented based on what has been learned adaptively and the predicted chances of success. The suggested annual cycle of program activities is shown in Fig. 5.



PWS Herring Restoration Plan DRAFT February 28, 2008 Page 12 The annual cycle starts in the fall-winter period with an evaluation of the ongoing program activities for Pacific herring being carried out in Prince William Sound that includes peer reviewers. The reviewers recommend courses of action along with the Herring Committee and the Executive Director. If new activities are warranted they are requested in the annual invitation issued in late winter. If ongoing programs need to be modified they are also adjusted through the Executive Director using the peer review guidance. New and modified work is proposed to the Trustee Council for their consideration during the summer.

#### NEXT STEPS

The Herring Restoration Plan will need to be implemented in several steps that coincide with data gathered from ongoing research and monitoring efforts.

- 1. The FY09 Invitation for Proposals should specifically request projects that seek to answer the questions included in this document under "Research Needs".
- 2. The Herring Steering Committee should be reduced in size, but include a representative from each of the stakeholders. This will allow for more efficient and cost effective operation of the Committee while ensuring that each interested group has a seat at the table.
- 3. The third annual Herring Roundtable should be focused on results from FY08's research and its incorporation into an updated Herring Restoration Plan.
- 4. After meeting with Japanese researchers, who have been successfully raising Pacific herring for commercial uses, and analyzing data gathered by funded PI's, the Herring Steering Committee should make a recommendation to the Executive Director and the Trustee Council regarding a full-scale enhancement program.
- 5. A pilot-scale enhancement program would be beneficial in determining the feasibility of a larger scale program, identifying potential issues before significant funds are spent, and establish a relationship for permitting with the Alaska Department of Fish and Game.

#### REFERENCES

Batten, S.D. 2007. Acquisition of Continuous Plankton Recorder Data. Restoration Project 070624. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 22 pp.

Bickford, N.A., B.L. Norcross. 2007. Herring Restoration in PWS: Identifying Natal and Nursery Habitats. Restoration Project 070782. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 34 pp.

Bishop, M.A., K.J. Kuletz. 2007. Seabird Predation on Juvenile Herring in Prince William Sound. Restoration Project 070814. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 48 pp.

Boehm PD, Page DS, Brown JS, Neff JM, Burns WA. 2004. Polycyclic aromatic hydrocarbon levels in mussels from Prince William Sound, Alaska, USA, document the return to baseline conditions. Environmental Toxicology and Chemistry 23:2916-2929.

Brown, E.D. and M.G. Carls. 1998. Restoration notebook: Pacific herring (*Clupea pallasi*). Exxon Valdez Oil Spill Trustee Council, Anchorage, AK. 8 pp.

Carls, M.G., G.D. Marty, and J.E. Hose. 2001. Synthesis of the toxicological and epidemiological impacts of the Exxon Valdez oil spill on Pacific herring in Prince William Sound, Alaska. Restoration Project 99328. *Exxon Valdez Oil Spill Trustee Council Final Report*, Anchorage, AK. 86 pp.

Carls, M. G.; Marty, G. D.; Hose, J. E. 2002. Synthesis of the toxicological impacts of the *Exxon Valdez* oil spill on Pacific herring (*Clupea pallasi*) in Prince William Sound, Alaska, USA. *Canadian Journal of Fisheries and Aquatic Sciences*, 59, (1), 153-172.

Cole, J., McGlade, J. 1998. Clupeoid Population Variability, the Environment and Satellite Imagery in Coastal Upwelling Systems. Reviews in Fish Biology and Fisheries 8:445-471

Gay, S.M. 2007. Project 070817. Physical oceanographic factors affecting productivity in juvenile Pacific herring nursery habitats. Restoration Project 070817. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 20 pp.

Gay, S. M., Vaughan, S.L. 2001. Seasonal hydrography and tidal currents of bays and fjords in Prince William Sound, Alaska. Fisheries Oceanography 10: 159-193

Hart, J.L. 1973. Pacific fishes of Canada. Bulletin 180. Fisheries Research Board of Canada, Ottawa, Canada. 740 pp.

Hay DE. 1985. Reproductive biology of Pacific herring (Clupea harengus pallasi). Can J Fish Aquat Sci 42(Suppl 1):111-126.

Herschberger, P., J. Hansen, D. Elliott, E. Emmenger, R. Kocan, G. Kurath, S. LaPatra, J. Winton. 2007. Restoration Project 070819. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 77 pp.



Hulson, J.F., Miller, S.E., Quinn, T.J., Marty, G. D., Moffitt, S. D., Funk, F. 2008. Data conflicts in fishery models: incorporating hydroacoustic data into the Prince William Sound Pacific herring assessment model. ICES Journal of Marine Science, January 1, 2008; 65(1): 25 - 43.

Kiefer, D.A., E. Brown, V.M. Tsontos. 2007. An Ecosystem Model of Prince William Sound Herring. Restoration Project 070810. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 50 pp.

Lindeberg, M.R. 2007. ShoreZone mapping for Prince William Sound. Restoration Project 070805. Exxon Valdez Oil Spill Trustee Council Project Proposal, Anchorage, AK. 32 pp.

Matkin, C. 2007. Monitoring, Tagging, Feeding Studies, and Restoration of Killer Whales in Prince William Sound/Kenai Fjords in 2007. Restoration Project 070742. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 25 pp.

Meuret-Woody, H. 2007. Identification of Essential Habitat for Pacific Herring (Clupea Pallasi) in Sitka Sound for Comparison to Prince William Sound i.e. Source vs. Sink Habitat. Restoration Project 070834. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 32pp.

Moffitt, S.D., R. Bochenek. 2007. Herring Data and Information Portal. Project 070822. Exxon Valdez Oil Spill Trustee Council Project Proposal, Anchorage, AK. 24 pp.

Otis T, Heinz R, Bickford N. 2007. Using otolith chemistry to discriminate Pacific herring stocks in Alaska. Restoration Project 070769. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 18 pp.

Pearson, W. H., R. A. Elston, et al. 1999. Why did the Prince William Sound, Alaska, Pacific herring (Clupea pallasi) fisheries collapse in 1993 and 1994? Review of hypotheses. Cananadian Journal of Fisheries and Aquatic Sciences 56: 711-737.

Rice, S., Heintz, R., Moran, J., Quinn, T., Straley, J. 2007. Significance of Whale Predation On Natural Mortality Rate of Pacific Herring in Prince William Sound. Restoration Project 070804. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 51 pp.

Thorne, R. E., and Thomas, G. L. 2008. Herring and the "Exxon Valdez" oil spill: an investigation into historical data conflicts. ICES Journal of Marine Science, 65: 44–50.

Vollenweider, J.J., Heintz, R.A. 2007. Are Herring Energetics in PWS a Limiting Factor in Successful Recruitment of Juveniles and Reproduction Investment of Adults? Restoration Project 070806. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 27 pp.

Willette, T.S., Carpenter, G.S., Hyer, K. and J.A. Wilcock. 1998. Herring natal habitats. Restoration Project 97166. *Exxon Valdez Oil Spill Trustee Council Final Report*, Anchorage, AK. 257 pp.

Weingartner, T. 2007. Long-Term Oceanographic Monitoring of the Alaska Coastal Current. Restoration Project 070340. *Exxon Valdez Oil Spill Trustee Council Project Proposal*, Anchorage, AK. 32 pp.

HERRING WKSHP AGEN 

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Herring Steering Committee Workshop Agenda Pioneer Igloo, Cordova, AK April 29-May 1, 2008 – 9:00 a.m. to 5:00 p.m.

May 2, 2008 – 9:00 to 11:00 a.m.

#### Tuesday, April 29

#### Morning Session

- 1. Introduction to the workshop and identification of workshop goals
- 2. Current Status of Herring ADF&G Cordova Office Presentation
- 3. Status of the current Herring Restoration Plan
- 4. Public comment
- 5. Ongoing herring project updates

#### Afternoon Session

- 6. Continue project updates
- 7. Summary of project progress
- 8. Discussion of the characteristics of an integrated program
- 9. Public comment

## Wednesday, April 30

#### Morning Session

- 10. Review the characteristics of an integrated program
- 11. Define the organizing principles and guiding hypotheses for the new program

#### Afternoon Session

- 12. Define the structural elements of an integrated program
- 13. Determine where program gaps exist (in both existing projects and for new projects)
- 14. Discussion of internal governance, synthesis activities, and shared logistics
- 15. Public comment

#### <u>Thursday, May 1</u>

#### **Morning Session**

- 16. Discuss how to engage the local and tribal communities
- 17. How will we implement the new integrated program?

#### Afternoon Session

- 18. Determine what quarterly, annual, and final deliverables would be required
- 19. Interfacing with the Herring Restoration Plan
- 20. Review workshop results and identify future needs

#### Friday, May 2

- Morning Session
- 21. Review workshop results (continued)
- 22. Determine next steps
- 23. Public comment

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#### PROPOSAL SIGNATURE FORM

THIS FORM MUST BE SIGNED BY THE PROPOSED PRINCIPAL INVESTIGATOR AND SUBMITTED ALONG WITH THE PROPOSAL. If the proposal has more than one investigator, this form must be signed by at least one of the investigators, and that investigator will ensure that Trustee Council requirements are followed. Proposals will not be reviewed until this signed form is received by the Trustee Council Office.

By submission of this proposal, I agree to abide by the Trustee Council's data policy (*Trustee Council Data Policy*\*, adopted July 9, 2002) and reporting requirements (*Procedures for the Preparation and Distribution of Reports*\*\*, adopted July 9, 2002).

#### PROJECT TITLE: <u>EVOSTC Outreach and Information Sharing Venue - Cordova Center</u>

Printed Name of PI: _Tim Joyce, Mayor, City of Co	ordova		
Signature of PI:		Date _	_1/19/2007
Printed Name of co-PI: _Cathy Sherman, Director c	of Information Services		
Signature of co-PI:		Date 1/1	9/2007
Printed Name of co-PI:			
Signature of co-PI:	Date	_	

\* <u>www.evostc.state.ak.us/Policies/data.htm</u> \*\* <u>www.evostc.state.ak.us/Policies/Downloadables/reportguidelines.pdf</u>

> Download the FY07 Invitation and Instructions at http://www.evostc.state.ak.us/Proposals/forms.htm

## FY07 INVITATION PROPOSAL SUMMARY PAGE (to be filled in by proposer)

Project Title: EVOSTC Outreach and Information Sharing Venue - Cordova Center

Project Period: 10/1/2006-09/30/2009

Proposer(s):Cordova Mayor Tim Joyce, Director of Information Services Cathy Sherman

Study Location: Cordova, Alaska

Abstract: The Cordova Center will be a 34,000 sq. ft. ADA accessible multiuse facility designed to address EVOSTC, community and regional needs for: public outreach, GEM research and information sharing; symposia; museum oil spill history and new response technology exhibit; library research support; visitor center; oil spill response center; science discovery room; restoration effort results; and art representing ecosystems of the Delta and Sound.

Funding: EVOS Funding Requested: \$ (must include 9%GA) FY 07 TOTAL: \$ 38.7 (in thousands) FY 08 TOTAL: \$2239.37 (in thousands) FY 09 TOTAL: \$ 5186 (in thousands) Multi-year total: \$ 7464.1 (in thousands)

Non-EVOS Funds to be used:

Spent to date \$ 858.9 (in thousands) FY07 TOTAL: \$ 150 (in thousands) FY08 TOTAL: \$ 2710.2 (in thousands) FY09 TOTAL: \$ 6694.5 (in thousands) Multi-year total: \$10413.6 (in thousands) Date: January 11, 2007

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## PROJECT PLAN

#### NEED FOR THE PROJECT Statement of problem

The Prince William Sound region has a strong need for a facility whose mission includes providing the venue and means for education of citizens, students, scientists, resource managers and stakeholders about the Prince William Sound and Gulf ecosystems and how best to manage its natural resources.

The EVOS Trustee Council's goals of outreach, sharing research and providing educational opportunities correspond with needs of the City of Cordova.

Cordova has no centrally located community center providing the facilities and amenities necessary to meet all the population's needs. While there are public and private facilities that are used for meetings and conferences in the community, none provides adequate space, equipment and services to meet Cordova's needs. The existing facilities in Cordova for science education programs, meeting rooms, museum, library, auditorium/theater and emergency response are inefficient and do not meet ADA standards. The present visitor center is not adequate; yet diversifying Cordova's injured tourism and fishing-based economy depends increasingly on the expanding of tourism and outdoor recreation-based industries.

The existing municipal building functions as emergency dispatch and communications center in case of tsunami, oil spill and other emergencies. The current location has serious problems which need to be remedied in order to provide emergency services and respond to disasters:

- absence of backup electrical power would greatly hinder emergency response personnel's ability to communicate with others in the region, state or nation
- location of existing facility within the tsunami zone requiring equipment and personnel to be relocated to higher ground for actual events
- lack of space for oil spill training response leaves responders unprepared

#### **Background and history**

The community of Cordova was heavily impacted by the devastating effects of the 1989 Exxon Valdez oil spill to the region's economy. Commercial fishing, passive use, recreation and tourism are services that were reduced because of the spill. Cordova's dependence on commercial fishing has resulted in an economy that is cyclical in nature and very specialized. This reliance on one industry has led to economic difficulties as fluctuations occur in fishing and fishing related ventures. The community recognizes the need for economic diversification to promote long-term sustainability.

Lack of economic diversity has led to the following problems:

- long-term impact of the oil spill on fishing families and community businesses that relied on those families for a sizeable portion of their income;
- economic difficulties during low fishing cycles leading to increased hardship for over half the households in Cordova;
- seasonal influx of workers for fishing industry who leave at the end of the season taking their income with them instead of spending it in the community;
- business closures during the off season due to reduced population, leaving locals with fewer choices and opportunities;

Cordova Center Proposal Tim Joyce, Mayor, City of Cordova

- employee lay-off during the off season resulting in a high unemployment rate;
- decrease in raw fish tax revenues from a high of 1,294,704 in 1989 to 448,958 in 2004;
- decrease in local sales tax revenue.

The City of Cordova is seeking funding to construct the Cordova Center, a 34,000 square foot, fully ADA accessible multi-use facility. The Center will combine a number of functions for the community of Cordova including **conference center**, **library**, **Science Discovery Room**, **museum**, **Oil Spill Response Center and visitors' center**. Throughout the building there will be educational displays of: the results of SEA, GEM and other EVOS related research findings; restoration efforts and their results; and of art representative of the ecosystems on the Delta and in the Sound. These displays will ensure that any visitor to the Center will have exposure to educational materials about the natural resources of the region and the progress of restoration efforts related to the EVOS.

As well as providing a solution to the problems noted above, the Cordova Center offers many exciting opportunities. The Cordova Center is strategically positioned to be a centerpiece of **EVOS Trustee Council information sharing in the region.** The new facility will enhance and expand scientific research services and the regional visitor industry.

#### Relevance to 1994 Restoration Plan Goals and Scientific Priorities

The EVOSTC FY 07 invitation for proposals states that the Council is interested in local community based proposals that would address community revitalization restoration objectives. The Cordova Center Project is an important part of Cordova's efforts to model the original mission of the Trustee Council's Restoration Program, by taking into account the importance of the quality of life and the need for viable opportunities to establish and sustain a reasonable standard of living.

As an integrated community facility, the Cordova Center is designed to address all of the following objectives. The Center will provide a venue from which personnel can:

- provide access to SEA, GEM and other EVOS related data through library services;
- offer citizen training and support in oil spill response through the emergency response center;
- provide citizen training and support environmental monitoring activities through the science discovery program;
- manage a data/local knowledge archive;
- make available educational programs;
- publicize community involvement opportunities;
- provide a **forum** to identify important community and region-wide issues and concerns that could be addressed by EVOS related monitoring and research;
- provide **information** to communities regarding data and scientific research performed by the Trustee Council science program;
- improve **communication** of findings and results of restoration efforts to spill area residents, village councils, and the appropriate regional organizations;

The new Cordova Center will provide an oil spill response training and incident command and communications center, as well as an emergency administrative response and communications center. The Oil Spill Prevention and Response Center will: conduct oil spill response training (members of Cordova's fishing fleet were and are first responders to a spill in Prince William

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Sound); instruct community members in oil spill prevention and clean-up techniques; build partnerships between resources-dependent community members and state and federal resource agencies; house an Oil Spill Response Emergency and Communications Center.

Cordova is one of five community response centers that have been established in Prince William Sound where the oil industry has stockpiled spill containment and removal equipment. Local fishing vessels are part of Alyeska's planned nearshore response. They are used, among other things, to transport response equipment, deploy and tend boom, and mobilize pre-staged equipment to protect fish hatcheries. Twice yearly, Alyeska provides response training to hundreds of fishing boat crews. The fishing vessels, based in communities in Prince William Sound, the Kenai Peninsula, and Kodiak Island are under contract with Alyeska to respond to spills if willing and available at the time of an incident.

The Center will function as a repository for data generated by EVOS projects that will make this information readily available to the scientific communities, resource managers, resource dependent people and their communities, policy makers, EVOS staff and contractors, GEM committees and working groups, state and federal resource agencies, and concerned members of the public. By providing easy access to well-organized materials the Cordova Center will increase the long-term value of the projects' research.

The new facility will offer information in easily accessible formats, including displays, exhibits and art, thereby fulfilling the Trustee Council's goal of disseminating information on restoration to the broadest audience possible.

We are glad to see in the EVOSTC FY 07 invitation for proposals the statement that "the Council believes that the human population can not be separated from the ecosystem and the components that comprise human use." The Cordova Center project will address the EVOS Trustee Council objectives for human services that depend on natural resources. The Visitors' Center will serve as a focus to restore and develop Cordova's outdoor recreation, tourism and commercial fishing industries. It will promote opportunities for outdoor recreation and tourism in the Prince William Sound region; serve as stimulus for restoration of injured services of recreation and tourism in the region; and provide for seafood marketing and availability information in a kiosk at the Cordova Center, helping to expand markets for Alaska fishing resources and to restore commercial fishing injured by the spill.

The Cordova Center will also house a museum which will assure that the public has easy access to information regarding the spill and its impact upon the region, to exhibits on oil spill history and the advances in science, technology and industry that were stimulated by the spill. Portions of the acclaimed educational exhibit, *Darkened Waters: Profile of an Oil Spill*, created by the Pratt Museum in Homer, Alaska will form the basis for the new *Prince William Sound: Region in Transition* exhibit being designed as a key display for the Cordova Museum. *Prince William Sound: Region in Transition* will tell not only the story of what happened as a result of the 1989 tragedy, but also will offer a comprehensive story of oil transportation safety advances in Prince William Sound, the development of oil spill response, the interrelationship of the local fishermen and fishing industry with the oil industry, and the US Coast Guard's role during an oil spill. The new exhibit will also encompass the expansion and enrichment of research in the science of the Sound since the 1989 oil spill, including findings of research funded by the EVOS Trustee Council, Prince William Sound Science Center and the Oil Spill Recovery Institute. This exhibit

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responds to the continual questions of many visitors regarding the oil spill and its impacts on our region and what has changed since the oil spill.

#### Expected results and benefits of success to EVOSTC

Building a facility that provides information about and promotes stewardship of Gulf ecosystem resources, serves local and regional residents, and visitors, will be an important contribution to stable and sustainable economic recovery. The variety of interdisciplinary programs and services that will be provided in this new multi-use facility will meet the needs to support research, disseminate EVOS-related information, and reach out to people around the world and inform them of the research findings and progress to date.

Together, the partners will increase access to information, educational opportunities, and the overall understanding of the effects of oil spills and the best practices of response. The Cordova Center will provide the means for transmitting this information to all those who find it interesting, valuable or crucial to their work.

#### PROJECT DESIGN

#### **Objectives**

The first objective of this project is to achieve full funding for the construction of the Cordova Center. The current estimate for total construction of the project is \$17.3 million based on a cost estimate developed by HMS Engineering, experts in cost estimating in the State of Alaska. This funding is an investment in local and regional assets that creates the physical infrastructure to diversify the economy and provide essential benefits to the community and to the region.

Once the primary objective is achieved, the objectives listed below for the uses of designated spaces in the center will be pursued. These objectives accord with EVOSTC goals.

## <u>Conference Center</u> – A venue for sharing of EVOS research

- 1. Host EVOS-related workshops, marine research conferences and symposiums;
- 2. Show films produced with EVOS funds in the auditorium;
- 3. Provide space for government agency and resource management meetings;
- 4. Facilitate communication between scientific community and stakeholder user groups in Prince William Sound;
- 5. Make available space for Eyak tribal members to share traditional ecological knowledge and to hold tribal meetings.

#### Library – Providing access to EVOS-related information

- 1. Inform the public about the status of restoration efforts in the spill region;
- 2. Become a repository and dissemination source of EVOS and GEM publications and related research reports for scientific communities, resource managers, policy makers, and members of the public;
- 3. Expand library collection of materials relating to scientific research needs, commercial fishing, oil spill history, oil spill response, fisheries management related to the spill, its impact and its restoration and recovery;
- 4. Support oil spill and related marine researchers' needs through online sources and interlibrary loans, such as providing computer access to the ARLISS library for reference literature on oil spill research;
- 5. Present educational programs for all ages regarding research results; provide online links and access to EVOS Trustee Council related educational materials;

Cordova Center Proposal Tim Joyce, Mayor, City of Cordova

6. Share resources for research needs of Prince William Sound Science Center, Native Village of Eyak, and Prince William Sound Community College.

#### Science Discovery Room – Educating environmental stewards

- House the Science Discovery Room for the Prince William Sound Science Center and U.S. Forest Service sponsored Science Discovery Program to facilitate study and monitor the ecosystem of the Sound;
- 2. Enhance community involvement with Science Discovery Room;
- 3. Conduct programs related to health and sustainability of marine resources;
- 4. Exhibit science displays for public education;
- 5. Educate youth through hands-on stewardship and monitoring activities
- 6. Facilitate student involvement in EVOS and other research projects.

## <u>Museum</u> – Documenting the past and looking to the future

- 1. Create and display the new core exhibit *Prince William Sound: Region in Transition* that will expand the interpretation of the oil spill event to provide a comprehensive story of oil transportation safety advances in Prince William Sound, the development of oil spill response, the interrelationship of the local fishermen and fishing industry with the oil industry, the US Coast Guard's role in oil spill response, and the expansion and enrichment of science research in the Sound since the 1989 oil spill;
- 2. Disseminate information on restoration activities;
- 3. Expand exhibits on history of resource development in the Copper River Region;
- 4. Respond to visitor questions on EVOS and the PWS region.

## <u>Oil Spill Response Center</u> – Oil spill prevention and response training

- 1. Provide space for oil spill response training (Members of Cordova fishing fleet were and are first responders to a spill in Prince William Sound);
- 2. Educate community members in oil spill prevention and clean-up techniques;
- 3. Build partnerships between resources-dependent community members and state and federal resource agencies;
- 4. House an Oil Spill Response Emergency and Communications Center.

# <u>Visitors' Center</u> – Promoting the recovery of Cordova's outdoor recreation, tourism, and commercial fishing industries

- 1. House Visitor Center to promote opportunities for outdoor recreation and tourism in the Prince William Sound region;
- 2. Serve as stimulus for restoration of injured services of recreation and tourism in the region;
- 3. Provide seafood marketing and availability information in a kiosk at the Cordova Center, helping to expand markets for Alaska fishing resources and to restore commercial fishing economy that was injured by the spill.

<u>Sustainability</u>: A key factor in the initial building concept for the Cordova Center was the attempt to consolidate many Cordova facilities from old, inefficient facilities into one modern facility. This promotes effective operation and staffing, and drives down the cost of operating several uneconomical buildings. To further reduce future operating costs, the design team carefully reviewed life-cycle costs of building systems, and recommended material quality to minimize future maintenance costs. The building design aggressively utilizes the highest levels of insulation and energy efficiency, adopting several cutting edge systems for minimized

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operation cost, such as displacement ventilation and passive cooling using water reservoirs integrated in the building foundation space. Architects worked with staff and maintenance personnel to solicit important input to the design with a high priority given to environmental responsiveness. The facility was registered and will seek certification status with the U.S. Green Building Council through the Leadership in Energy and Environmental Design rating system.

The community supports this new mixed-use facility because it provides the opportunity for cost effective operation, with shared resources, minimized building volume, and common centralized services, including mechanical and electrical systems.

<u>Facility operation management</u>: The City anticipates dedicating to the operation of the Cordova Center a part-time Marketing Director, a full-time Facility Manager, a full-time custodian and full-time maintenance position to be responsible for the tasks associated with the operations of the facility. Each of these staff members will report directly to their department head or the City Manager. The operation and maintenance of the facility will be the responsibility of the City Manager who will work closely with the Information Services Director, Facility Manager and Director of Public Works to assure that marketing, scheduling, maintenance and janitorial duties are carried out in a timely, efficient and effective manner. City Information Services staff will offer direct assistance to meeting planners. All operational and maintenance costs will be borne by the City of Cordova.

<u>EVOSTC project related management</u>: Staff will work closely with the Science Discovery Program to implement educational displays related to the Prince William Sound region. Whenever possible they will cooperate in providing science programs for all ages to increase learning opportunities in the community.

## Procedure

- Ensure community involvement The Cordova Center project has been under way since 2001, starting with community meetings to ascertain general needs and high-priority features. A strong consensus was achieved for the vision of a multi-purpose community center incorporating the library, museum, science discovery center, auditorium, and offices in a single facility with a marine resource theme.
- 2. Build collaboration Cordova Center planners met with EVOS Trustee Council members to initiate a dialog about how the Center can best serve EVOS Trustee Council outreach needs. The City initiated a strong partnership between members of related institutions including the Prince William Sound Science Center, United States Forest Service, Native tribe of Eyak, Community College, public schools, federal agencies, nonprofit Cordova Historical Society, service and civic groups and the community as a whole to collaborate on the planning and implementation of the Cordova Center project.
- 3. Retain design team The firm of Minch Ritter Voelckers, Inc. was retained as project architects in February 2002. Detailed programming analysis of spaces was initiated. Community forums focusing on site, materials and features were organized to build broad support and consensus for the project, and to provide information to the design team as ideas were formulated. The Cordova Center architectural and engineering drawings are bid-ready. They represent the culmination of three years of community discussion and design review.

Cordova Center Proposal Tim Joyce, Mayor, City of Cordova

- 4. Secure the site The City of Cordova purchased the preferred site.
- 5. Plan capital campaign A strategic plan has been developed for the capital campaign. A working fundraising plan has been formulated, with a tactical development plan for carrying out each strategy.
- 6. Secure state and federal appropriations Appropriations have been requested and received for project planning and initial stages. Federal funds have been dedicated to the project from the Economic Development Administration, USDA Rural Economic Development Administration and appropriations from HUD. The Alaska State Legislature has provided funding and Governor Murkowski included an appropriation in his 2005 budget.
- 7. Initiate public fundraising A public fundraising campaign has been launched and will be on-going throughout the duration of the project. These local contributions show support for the project and will stimulate funding from non-local sources.
- 8. Submit grant applications Proposals have been submitted to various prospective funding sources for grants to support the Cordova Center project.
- 9. Apply to the Trustee Council for funds Previous applications have been submitted to the EVOSTC for partnership in funding the Cordova Center project. Feedback was received and the application has been modified in response to more clearly identify the services to EVOSTC that the Cordova Center will support. EVOSTC funding is a critical component in building a coalition of funders for construction of the Cordova Center. It is the keystone to the success of the project.
- 10. Submit additional funding applications Once EVOSTC funding is committed to the Cordova Center project, grant requests will continue to be submitted to foundations, corporations with a local presence, and businesses. Additional funding requests will be made to the Alaska Congressional delegation and to the state for budget appropriations for top-off funding.

## **Data Analysis and Statistical Methods**

Not applicable

#### Description of Study Area

The City of Cordova, incorporated in 1909, is located at the southeastern end of Prince William Sound in the Gulf of Alaska. The community was built on Orca Inlet, at the base of Eyak Mountain. It lies 52 air miles southeast of Valdez and 150 miles southeast of Anchorage. Cordova is a rural community accessible by air or water. Alaska Airlines provides federally subsidized daily jet service to the state airport. Access to the community is also available by smaller planes. The Alaska Marine Highway provides ferry service.

A home rule municipality with a Council-Manager form of government and a volunteer elected mayor and city council, Cordova has a year-round population of 2,298 residents (DCED 2004) including its federally recognized Native Tribe (The Native Village of Eyak). With 15% of the population Native American, the cultures of the Alutiiqs, Eyaks and Tlingits play an important role in the community. Most Eyak tribal members reside within the community of Cordova.

Cordova Center Proposal Tim Joyce, Mayor, City of Cordova Gateway to the Copper River Delta, a 60-mile arc of wetlands, Cordova relies heavily on the marine and river ecosystems for its economy. Nearly half of all households are involved in the commercial fishing industry. For 17 years, the community has worked to re-group from the devastating effects to the economy in this region from the Exxon Valdez oil spill. Cordova continues to experience economic difficulties as fluctuations occur in the fishing industry.

Since 1989, work with the tourism industry has been underway to develop the community as a desirable destination. Visitation to Cordova has been slowly increasing in the past ten years primarily from the independent traveler via AMHS or air service. Passengers also arrive each week from Memorial Day to Labor Day on small ships operated by Alaska Sightseeing Cruise West. The Iceworm Festival, the Shorebird Festival, the Copper River Wild Salmon Celebration and musical events draw additional visitors. Sport fishermen arrive in the community in late summer for the returning silver salmon sport fishing season.

#### **Coordination and Collaboration**

Cordova Center planners have met with EVOS Trustee Council members several times to discuss how best to utilize space in the new facility to meet EVOS Trustee Council outreach needs and EVOS related research dissemination goals. As noted in the Procedure section, numerous stakeholders have been involved in the planning the Cordova Center. The Prince William Sound Science Center, U.S. Forest Service, Native Village of Eyak, PWS Community College, public schools, federal agencies, nonprofit Cordova Historical Society, service and civic groups and community members are collaborating on the planning and implementation of the Cordova Center project and have a stake in its success. Attached letters show support for the project. By partnering, the Center will provide cultural, educational and recreational opportunities and facilitate activities that foster the sharing of traditional ecological knowledge.

The project is structured to continually reinforce this collaboration as the interrelated services provided at the new facility complement and build upon each other. Continual public planning to identify new ways in which the facility can creatively be utilized to serve EVOS Trustee Council, the region and the state will enable the Cordova Center to maintain its role of disseminating information on restoration to a broad audience. This is an investment that will have long-term and far-reaching outcomes for EVOS Trustee Council while providing an array of benefits to the community of Cordova and the Prince William Sound region.

#### SCHEDULE

#### **Project Milestones**

Objectives To secure funding to construct the Cordova Center To let the construction bid in 2008

- To begin construction in 2008
- To complete construction in 2009
- To implement EVOSTC related services upon completion of construction

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## Measurable Project Tasks

## FY'07, 1st quarter (October 1, 2006-December 31, 2006)

• Proposal revised according to EVOSTC review and resubmitted

## FY'07, 2nd quarter (January 1, 2007-March 31, 2007)

- Project funding approved by Trustee Council
- Input sought from Trustee Council on outreach and information dissemination spatial requirements
- Requests for state and federal appropriations
- Grant applications to foundations, corporations and government sources
- New phase of local fundraising campaign initiated
- Lobby to support funding requests for state and federal appropriations
- Ongoing fundraising
- Design new Prince William Sound: Region in Transition museum display

## FY'07, 3rd quarter (April 1, 2007-June 30, 2007)

- Grant applications to foundations, corporations and government sources
- Ongoing fundraising
- Community involvement and traditional ecological knowledge plan developed with tribal and community members

## FY'07, 4th quarter (July 1, 2007-September 30, 2007)

- Grant applications to foundations, corporations and government sources
- Ongoing fundraising
- Interim narrative and financial reports to EVOSTC
- Move to development phase of community involvement and traditional ecological knowledge plan

#### FY'08, 1st quarter (October 1, 2007-December 31, 2007)

- Final construction grant applications for top-off funding
- Construction bids advertised
- Prepare RFP's and bid documents
- Begin implementing community involvement and traditional ecological knowledge plan
- Groundbreaking ceremony

## FY'08, 2nd quarter (January 1, 2008-March 31, 2008)

- Annual EVOS Marine Science Symposium
- Construction contract awarded
- Develop publicity to market conference facility for professional meetings

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• Coordinate with Native Village of Eyak to develop Technical Ecological Knowledge program for new facility

## FY'08, 3rd quarter (April 1, 2008-June 30, 2008)

- Contractor mobilizes
- Construction begins as soon as weather permits
- Finalize management plan for new facility

Cordova Center Proposal Tim Joyce, Mayor, City of Cordova • Solicit and commission art with gulf ecosystem themes for new facility

#### FY'08, 4th quarter (July 1, 2008-September 30, 2008)

- Construction continues
- Work with educators to design opening display for Science Discovery Room
- Interim narrative and financial reports to EVOSTC

## FY'09, 1st guarter (October 1, 2008-December 31, 2008)

• Construction continues

## FY'09, 2nd quarter (January 1, 2009-March 31, 2009)

- Annual EVOS Workshop
- Construction continues

## FY'09, 3rd quarter (April 1, 2009-June 30, 2009)

- Construction continues until completion
- Inspection

## FY'09, 4th quarter (July 1, 2009-September 30, 2009)

- Move to new facility
- Grant opening
- Submit final reports

Upon completion of construction of the Cordova Center the partner departments and agencies will move into the facility. A Grand Opening celebration will be held to welcome the public into the new facility, to showcase its offerings, and to celebrate the successful partnerships and collaborations that have resulted in the completion of this important project.

During the first year of operation the services and activities that relate to EVOSTC goals and objectives will be implemented. The *Prince William Sound: Region in Transition* exhibit will be on display in the museum. The Archival materials will be catalogued and museum and library staff will assist the public in accessing the materials. Science education activities for youth will be offered at the Science Discovery Center. Educational displays will be created and assembled throughout the Cordova Center facility. Emergency oil response training sessions will be held. Marine science research symposia on PWS and events such as the annual EVOS workshop can be held at the center.

Statistics will be maintained on the use of these services and the attendance at the various events/activities. The Director of Information Services and the Mayor of Cordova will provide an update to the EVOSTC after the first year of operation to report on the initial outcomes of the EVOSTC's investment in the Cordova Center.

## **RESPONSIVENESS TO KEY TRUSTEE COUNCIL STRATEGIES**

**Community Involvement and Traditional Ecological Knowledge (TEK)** – (Please see attached letters and resolutions of support.)

The Cordova Center Project developed and matured through a successful series of public meetings providing the opportunity for all residents to have input into the planning process.

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Since 2002, a dozen open forum meetings have been held to discuss aspects of the Cordova Center project from site to building components to financial plans. Boxholder mailings, local surveys, and a series of articles in the *Cordova Times* have offered opportunities for education and queries. Radio talk shows since 2002 have allowed residents to comment and have questions answered. Many of the features of the Cordova Center were specifically designed to address a need that was identified or addressed in the series of public forums held early in the process. This collaboration from an early stage has allowed the project to move forward with strong support from the community. Public meetings and project progress updates continue even into this stage of the project.

The community of Cordova has determined that sustainable design is good citizenship, good economics and good public service. All the partners of the Cordova Center have made an organizational commitment to creating a sustainable facility. There is resolve to construct a multi-use public building that uses innovative techniques to be on the cutting edge environmentally and technologically. From the beginning of the planning process, this project has depended on the joint efforts of broad-based and diverse groups. All community members are invited to contribute their input to the planning process. This continual information sharing will remain a function of the Cordova Center once it is constructed.

<u>Cordova Center Partners</u>: The City of Cordova offers the many varied public services that municipal governments are responsible for in small rural communities including museum, library, water, sewer, road maintenance, public health and safety.

Established in 1967 as a centennial museum by the **Cordova Historical Society**, the **Cordova Museum** is operated under the auspices of the City of Cordova while the Cordova Historical Society owns the collection. The museum offers exhibitions, programs, publications and other activities that engage, enlighten, educate and entertain both community residents and visitors of all ages.

The **Cordova Public Library** provides services to patrons throughout the community of Cordova and surrounding areas from Icy Bay to hatcheries in remote areas of Prince William Sound. The library also serves as the elementary school library for 200 pre-kindergarten to sixth grade children. In addition, the library provides Internet access and on-site use of its resources to visitors throughout the year.

The U.S. Forest Service in partnership with the Prince William Sound Science Center provides the Science Discovery Program, offering a variety of education programs and demonstrations for youth. These programs provide an important connection to the marine environment for people of all ages and are directly related to EVOS Trustee Council concerns.

#### Resource Management Applications Not applicable

#### **Budget Justification:**

We are requesting a total of \$7,464,085 over a three year period (FY07-FY09) from the EVOS Trustee Council. This multi-year request will fund costs associated with constructing areas in the Cordova Center with functions that directly relate to carrying out EVOSTC objectives. The following chart shows that 14,655 square feet will be used for EVOS related functions.

- Square
- footage EVOS Space Use Designation
- 4,075 Conference Center: A venue for sharing GEM produced & other EVOS research
- 1,225 Library: Providing access to EVOS related information and research support
- 1,040 Science Discovery Room: Educating environmental stewards
- 1,700 Museum: Exhibits Documenting the past and looking to the future
- 3,410 Oil Spill Response Center: Training and emergency communication center
- 3,205 Visitors' Center: Restoration and development of regional outdoor recreation, tourism, and commercial fishing industries

Funds are also requested for the required travel to attend the Marine Science Symposium and the 9% general administration. This funding application is <u>not</u> for operation or maintenance of the facility. The City of Cordova will own and operate the Cordova Center.

Please note the following items are the same for all years:

- No funds are being requested for personnel, commodities or equipment.
- No indirect funds are being requested.
- Community involvement activities will be handled by the Mayor and City staff throughout the duration of the project. Regular updates to the community of Cordova will be provided through newsletters, email correspondence and other publicity activities. Finance Director's (FD) and Director of Information Services' (DIS) time, supplies and other associated costs will be provided as an **in-kind donation** from the City.

Estimate: DIS = 144 hours @ \$20.40/hour plus \$100 in supplies per year = \$3,037

• All narrative and financial reports will be prepared by city staff as an in-kind donation. Estimate: DIS = 60 hours @ \$ 20.40/hour plus FD120 hours @ \$44/hr per year = \$6,504

#### FY07 Request: \$ 38,716 (\$38.7 in thousands)

Contractual: Activities include finalization of construction drawings and exhibit design.

- Exhibit design Bob Banghart is working with museum staff to finalize design for museum exhibits, including those related to EVOS. Contract work: \$ 18,000 (\$18 in thousands)
- Finalization of construction drawings and assistance with bid specifications: Minch Ritter Voelckers (architects). Contract work: \$16,219 (\$16.2 in thousands)

Travel: Mayor Tim Joyce will attend the Marine Science Symposium. Airfare \$300; hotel @ \$150/night and perdiem @ \$50/day for five days. \$ 1,300 (\$1.3 in thousands) General Administration 9% fee: \$35,519 X 9% = \$3,197 (\$3.2 in thousands)

#### FY08 Request: \$2,239,367 (2239.37 in thousands)

**Contractual:** The contractor will mobilize and construction will begin as soon as the weather allows in 2008. Architects estimate that construction will be 30% complete by the end of September. The contractual budget request for FY08 will fund 30% of the project costs associated with the 14,655 square feet identified as related to EVOSTC interests. Project cost per

Cordova Center Project Proposal Budget Justification Mayor Tim Joyce 1 square foot for the purpose of this request is based on architectural/engineering, administration, exhibit design/installation, construction, and a portion of the contingency costs, divided by total square footage: \$15,878,000 /34,000 square feet = \$467 per square foot

14,655 square feet X \$467 per sq. ft. X 30% = \$2,053,166 (\$2053.17 in thousands) Travel: The Mayor will attend the Marine Science Symposium. \$ 1,300 (\$1.3 in thousands) General Administration 9% fee:  $$2,054,466 \times 9\% = $184,902$  (\$184.9 in thousands)

## FY09 Request: \$5,186,002 (\$5186.0 in thousands)

**Contractual:** Construction will continue until completion, which is anticipated in July 2009. Final inspections will occur as soon as possible and the obligations with the contractor finalized following the acceptance of the structure by the City of Cordova. The contractual budget request for FY09 will fund the final 59.5% of the project costs associated with the 14,655 square feet identified as related to EVOSTC interests.

14,655 square feet X \$467 per sq. ft. X 69.5% = \$4,756,500 (\$4756.5 in thousands) Travel: The Mayor will attend the Marine Science Symposium. \$1,300 (\$1.3 in thousands) General Administration 9% fee: \$4,757,800 X 9% = \$428,202 (\$428.2 in thousands)

EVOS Trustee Council funding is a critical component to project success. As well as providing valuable financial support, it will allow Cordova to leverage funds from other sources to make the Cordova Center Project a reality.

#### Other revenues and cost-sharing for the project

To date, \$3.7 million has been secured: federal appropriations - \$1.98 million; City of Cordova - \$225,000; FY06 Governor's budget - \$1 million; Economic Development Administration - \$200,000; Alaska State Legislature - \$25,000; U.S. Forest Service - \$300,000; and \$20,000 from local fundraising. In addition, the City has provided in excess of \$90,000 through in-kind and cash support for the planning and development of the project. The design and construction drawings are complete, the site has been acquired and some funds are available for construction.

An active local fundraising campaign is underway to obtain the remaining needed funds. In-kind support will be provided during the construction phase with time and equipment of the following departments: public works; planning and water/sewer. The remainder of the funds for this project will be raised from a public/private fundraising partnership made up of local contributions, government appropriations and grants from foundations, corporations and government agencies.

PROJECT EXPENSES		PROJECT REVENUES	
Land	\$ 140,000	Municipal to date	\$ 225,000
Architect & Engineering	\$ 900,000	State & Federal to date	\$3,513,000
Administration/Inspection	\$ 320,000	Local fundraising	\$ 20,014
Construction	\$13,261,748	Total Funding Secured	\$3,758,014
Exhibit Design/Installation	\$ 500,000	Municipal Projected	\$ 775,000
Equipment/Furnishings/Art	\$ 381,618	State & Federal Projected	\$2,966,679
Landscaping	\$ 30,000	Foundations/Corporations Projected	\$2,709,000
Contingency/Inflation	\$ 1,724,027	 Local Fundraising Projected	\$ 205,000
		EVOSTC funding for construction	\$6,843,885*
·		Total Funding Projected	\$13,499,564
Total Funding Needs	\$17,257,393	 Total Secured & Projected	\$17,257,578

\*Additional EVOSTC funding request of \$620,201 is for 9% GA costs plus Symposium travel

Cordova Center Project Proposal Budget Justification Mayor Tim Joyce 2

	Proposed	Proposed	Proposed	TOTAL	**************************************		
Budget Category:	FY 07	FY 08	FY 09	PROPOSED	°		بر ب
							1
Personnel	\$0.0	\$0.0	\$0.0	\$0.0	n (1911)		
Travel	\$0.0	\$0.0	\$0.0	\$0.0		· · · ,	· · · ·
Contractual	\$35.5	\$2,054.5	\$4,757.8	\$6,847.8			t serie (
Commodities	\$0.0	\$0.0	\$0.0	\$0.0		· · · ·	
Equipment	\$0.0	\$0.0	\$0.0	\$0.0			ار پر ا م
Subtotal	\$35.5	\$2,054.5	\$4,757.8	\$6,847.8			
General Administration (9% of subtotal)	\$3.2	\$184.9	\$428.2	\$616.3			
Project Total	\$38.7	\$2,239.4	\$5,186.0	\$7,464.1			
						5	
Other Resources: (Cost Shares)	\$150.0	\$2,710.2	\$6,690.6	\$9,550.8			

EVOSTC funds are being requested to cover the costs associated with the 14,655 square feet of the Cordova Center that have been identified as related to EVOSTC outreach and information sharing activities, travel to the Science Marine Symposium and the 9% required GA. The costs associated with the remaining square footage, landscaping, furniture, equipment, art and the contingency are being funded by the following cost sharing sources:

#### Secured funding sources: \$3.758M raised to date

Site: City of Cordova-\$140,000. Planning and design: Economic Development Admin \$200,000; City of Cordova match for EDA \$85,000; Federal Financial Assistance \$300,000; A portion of appropriations Bill FY03 S2709-Dept of Interior \$994,000 (remainder on construction).

Construction, equipment, furniture, art, administration, etc: Appropriations Bill FY04- Veterans Admin \$994,000; State of AK FY05 -

Appropriation \$25,000; State of AK Governor's Capital Project FY06 Budget Appropriation \$1,000,000; local fundraising \$20,014.

7-Jan-07

In addition to the cost sharing listed in the summary form above, \$858,805 has been spent on project planning activities from secured grant funds and city matching funds. The city has acquired the site for \$140,000 and provided a substantial amount of in-kind staff time gathering public input, working with the architects and other planning activities related to the project.

#### Projected funding sources:

**Construction, equipment, furniture, art, administration, etc:** Federal and state appropriations \$2.967M; Municipal funding: \$775,000; Foundation funding and corporate donations \$2.7M; and local fundraising activities \$205,000. These projected funds will be spent on administration, contractual, equipment, furniture, art, landscaping, and to cover a portion of the contingency in the project budget. Please see Budget Justification narrative for complete project budget.



Project Number: Project Title:The Cordova Center: EVOSTC Outreach and Information Sharing Venue Trustee Agency



Date Prepared:

Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
						0.0
						0.0
						0.0
						0.0
						0.0
						. 0.0
						0.0
						0.0
						0.0
						0.0
						0.0
\	Subtotal		0.0	0.0	0.0	The state of the s
		لمندف والمراجعة ومعادمهم الأمير الأ		Pei	sonnel Total	\$0.0
Travel Costs:		Ticket	Round	Total	Daily	Travel
Description		Price	Trips	Days	Per Diem	Sum
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
		L		L., <u> </u>	Travel Total	\$0.0
Project Number:					F	FORM 3B
FY 07 Project Title: The Cordova Center: EVOSTC Outreach					F	Personnel
						& Travel
	Agency: Truetee Agen	cy: Trustee Agency			[	DETAIL
	Agency. Trustee Agen	сy				

Contractual Costs:		·····	Contractual
Description		· <u>·····</u> ·····	Sum
4A Linkage			35.5
If a component of the project will be performe	ed under contract, the 4A and 4B forms are required.	tractual Total	\$35.5
Commodities Costs:			Commodities
Description			Sum
	Comn	nodities Total	\$0.0
FY 07	Project Number: Project Title: The Cordova Center: EVOSTC Outreach and Information Sharing Venue Agency: Trustee Agency	F Co Co	ORM 3B ntractual & mmodities DETAIL

\_\_\_\_\_

New Equipment Purchases:		Number	Unit	Equipment
Description		of Units	Price	Sum
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
<u>├</u> ─_ <sup>_</sup>		New Fau	inment Total	0.0
Existing Equipment Usage:		New Equ	Number	
Description	· · · · · · · · · · · · · · · · · · ·		of Units	Agency
				, <u>gonoy</u>
			1	
			1	
				L
	Project Number:		F	FORM 3B
	Project Title: The Cordova Center: EVOSTC O	utreach	I E	auipment
FIV/	and Information Sharing Venue			DETAIL
	Agency: Trustee Agency			
	geney. Hudice Ageney		L	

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Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
			1			0.0
						0.0
						0.0
						0.0
		t	0.0	<u>U.U</u>	U.U	
		Tieket	Bound		Somer Total	
Description			Tripe	Dave	Dally Per Diem	Sum
			11/23	Days	Fei Diem	
						0.0
· · ·						0.0
						0.0
						0,0
						0.0
						0.0
						0.0
						0.0
						0.0
		]				0.0
						0.0
					<b>Travel Total</b>	\$0.0
	Project Number:				F	FORM 3B
	Project Title: The Cordova Center: EVOSTC Outreach				-   F	Personnel
	and Information Sharing	a Venue				& Travel
	Ageney: Truetoo Agen					DETAIL
	Agency. Those Agen	Cy				

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Contractual Costs:	Contractual
Description	J Sum
4A Linkage	2,054.5
If a component of the project will be performed under contract, the 4A and 4B forms are required. Contractual Tota	I \$2,054.5
Commodities Costs:	Commodities
Description	Sum
Commodities Tota	\$0.0
FY 08 Project Number: Project Title: The Cordova Center: EVOSTC Outreach and Information Sharing Venue C   Agency: Trustee Agency C	FORM 3B ontractual & ommodities DETAIL

New Equipment Purchases:		Number	Unit	Equipment
Description		of Units	Price	Sum
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
		New Equ	ioment Total	\$0.0
Existing Equipment Usage:			Number	Inventory
Description			of Units	Agency
				{
			1	1
				}
				[ ]
				{
				]
			L	<u></u>
	Project Number:		т	
	Project Title: The Cordova Center: EV/OSTC C	utreach		
<b>FY 08</b>	and Information Charing Vanue		ļE	quipment
	and information Sharing Venue			DETAIL
	Agency: Trustee Agency		L	

7 of 20

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Personnel Costs:		GS/Range/	Months	Monthly		Personnel
Name	Description	Step	Budgeted	Costs	Overtime	Sum
			_			0.0
						0.0
		,				0.0
	1					0.0
						0.0
		[ ]				0.0
		(				0.0
	1					0.0
						0.0
						0.0
						0.0
	LSubtetel			0.0		0.0
		line	0.0	0.0	sonnel Total	
Travel Costs:		Ticket	Round	Total	Daily	Travel
Description		Price	Trips	Davs	Per Diem	Sum
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
				·		0.0
L			;		Travel Total	\$0.0
r	·					
	FY 09 FY 09 Agency: Trustee Agency					ORM 3B
						Personnel
						& Travel
						DETAIL
				1	L	

Contractual Costs:			Contractual
Description		······································	Sum
4A Linkage			4,757.8
If a component of the project will be performed un	der contract, the 4A and 4B forms are required.	Contractual Total	\$4,757.8
Commodities Costs:			Commodities
Description			Sum
			20.0
L		Commodities Total	\$0.0
FY 09	Project Number: Project Title: The Cordova Center: EVOSTC Out and Information Sharing Venue Agency: Trustee Agency	reach Co Co	ORM 3B ntractual & mmodities DETAIL

New Equipment Purchases:	Number	Unit	Equipment
Description	of Units	Price	Sum
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
	New Equ	ipment Total	\$0.0
Existing Equipment Usage:		Number	Inventory
Description		of Units	Agency
FY 09 FY 09	Outreach	F	ORM 3B quipment DETAIL

\_ \_ \_

Y 07 \$0.0 \$1.3 \$34.2	FY 08 \$0.0 \$1.3 \$2,053.2	FY 09 \$0.0 \$1.3 \$4,756.5		PROPOSED \$0.0 \$3.9 \$6.843.9				
\$0.0 \$1.3 \$34.2	\$0.0 \$1.3 \$2,053.2	\$0.0 \$1.3 \$4,756.5		\$0.0 \$3.9 \$6.843.9				
\$0.0 \$1.3 \$34.2	\$0.0 \$1.3 \$2,053.2	\$0.0 \$1.3 \$4,756.5		\$0.0 \$3.9 \$6,843.9				
\$1.3 \$34.2	\$1.3 \$2,053.2	\$1.3 \$4,756.5		\$3.9 \$6.843.9				
\$34.2	\$2,053.2	\$4,756.5		\$6.843.9				
				÷010 1010			· .	
\$0.0	\$0.0	\$0.0		\$0.0				
\$0.0	\$0.0	\$0.0		\$0.0				
\$35.5	\$2,054.5	\$4,757.8		\$6,847.8	! <b>`</b>	· -		
\$0.0	\$0.0	\$0.0		\$0.0	:			
\$35.5	\$2,054.5	\$4,757.8		\$6,847.8				
		· · · · · ·		· ·	ء د ر ۽			
	\$0.0 \$0.0 \$35.5 \$0.0 \$35.5	\$0.0   \$0.0     \$0.0   \$0.0     \$35.5   \$2,054.5     \$0.0   \$0.0     \$35.5   \$2,054.5     \$0.0   \$0.0     \$35.5   \$2,054.5	\$0.0   \$0.0   \$0.0     \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8     \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8     \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8	\$0.0   \$0.0   \$0.0     \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8     \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8     \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8	\$0.0   \$0.0   \$0.0   \$0.0     \$0.0   \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8   \$6,847.8     \$0.0   \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8   \$6,847.8     \$0.0   \$0.0   \$0.0   \$0.0     \$35.5   \$2,054.5   \$4,757.8   \$6,847.8	\$0.0 \$0.0 \$0.0 \$0.0   \$0.0 \$0.0 \$0.0 \$0.0   \$35.5 \$2,054.5 \$4,757.8 \$6,847.8   \$0.0 \$0.0 \$0.0 \$0.0   \$35.5 \$2,054.5 \$4,757.8 \$6,847.8   \$0.0 \$0.0 \$0.0 \$0.0   \$35.5 \$2,054.5 \$4,757.8 \$6,847.8	\$0.0 \$0.0 \$0.0 \$0.0   \$0.0 \$0.0 \$0.0 \$0.0   \$35.5 \$2.054.5 \$4.757.8 \$6,847.8   \$0.0 \$0.0 \$0.0 \$0.0   \$35.5 \$2.054.5 \$4.757.8 \$6,847.8   \$0.0 \$0.0 \$0.0 \$0.0   \$35.5 \$2.054.5 \$4.757.8 \$6,847.8	\$0.0 \$0.0 \$0.0   \$0.0 \$0.0 \$0.0   \$35.5 \$2,054.5 \$4,757.8   \$0.0 \$0.0 \$6,847.8   \$0.0 \$0.0 \$0.0   \$35.5 \$2,054.5 \$4,757.8   \$35.5 \$2,054.5 \$4,757.8   \$35.6 \$2,054.5 \$4,757.8   \$6,847.8 \$6,847.8

FY 07-09	Project Number: Project Title: The Cordova Center: EVOSTC Outreach and Information Sharing Venue Name of Contractor: City of Cordova	FORM 4A Non-Trustee SUMMARY
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Personnel Costs:			Months	Monthly		Personnel
Name	Description		Budgeted	Costs	Overtime	Sum
NONE						0.0
						0.0
						0.0
						0.0
						0.0
τ.		4				0.0
						0.0
						0.0
						0.0
					1	0.0
		· · ,				0.0
	l					0.0
	Subtotal	and a man	0.0	0.0	0.0	
				Pei	rsonnel lotal	\$0.0
Travel Costs:		Ticket	Round	Total	Daily	Travel
Description		Price	Trips	Days	Per Diem	Sum
1. Joyce attend Marine Science Symposi	um in Anchorage	0.3	1	5	0.2	1.3
						0.0
						0.0
						0.0
		(				0.0
			,			0.0
						0.0
						0.0
						0.0
						0.0
		}				0.0
		<u> </u>	L	L	Travel Total	0.0 \$1.3
<u>Lo,</u>					Traver Total	<u>۹۱.5</u>
<u> </u>					<b>┌─</b> ─	
	Project Number:					
EY 07	Project Title: The Cord	ova Center:	EVOSTC O	utreach	F	rsonnel
	and Information Sharing	g Venue			1	& Travel
	Name of Contractor C	ity of Cordov	/a			DETAIL

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Contractual Cost	is:		Contractual
Description			Sum
Contract with	architects and museum exhibit c	lesigner to complete plans	
}	14655 square feet related space	e X \$467 per square foot @ .5% completion equals \$34,219	34.2
1			
ll la l			
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]			
4			
1			
<b></b>		Contractual Tota	\$34.2
<b>Commodities</b> Co	sts:		Commodities
Description			- Sum
NÔNE			
[			]
1)			
ii			
¥			
<u>)</u>			{
JI			{
			]
		Commodities Tota	\$0.0
		Project Number	FORM 4B
		Project Title: The Cordeve Center: EVOSTC Outroach	ontractual &
FY 07			ommodifies
1		and information Sharing Venue	
		Name of Contractor: City of Cordova	DETAIL

New Equipment Purchases:		Number	Unit	Equipment
Description		of Units	Price	Sum
NONE				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
<u> </u>		New Equ	inment Total	<u> </u>
Existing Equipment Usage:			Number	
Description	·		of Units	
NONE				
	•			
<u> </u>				1
	Project Number:	1	) F	
	Project Title: The Cordova Center: EVOSTC O	utreach		quinment
	and Information Sharing Venue			
	Name of Contractor: City of Cordova			
	Internetion Contractor. City of Coldova		L	

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Personnel Costs	s:			Months	Monthly		Personnel
Name		Description		Budgeted	Costs	Overtime	Sum
NONE			-				0.0
							0.0
							0.0
							0.0
							0.0
							0.0
			·				0.0
							0.0
							0.0
							0.0
			+				0.0
		Subtot	al	0.0	0.0	0.0	
					Pei	rsonnel Total	\$0.0
Travel Costs:			Ticket	Round	Total	Daily	Travel
Description			Price	Trips	Days	_Per Diem	Sum
Mayor	attend Marine Science Symposi	um in Anchorage	0.3	1	5	0.2	1.3
1.2 1.2 m							0.0
4 -							0.0
							0.0
							0.0
							0.0
*							0.0
							0.0
					1		0.0
3							0.0
							0.0
			<u></u>			Travel Total	\$1.3
	1					<b></b>	
	Project Number:					F	ORM 4B
		Project Title: The Cor	dova Center:	EVOSTC O	utreach	F	Personnel
		and Information Shari	ng Venue				& Travel 🛛
		Name of Contractor:	City of Cordov	/a			DETAIL
L	J		-			L	

Contractual Costs:			Contractual
Description			Sum
Description Contract with general contractor to const 14655 sq ft related to EVO	ruct the Cordova Center anticipate 30% completion of facility in FY08 OSTC @ \$ 467 per square foot @ 30% completion equals \$2,053,166		Sum 2,053.2
· · · · · · · · · · · · · · · · · · ·	Cont	tractual Total	\$2,053.2
Commodities Costs:			Commodities
Description			Sum
NUNE			
	Comm	odities Total	\$0.0
FY 08	Project Number: Project Title: The Cordova Center: EVOSTC Outreach and Information Sharing Venue Name of Contractor: City of Cordova	F Cor Co	ORM 4B ntractual & mmodities DETAIL

New Equipment Purchases:		Number	Unit	Equipment
Description		_of Units	Price	Sum
NONE				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
<b></b>		Now Equ	inment Total	0.0
Existing Equipment Usage:		New Equ	Number	
Description			of Units	
NONE				
				۰.
				- ;
				· ·
				* *
L	<del> </del>			
<b></b>				
				ORM 4B
FY 08	Project little: The Cordova Center: EVOSTC C	Jutreach	E	quipment
	and Information Sharing Venue		ł	DETAIL
	Name of Contractor: City of Cordova		L	
		ł		

Personnel Costs:	······································		Months	Monthly		Personnel
Name	Description		Budgeted	Costs	Overtime	Sum
NONE						0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
						0.0
	Subtotal	in man at a most	0.0	0.0	0.0	
				Pei	rsonnel Total	\$0.0
Travel Costs:		Ticket	Round	Total	Daily	Travel
Description	in a base of the second	Price		Days	Per Diem	Sum
attend Manne Science Symposi	um in Anchorage	0.3		5	0.2	1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 51.3
FY 09	Project Number: Project Title: The Corc and Information Sharing Name of Contractor: C	dova Center: g Venue ity of Cordov	EVOSTC C	Dutreach	F	ORM 4B Personnel & Travel DETAIL

Contractual Costs:		Contractual
Description		Sum
Contract with general contractor to construct 14655 sq ft related to EVOST	the Cordova Center anticipate final 69.5% completion of facility in FY09 C @ \$ 467 per square foot @ 69.5% completion	4,756.5
	Contractual To	tal \$4,756.5
Commodities Costs:		Commodities
Description		Sum
	Commodifies Tot	2 \$0.0
<u> </u>		ai
FY 09	Project Number: Project Title: The Cordova Center: EVOSTC Outreach and Information Sharing Venue Name of Contractor: City of Cordova	FORM 4B Contractual & Commodities DETAIL
# EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL DETAILED BUDGET FORM FY 07 - FY 09

New Equipment Purchases:		Number	Unit	Equipment
Description		of Units	Price	Sum
NONE				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
				0.0
Indicate replacement equipment with an R		New Fau	inment Total	0.0
Existing Equipment Usage:		qu	Number	
			of Units	
NONE				· · · · · · · · · · · · · · · · · · ·
				4
				· · · ·
				-
				۰ ۲۰۰۰ ۲۰۰۰ ۳۰
	Project Number:		F	ORM 4B
	Project Title: The Cordova Center: EVOSTC O	utreach	I E	quipment
	and Information Sharing Venue		ļ	
	Name of Contractor: City of Cordova			

### Mr. Timothy L. Joyce P.O. Box 555 Cordova, AK 99574 (907)424-4747 (Work) Email: tljoyce@fs.fed.us

City of Cordova POB 1210 Cordova, AK 99574 Dates Employed: 03/6/03 – present Salary: Gratis Hours per Week: 10

#### Mayor

I was elected Mayor of the City of Cordova in March of 2003 and re-elected in March of 2004. As Mayor, I represent the people of Cordova and follow the will of the City Council. As a home rule city with a Council/Manager form of government, the mayor performs all the ceremonial duties for the city, sets the agenda for city council meetings and will be in direct command of the city if the Governor declares a state of Marshall Law. The mayor plays a major role in the strategic planning in the city's future and strives to improve the lives of the citizens in the community.

USDA Forest Service	Dates Employed: 05/01/01 - present
POB 280	Salary: \$50,809/yr
Cordova, AK 99574	Hours per Week: 40

### Subsistence Fisheries Biologist

I have the responsibility for the federal subsistence fisheries program in for the USDA Forest Service in PWS. I make recommendations on harvest limits, gear types used and areas open for harvest to the delegated in season manager. I issue permits to the qualified rural residents to harvest fish in freshwater. I write the staff analysis for proposals to change subsistence fishing regulations in PWS. I comment on and testify at Regional Advisory Council, Federal Subsistence Board and State Board of Fisheries meeting regarding proposals for regulation change that may have impacts on the subsistence harvest of qualified rural residents of PWS. I work with the local Native Village tribe in developing and overseeing research projects designed to provide information relevant to subsistence activities in PWS including projects related to Traditional Ecological Knowledge. I interact with the local AD&G staff regarding potential harvests and biological ramifications. (Supervisors Name: Deyna Kuntzsch. Phone: 907-424-7661)

State of Alaska	Dates Employed: 03/1999- 04/30/01
333 Raspberry Road	Salary: \$34.12/hr
Anchorage, AK 99518-1599	Hours per Week: 37.5

### Area Management Biologist

I had overall responsibility for regulation and harvest management of commercial finfish fisheries in PWS. My independent actions and decisions result in the harvest of salmon and herring with an annual ex-vessel value of\$10-\$50 million which affects the livelihoods of 300-500 fishermen and crew and two multimillion dollar private non-profit hatchery associations. First wholesale profits from this catch affect a score of processing companies and their employees and have a direct effect on the local economies of Cordova, Valdez, Whittier and Seward. I was and still am the chairman of the Prince William Sound/Copper River Regional Planning Team, which reviews and makes recommendations to the Commissioner of ADF&G on salmon enhancement and rehabilitation projects including hatchery operation plans for the upcoming season. I was responsible for five salmon and herring budgets in the management area and was the facilities manager for the Cordova ADF&G office. I share responsibility for completing the 150 page Area Annual Management Report and during years of Board of Fisheries meetings prepare additional reports and presentations for Board of Fisheries activities. (Supervisor's Name: Jeff Regnart. Phone: (907)267-2350.)

Alaska Department of Fish and Game 333 Raspberry Road Anchorage, AK 99518-1599 Dates Employed: 07/1995-03/1999 Salary: \$34.13/hr Hours per Week: 37.5

Area Resource Development Biologist

I was responsible for planning, supervising and conducting studies concerning the rehabilitation, enhancement and development of PWS Pacific salmon. I was the principal investigator for the Exxon Valdez Trustee Council studies involved with identifying wild and hatchery stocks, assisting with studies directed at supplementation as a restoration tool, and synthesizing available information to evaluate the effects of hatchery and other enhancement operations on wild stocks. I evaluated ongoing salmon enhancement, rehabilitation and development projects for potential impacts to the Prince William Sound fisheries I wrote or edited technical reports on PWS salmon and rehabilitation projects and made several oral presentations on these projects including presentations at the annual Exxon Valdez Oil Spill workshops. I was responsible for managing 6 different budget codes with a combined total approaching \$1 million. (Supervisor's Name: Stephen Fried. Phone: (907)786-3824.)

Alaska Department of Fish and Game 333 Raspberry Road Anchorage, AK 99518-1599 Dates Employed: 06/1978-07/1995 Salary: \$32.32/hr Hours per Week: 37.5

Hatchery Manager

JOM Native parent committee P.O. Box 132 Sand Point, AK 99661 Dates Employed: 03/1976-05/1978 Salary: \$1890/mo. Hours per Week: 40

Aquaculture teacher

U.S. Peace Corps B.P 817 Yaounde, Cameroon, Cameroon - W. Africa Dates Employed: 06/1973-10/1975 Salary: \$200/mo. Hours per Week: 50

Peace Corps Volunteer - Inland Fisheries

#### EDUCATION:

Oregon State University Corvallis, OR B.S., 1973 Major: Fisheries Science

#### JOB-RELATED HONORS, AWARDS, MEMBERSHIPS, ETC.:

President of the Alaska Chapter of the American Fisheries Society 2003- 2004 Meritorious Service Award - ADF&G 1986 Public Involvement Award - ADF&G 1987 Program Innovation Award - ADF&G 1989

#### **PUBLICATIONS:**

Kaill, M., K. Rawson, T. Joyce, 1990. Retention Rates of Half-Length Coded Wire Tags Implanted in Emergent Pink Salmon. AFS Symposium 7:253-258.

Joyce, T., K. Rawson. 1988. Accuracy and Precision of Counting Eyed Eggs with an Electronic Fish Counter. Progressive Fish Culturist 50: 113-115.

Joyce, T., D. Evans. 2000. Otolith Marking of Pink Salmon in Prince William Sound Salmon Hatcheries. Exxon Valdez Oil Spill Restoration Project 19188 Final Report.

Wertheimer, A.C., W.W. Smoker, T.L. Joyce, W.R. Heard, 2001. Comment: A Review of the Hatchery Programs for Pink Salmon in Prince William Sound and Kodiak Island, Alaska. Transactions of the American Fisheries Society 130:712-720.

## Cathy R. Sherman 403 Upper Davis Avenue; PO Box 1186; Cordova, AK 99574-1186 907.424.3759 (Home) 907.424.6665 (Work) 907.424.6666 (FAX) infoservices@cityofcordova.net

Profile	Solid background in public relations; visitor services; marketing; with strong emphasis in museum and library management. Consistently maintains operational goals and customer service expectations. Experience in information technology. Skilled in developing and implementing standardized policies and procedures; strategic plans; grants.			
Education	Education			
	B.A. Historic Research/Journalism, Juniata College	February 1982		
Career History	<ul> <li>City of Cordova, Cordova, Alaska Information Services Director</li> <li>Manage ten-member department for public/school library and historical museum</li> <li>Liaison between Non-profit Historical Society/City of Cordova and Liaison between Library Commission/City of Cordova</li> <li>Develops and administers annual operating budgets for museum and library; develops, administers, implements grants</li> <li>Manages information technology systems for City of Cordova.</li> <li>Jacreased hours of service to the public resulting in 10-15% growth</li> </ul>	Feb 1995-current		
	<ul> <li>Increased nodes of service to the phone resulting in 10-1578 growth annually in visitation.</li> <li>City of Cordova, Cordova, Alaska Cordova Historical Museum Director <ul> <li>Manage three-member department for museum; 15+volunteers</li> <li>Liaison between Non-profit Historical Society/City of Cordova</li> <li>Responsible for all operations of museum including exhibit spaces and programming. Expanded traveling and temporary exhibit program.</li> <li>Developed educational curriculum for K-6 students.</li> </ul> </li> </ul>	Sept. 1993-Feb 1995		
	<ul> <li>National Park Service, Seward, Alaska/Pennsylvania</li> <li>Interpretive Staff</li> <li>Public Programs; Exhibits and Publications</li> </ul>	1979-1985		

# Cathy R. Sherman Cordova Center Project Leader 2002-Present infoservices@cityofcordova.net

## Cordova Center

City of Cordova Boxholder Mailings	
Cordova Historical Society Newsletters	
City of Cordova Newsletters	
City of Cordova Webmaster	
Cordova Public Library Webmaster	
Cordova Center Webmaster	
Cordova Center Case Statement	
Cordova Center Business Plan	
Cordova Center Capital Campaign and Strategic Plan	
<b>City of Cordova, Cordova, Alaska</b> LaRue Barnes, ICC, Native Village of Eyak, Cordova	Feb 1995-current
Rebecca Nourse, District Ranger, US Forest Service, Chugach NF, Cordova Ranger District, Cordova	
Joe Meade, Supervisor, US Forest Service, Chugach NF, Supervisor, Anchorage	
Nancy Bird, President, Prince William Sound Science Center, Cordova	
Christene Dunlap, President, Cordova Historical Society	
Patience Faulkner, President, Cordova Library Commission	
Kristin Smith, Executive Director, Copper River Watershed Project	
Clay Koplin, President Cordova Chamber of Commerce	
Don Clark, Superintendent, Cordova School District	
Cordova Historical Society Museums Alaska Cordova Chamber of Commerce Alaska State Library Association American Library Association Public Library Association Alaska State Historical Society American Association of Museums National Association of Historic Preservation	
	City of Cordova Boxholder Mailings Cordova Historical Society Newsletters City of Cordova Webmaster Cordova Webmaster Cordova Webmaster Cordova Center Webmaster Cordova Center Webmaster Cordova Center Gase Statement Cordova Center Gase Statement Cordova Center Capital Campaign and Strategic Plan Cordova Center Capital Campaign and Strategic Plan City of Cordova, Cordova, Alaska LaRue Barnes, ICC, Native Village of Eyak, Cordova Rebecca Nourse, District Ranger, US Forest Service, Chugach NF, Cordova Ranger District, Cordova Joe Meade, Supervisor, US Forest Service, Chugach NF, Supervisor, US Forest Service, Chugach NF, Supervisor, Anchorage Nancy Bird, President, Prince William Sound Science Center, Cordova Christene Dunlap, President, Cordova Library Commission Kristin Smith, Executive Director, Copper River Watershed Project Clay Koplin, President Cordova School District Cordova Historical Society Museums Alaska Cordova Chamber of Commerce Alaska State Library Association American Library Association Alaska State Library Association Alaska State Library Association Alaska State Library Association Alaska State Historical Society American Association of Historic Preservation

John I. Harvill P.O. Box 1569 Cordova, AK 99567 Phone: (907) 424-4512 Fax; (907) 424-4514 Cell: (907) 253-4512 e-mail: harvill@gci.net

April 28, 2008

Exxon Valdez Oil Spill Trustee Council

Dear Sir:

We are very sorry we have to go to Anchorage today for three days. It is our desire to support the Cordova Center as much as possible. A lot of time and effort has gone into the project, and your help is greatly needed to finalize the entire City's dreams.

We are currently developing 180 acres three miles out of town along Eyak Lake. There will be over 40 home sites. The Center and High Speed Ferry were two components that helped us make up our minds to proceed with this big of a project in Cordova.

While other cities greatly less affected by the spill have received meaningful support to help offset the damages of this magnitude, Cordova has received nothing, and this Cordova Center will go a long way in helping us all forget the unfortunate past, and relieve some of the damages.

Thank you for your time, and help getting us the new Center. We are extremely sorry we could not be in town to meet you all. If for any reason you will be staying over for the weekend, please give us a call; we would like to show you our Alpine Property project.

Sincerely,

1/1

John and Barbara Harvill

# **Cordova Chamber of Commerce**

P.O. Box 99 • First Street Cordova, Alaska 99574 (907) 424-7260 • Fax (907) 424-7259 www.cordovachamber.com



## CORDOVA ~ ALASKA'S HIDDEN TREASURE

## CORDOVA CHAMBER OF COMMERCE RESOLUTION 08-01

## A RESOLUTION OF THE CORDOVA CHAMBER OF COMMERCE SUPPORTING EVOS FUNDING OF THE CORDOVA CENTER

WHEREAS, The Cordova Chamber of Commerce recognizes the harm that the Exxon Valdez Oil Spill inflicted on the human resources and human support services in the community of Cordova, and

WHEREAS, the Cordova Chamber of Commerce has noted the negative economic impacts on the sustainability of the community and on livelihoods, and

WHEREAS, the visitor industry is a growth industry which has helped the residents of Cordova to recover financially and emotionally from the oil spill, and the construction of the Cordova Center will grow the visitor industry in Cordova, and

WHEREAS, the Cordova Center will provide a forum for community meetings, opportunities for recreational and commercial performing arts, and conferences on a small scale to restore the diminished social and economic functions of the community, and

WHEREAS, the new library and museum will replace existing structures and enhance services with energy-efficient, sustainable structures, and

WHEREAS, the Cordova Center Project will provide a positive focal point on Main Street Cordova to renew pride of place, and

WHEREAS, the Cordova Chamber of Commerce is committed to the success of the project in meeting community human needs and in growing a sustainable economy that the building can contribute to,

NOW, THEREFORE, BE IT RESOLVED that the Cordova Chamber of Commerce of Cordova, Alaska does hereby request the Exxon Valdez Oil Spill Trustee Council to meet the human and economic needs of the community damaged by the effects of the Exxon Valdez Oil Spill by funding construction of the Cordova Center.

# PASSED AND APPROVED THIS <u>30<sup>th</sup></u> Day of April, 2008.

Erin LeBon, President

Exxon Valdez Oil Spill Trustee Council May 1, 2008 Cordova Meeting

**Refreshing the Herring Restoration Effort** Nearly all of the un-recovered natural resources in the Exxon Valdez spill affected area are dependent on herring or other herring dependent species.

"You used to be able to tell that spring had sprung in Cordova when you saw herring boats outside of the harbor just before their herring season started. I am wistfully reminded of this year after year as the boats continue to remain absent." Zeben Kopchak, age 16, Science Center Lingering Oil field trip, March 2006. (NOW age 18)

*Our Challenge:* Understanding and restoring 'herring' presents a significant cognitive problem; information and knowledge within the pertinent disciplines are so diverse that no person can know all that needs to be known for a comprehensive solution, and solutions will depend on close cooperation and collaboration of people with many kinds of experience and expertise.

(Paraphrased from the National Research Council review of salmon restoration efforts in the Pacific NW)

The basic premise is that the decline and non-recovery of Pacific Herring results from a readjustment of balances in the pelagic fish assemblage forced by interactions between oil influences and the natural ecosystem. Restoration might be possible if the processes constraining production can be understood. Without understanding the ecosystem-level relationships influencing production, however, well-meaning but uniformed restoration activities may be ineffective or even cause additional harm. (*Restated from the Sound Ecosystem Assessment*)

To meet the Pacific Herring Restoration challenge we must:

- 1) Clearly articulate our goal.
- 2) Craft tangible and durable program components.
- 3) Cultivate an informed constituency to support and implement programs
- 4) Allocate resources for the long timeline of herring recovery

### Vision:

Promote a sustainable, healthy herring population in the PWS ecosystem by making a long term programmatic commitment for:

- Understanding the decline and lack of recovery of the PWS herring population
- Identifying and evaluating recovery alternatives for herring ranging from no action to direct intervention
- Implementing appropriate recovery projects and monitoring their impact on herring populations
- Continually synthesizing and sharing the information gained with the communities and stakeholders

### **Program Approach:**

- Recognize that herring populations are dynamic, knowledge of how they work in the ecosystem is limited, and restoration opportunities take careful evaluation to assure that they do not jeopardize the natural system.
- Refresh the Herring restoration process by providing long term support to herring restoration efforts through a "Sustainable Herring Initiative"

The initiative would create and authorize a formal "herring restoration committee" to develop a restoration plan that requires unprecedented cooperation and collaboration among projects,

continued synthesis of information, new approaches to data management and display protocols, and publication of multi discipline-multi author analysis of system functions affecting herring. The plan would identify restoration options and initiate projects for recovery.

The plan would recognize and address the challenges of the "biological timelines" involved in understanding herring, identifying restoration opportunities, evaluating any proposed project against ecological risk, initiating and evaluating projects, and assessing population health and change over time.

### **Research and Restoration Strategies**

- Collaborative Ecosystem Research and Synthesis (team approach)
- Monitoring (the nature of change, seasonal, annual, decadal, other)
- Applied science putting the basics to work
- Restoration Opportunities- Evaluation and implementation of appropriate restoration projects
- Communications-outreach and education on efforts to understand and restore herring

These guiding strategies would align the initial efforts with the ongoing and continuing work of state and federal agencies under their mandates.

Sustainable Herring Initiative Mission: Understand ecosystem change that has affected herring population recovery and/or restoration in EVOS impacted areas. Initiate appropriate direct intervention/restoration strategies for the recovery of herring populations using the best available technologies and local commercial fishing expertise.

## **Restoration Planning Process for Recovery of Herring and Herring Dependent Species:**

- 1) Identify and Synthesize Herring data and information for the un-recovered PWS herring populations, including known and suspected factors limiting herring recovery. Use "GIS" capacities to display temporal, spatial and cross-disciple research information.
- 2) Develop projects and programs that address factors limiting herring populations in PWS, including the assessment of current knowledge, data gaps, and projects needed. Areas of specific interest to include: predators, disease, low recruitment, lack of immigration, advection, limited food resources, climate change, genetics, lingering toxicity, habitat, inter-specific competition for food, spatial complexity of spawn and the interaction of all of these factors.
- 3) Identify and evaluate international efforts related to herring restoration and recovery.
- 4) Design/describe intervention/recovery projects that take advantage of local knowledge, provide opportunities for participation by displaced herring fishermen, are regionally relevant, and are based on "best available technology".
- 5) Identify administrative hurdles to obtaining state/federal permits and approval of any direct intervention projects, including hatcheries, egg transport/relocation, predator exclusion, etc.
- 6) Evaluate locally relevant restoration projects against known limiting factors and biological concerns.
- 7) Initiate relevant "pilot projects" for restoration.

- 8) Evaluate effectiveness of pilot projects over time against limiting factors and natural recovery.
- Continually synthesize and share the knowledge gained with a broad constituency of managers, scientists, fishermen, community members, tribal governments, and the general public.

**Components of the plan:** The restoration of herring production in PWS requires a comprehensive plan that addresses "ecosystem-based" adaptive management approaches. The plan should:

- Be mission driven and contain measurable goals
- Crafted through direct engagement and participation of all of the stakeholders

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- Contain a timeline for work
- Defines the terms used
- Describes/lists the components required to implement programs and projects
- Lists various strategies, from the outrageous and unpopular to the sane and safe.
- Identifies the components available to pursue a strategy, the items needed to implement a strategy, and the constraints and limitations in implementing a strategy
- Addresses the legal and administrative requirements for compliance to regulations that control and permit activities described in any strategy
- Provides rough timelines and budgetary estimates for actions needed to pursue a strategy
- Recognizes that the nature of the effort may change and that there is a need for flexibility, as the understanding of factors affecting herring improves through research, monitoring, and adaptive management

Once you have a plan, how do you provide for the continuity of the effort over the potentially long term recovery times?

### Governance of the Innovative efforts:

- Appropriate scientific disciplines represented on the governance board (technical, socioeconomic, scientific, management)
- Regional stakeholder representation to provide traditional and local knowledge, and help maintain practical focus for restoration outcomes
- Sufficient infrastructure to provide program support
- Adequate ties to other state, federal and academic programs to fill in the blanks that cannot be supported through the Sustainable Herring Initiative.

**Funding and Administration:** Create a directed and mission driven endowment with EVOSTC funds. Herring recovery may be a very long battle, and providing support over time might best be accomplished by institutional structures designed for long term commitments to research and recovery. Administration and governance of the endowment could be through the Oil Spill Recovery Institute (Created in OPA 90 federal legislation, a Federal/State/Stakeholder governance group with projects and programs administered through the Prince William Sound Science Center. Funding is from an endowment managed by the USCG). The OSRI board represents the multiple stakeholder interests in marine systems and oil spill recovery and could oversee the herring steering groups continued efforts at restoration. Since OSRI is tasked with fulfilling their mission until oil development in Alaska concludes, their oversight means that the "Sustainable Herring Institute" would have the capacity to provide biological timeline studies and restoration efforts for herring and herring dependent populations in Exxon Valdez Oil Spill impacted areas for the long term.

**Rationale**: An endowed "Sustainable Herring Institute" would provide a stable and predictable source of support for long-term studies and restoration approaches using herring life history timelines, not calendar years or funding cycles. Herring "recruit" into the breeding population at about four years old, and the age structure of herring populations plays an important role in recovery. Continued efforts over multiple year classes and recruitments are necessary.

This new approach to EVOST restoration and science would result in a long-term collaborative commitment for the basics, better synthesis and geospatial/temporal referencing of research data and knowledge, and better opportunity to pursue and implement appropriate "direct restoration" efforts.

Long term, biological timeline commitments to herring research, monitoring, modeling, and science based restoration would make tracking restoration effort successes against the noise of biological chaos easier. The result will go beyond herring because of the necessity to include research efforts on the ecosystem, including herring dependent species and food web relationships. Ecosystem approaches are critical to long term success for any restoration efforts.

There is no "Magic Bullitt" for herring recovery, and commitment to funding herring restoration needs to span decades. The Oil Spill Recovery Institute governance board has the capacity and the federal mandate to complement the EVOSTC effort, and is authorized to operate until oil development in Alaska ceases.

The progress made over the past two years in developing a more integrated herring recovery plan in encouraging, but glacier in pace. The trustees should look at continuing to support the integrated herring planning efforts. In addition, you should seriously consider a long term strategy to meet recovery efforts for herring and commercial fishing through a directed endowment.

RJ Kopchak Commercial Herring Fisherman Cordova District Fishermen United BOD Exxon Valdez Oil Spill Council PAC Herring Recovery Team Chairman

Again this Aril 29, 2008

In most part this is from my comments to the EVOSTC of December 7, 2006

I appreciate the contributions of words and ideas for this paper from many engaged in the herring planning effort, especially Ted Cooney, whose vision and communication skills continue to add value to our efforts.

# Herring losses based on historic average value

2008 update Prince William Sound based on Sitka Sound comparative analysis

Averages based on ex-vessel values for years fished prior to collapse.

		· · · · · · · · · · · · · · · · · · ·
Using \$ 1 = \$1 for 1980-1995	Annual Ex Vesse	l value by harvest type
WILD KELP HARVEST	\$232,000	
POUNDED Herring	\$2,100,000	
FOOD and Bait	\$244,000	
GILLNET	\$299,000	
SEINE	\$4,600,000	· · · · · · · · · · · · · · · · · · ·
Average value per year (not adjusted)	\$7,475,000	
		Inflation Adjusted 1995 \$ to 2005 \$
14 lost seasons (includes 1989)	\$89,700,000	\$126,552,000
Individual permit income		
Loss per season		14 year impact-rough estimate
		Not Inflation Adjusted-
Gillnet 24 permits each lost	\$ 12,458	\$ 174,412
Seine 107 permits each lost	\$ 42,990	\$ 601,860
Pounding 129 permits each lost	\$ 16,279	\$227,960
Wild harvest 263 permits average	\$ 882	\$ 12,348
Food and Bait 10 average each lost	\$ 24,400	\$ 341,600
Lost income Adjusted for Inflation for		14 yr. adjusted loss based on
12 lost seasons		1995 \$ value adjusted 2007
Gillnet 24 permits each lost		241,073
Seine 107 permits each lost		831,893
Pounding 129 permits each lost		315,087
Food and Deit 10 permits average		17,067
rood and Bait 10 average each lost		472,161
HERRING PERMIT VALUES 1989	Total Value 1989	Adjusted Value-2005 dollars
24 Gillnet (G34E) Permits \$ 92,600	\$ 2,222,400	\$ 144,338
107 Seine (G01E) Permits \$ 245,000	\$ 25,480,000	\$ 381,889
129 Pound (L 21E) Permits\$ 48,000(263 average) Hand (L12E)Not Limit(10 average Food/Bait)Not Limit	\$ 6,192,000 ted ted	\$ 74,819

Total 1989 Herring Permit Value

e \$ 33,894,400

\$ 52,322,859 Actual 2005 value: (0)

SOURCES: State of Alaska Data sites for herring fisheries below:

Query Permit Data by gear-type: Seine G01E Gillnet G34E Pound L21E Hand L12E Historic Permit Values: <u>http://www.cfec.state.ak.us/pmtvalue/mnuherr.htm</u> Herring Ex-Vessel Values and Production: <u>http://www.cfec.state.ak.us/quartile/mnuherr.htm</u> Inflation Adjustment Calculations: <u>http://www.westegg.com/inflation/infl.cgi</u>

The above table prepared by: Rj Kopchak, Cordova, Alaska 907-424-3541 ecotrust@ak.net

Disclaimer: I am a commercial fisherman, not an economist.

The Sustainable Herring Institute: To accomplish our goals we need to conduct restoration efforts over biological timelines, and to do this we need to establish a "center of excellence" for herring restoration, monitoring, research and management in Cordova, Alaska at the Prince William Sound Science Center with direct support to and involvement of the local ADFG herring scientists and managers.

Why in Cordova, Alaska? PWS Herring are managed by the ADFG office in Cordova. Community based science and restoration efforts make sense. Direct stakeholder involvement in governance and program implementation helps provide accountability, and helps focus efforts on results. In addition, the institute management, local vessel charters, synthesis, research, and restoration efforts centered out Cordova would help the local economy, and at least partially offset the lost community revenues resulting from the fisheries closures.

In 1989, Cordova was the home port or the majority of the herring fleet that was displaced by the herring fisheries closures, and Cordova businesses, and the community in general continues to suffer the greatest financial losses stemming from the closure of the fisheries. This is why local fishermen continue to be active in efforts to understand the collapse of the herring fisheries, and restore populations to biologically sustainable levels. Cordova served as the port for both the local resident herring fishermen and the transient permit holders. Cordova was the staging area for boats, tenders, aircraft, and the center for logistical support, providing fuel, groceries, parts and repairs, hospital services, processing and much more.

Cordova fishermen developed the first successful herring "pounding" fishery in Alaska. Because of their pioneering efforts to develop the PWS herring fisheries, Cordova residents held more herring permits than any other Alaska community. According to the Commercial Fisheries Entry Commission 1989 records, local residents and fishing families in Cordova owned 83% of herring gillnet permits, 80% food and bait, 60% pounding, 27% seine, and 21% of the hand harvest permits. Their continuing loss of income represents 40% of the impact from closed fishing seasons. Based on historic production, about \$51,000,000 to date has been lost to local family fishing operations. These losses came after the 1994 litigation, and no compensation for these losses has been paid, nor is it part of the "punitive" award before the supreme court.

Other "Oiled Communities" and fishing families were affected by the loss of the herring fisheries, but not nearly to the extent of the community of Cordova. Fishermen in Homer owned 9% of seine permits, Kodiak 8%, and Seward 3%, but none in Valdez. Valdez fishermen owned 12% of gillnet permits, none were owned in Homer, Kodiak or Seward. Homer families owned 9% of pounding permits, Valdez 4%, but none were held in Kodiak or Seward. For all fishermen combined, total herring losses from 12 closed seasons exceeds \$126,552,000. The value of all Herring fishing permits in 1989 was \$ 34 million. Today they are worth zero.

Before the closures, over 1,100 people directly participated in the PWS Herring fishery. Small and mid sized family fishing vessels, with between two and five crewmen harvested herring and herring egg covered kelp for special markets in Japan. There were 24 "Gillnet" boats, 107 "Seine" boats, 107 "jitneys" to assist the seine vessels, and 129-Pound Fishery Permits. On average, 263 Hand harvest permits, 350 crewmembers, and about 40 spotter pilots also directly participated in the fishery, a total of 913 fishermen, their crew and pilots. Processor boats and canneries employed another 200 or more. Prior to 1989, almost all of the operations were staged out of Cordova. By late March, stores and support businesses were busy providing services to the fleet.

Since the herring fishery closures, Cordova sees little business activity until early May, when the salmon fleet begins to prepare for the season opener. The Sustainable Herring Institute will help both herring and the community of Cordova to recover.

Rj Kopchak, December 7, 2006- Updated May 1, 2008

### Why a Sustainable Herring Institute at the Prince William Sound Science Center?

In addition to the many other qualifications that make the Prince William Sound Science Center (Center) uniquely qualified as the location for the Sustainable Herring Institute, the Center has been administering a similarly structured institute, the Oil Spill Recovery Institute, for over a decade.

Current research programs include oceanographic observations, salmon, herring, pollock and plankton population assessments and Steller sea lion observations. Multiyear research is also conducted on food web analysis using stable isotopes, seafood waste discharge management and on the Copper River Delta, investigations of intertidal, shorebird and fish ecology.

The mission of the Prince William Sound Science Center is to:

- Contribute to the comprehensive description, sustained monitoring and ecological understanding of Prince William Sound, the Copper River, and Gulf of Alaska.
- Promote the goal of maintaining long-term, self-regulating biodiversity, productivity and sustainable use of renewable resources.
- Educate and inform the youth and the general public about the critical interdependence of the biology and regional economies of Alaska.

Founded in 1989 as an independent research and education institution, the Center is committed to implementing ecosystem-based, biological timeline research, and providing education programs emphasizing the long-term diversity, health and sustainability of fishery resources upon which local residents depend.

In 1990, as part of the Oil Spill Prevention Act, congress established the Oil Spill Recovery Institute that is administered through and housed at the Prince William Sound Science Center. OSRI trust funds are essentially timeless, and will be available as long as oil exploration and development occurs in Alaska.

The Congressional mandate given OSRI is:

1. To identify and develop the best available techniques, equipment and materials for dealing with oil spills in the Arctic and sub-Arctic marine environment; and,

2. To complement federal and state damage assessment efforts and determine, document, assess and understand the long-range effects of Arctic and sub-Arctic oil spills on the natural resources of Prince William Sound, and the environment, the economy and the lifestyle and well-being of the people who are dependent on those resources.

OSRI spends its money based on a continually updated five-year Science Plan, and annual work plans. The plan is organized around four goals: Understand, Respond, Inform and Partner. The Science Plan includes continuing support for physical oceanography programs that could easily nest with herring efforts, especially larval drift and food availability. The work plan calls for incorporation of biological components into the atmospherically driven ocean model. OSRI promotes partnerships and joint solicitations with other research programs, includes graduate student fellowships that focus on the OSRI mission, and supports education programs in the Prince William Sound region. DRAFT CONCEPT\_ Sustainable Herring Institute The Exxon Valdez Oil Spill Trustees PRINCE WILLIAM SOUND SUSTAINABLE HERRING INITIATIVE Creating the:

Prince William Sound SUSTAINABLE HERRING INSTITUTE.

It is recognized that the impacts from the loss of herring populations in Prince William Sound due the Exxon Valdez Oil Spill are significant. Herring population collapse has resulted in the loss of available forage food for herring dependent species, including un-recovered bird and marine mammal species. The collapse of herring populations also resulted in the loss of commercial and subsistence fishing opportunities, and resulted in millions of dollars of lost opportunity for dependent fishing families and their communities. To provide support for long term, community based efforts to restore herring populations the EVOS trustees provide for the following:

(a) ESTABLISHMENT OF INSTITUTE. The EVOST Council provides for the establishment of a Prince William Sound SUSTAINABLE HERRING INSTITUTE. (hereinafter in this section referred to as the "Institute") to be administered through the Prince William Sound Science and Technology Institute, also known as the Prince William Sound Science Center, located in Cordova, Alaska. (OR Oil Spill Recovery Institute)

(b) FUNCTIONS. The Institute shall conduct research and carry out educational and demonstration projects designed to:

(1) identify and develop the best available techniques to bring about the restoration and recovery of herring populations in Prince William Sound, and other areas impacted by the EVOS,

(2) complement Federal and State efforts to determine the causes for continued depressed herring populations in oil spill impacted areas, support and complement efforts to understand herring contributions to dependent predator species, document, assess, understand, monitor and support scientifically based efforts to restore the wild herring populations of Prince William Sound and its adjacent waters (as generally depicted on the map entitled "EXXON VALDEZ oil spill dated March 1990"), incorporate appropriate traditional and local ecological knowledge,

and complement and support efforts to better understand the historic and potential contributions of herring to the regional economy, the lifestyle and well-being of the people who are dependent on herring, and encourage regional stakeholder participation in efforts to understand and restore wild herring populations.

(c) ENDOWMENT: The EVOS Trustees make a one time appropriation of \$50million of EVOST administered funds; to create a "Sustainable Herring Initiative" endowment of \$47million, to provide, through interest earnings, funds to support long-term herring science and restoration through the Prince William Sound Sustainable Herring Institute, and \$2 million to initiate the start of the Sustainable Herring Institute. After appointment of the Governance Board (section (d) 1; A - H) \$1million will be initially available for start up of the institute.

- The Prince William Sound Science and Technology Institute shall receive a \$250,000 fee from the initial funding appropriation of \$1million, and thereafter no more than 20% for administering funds drawn from the earnings of the endowment for program development and support.
- 2. \$100,000 will be made available for start up functions, convening the governance board, development of a long term, biological timeline restoration and recovery plan, convening planning groups, acquiring planning assistance, and developing standards and performance guidelines for the multiple disciplines involved in future herring related research, monitoring and restoration.
- 3. \$100K shall be transferred to the Alaska Department of Fish and Game to support herring research in Prince William Sound and adjacent waters. Thereafter, Ten percent (10%) of the annual interest generated by the Sustainable Herring Initiative Trust shall be transferred to the Alaska Department of Fish and Game to support herring research in Prince William Sound and adjacent waters. The funds shall be expended in a manner consistent with agency mandates, except that they shall be restricted in use to herring related research and monitoring, which may include research vessel support, herring research staff, data processing, synthesis, and associated administrative costs.
- \$2.55million shall be available for facilities and infrastructure needs, equipment, hardware and software and knowledge system start up.

The \$47million endowment will be managed by the Prince William Sound Science and Technology Institute (or OSRI) as a Trust, and the principal shall not be depleted. The annual interest from the endowment shall be available to the Governance Board, who shall authorize the expenditure of funds in accordance with the policies, provisions, and work-plans approved by the Governance Board.

(d) GOVERNANCE BOARD: The general qualifications for Governance Board members should be an understanding of Prince William Sound, ecology, pacific herring, marine ecosystems, economics, aquaculture, traditional knowledge, subsistence fisheries, commercial fisheries, conservation, or other disciplines that can provide a broad spectrum of knowledge, experience, and perspectives on marine ecosystems, pacific herring, and ecosystem functions important to the restoration, health and sustainability of herring populations.

(1) IN GENERAL. A governance board, composed of 12 members, shall determine the policies of the Institute. The board shall have governance over the use of funds generated by the endowment, and shall be appointed or selected as follows:

(*A*) TWO state representatives, one representative appointed by each of the Commissioners of Fish and Game, and Natural Resources of the State of Alaska, who shall be State employees, and shall serve for a term at the convenience of the appointing agency.

(*B*) TWO federal representatives, one representative appointed by each of the Secretaries of Commerce and the Interior, who shall be Federal employees, and shall serve for a term at the convenience of the appointing agency

(C) TWO representatives from the commercial fishing industry, initially appointed by the EVOST Council from among resident commercial fishermen from communities in Alaska that were affected by the EXXON VALDEZ oil spill, who shall serve terms of 3 years each. Individuals and interested organizations from within the fishing industry may submit the names of qualified individuals for consideration by the EVOST Council. Subsequent representatives shall be appointed by the SHI Governance Board from among nominations publicly solicited who fulfills qualifications.

(*D*) TWO Alaska Natives who represent tribal communities affected by the EXXON VALDEZ oil spill, appointed by the EVOST Council from a list of qualified individuals submitted by recognized tribal communities within the EVOS impacted area, who shall serve terms of 3 years each. Subsequent representatives shall be appointed by the SHI Governance Board from among nominations publicly solicited who fulfill qualifications

(*E*) ONE representative from the conservation community, and who shall represent the interests of marine conservation, who shall serve a term of 3 years. Individuals and interested organizations from within the conservation community may submit the names of qualified individuals for consideration by the EVOST Council. Subsequent representatives shall be appointed by the SHI Governance Board from among nominations publicly solicited who fulfill qualifications

(*F*) ONE at-large representatives from among residents of communities in Alaska that were affected by the EXXON VALDEZ oil spill who is knowledgeable about the marine environment and wildlife within Prince William Sound, and who shall serve terms of 3 years each, appointed by the remaining members of the Governance Board. Interested parties may submit the names of qualified individuals for consideration by the SHI Governance Board.

(G) ONE representative of the Institute of Marine Science, University of Alaska Fairbanks, who shall be named by the dean, and serve at the pleasure of the university.

(*H*) ONE representative of the Institute of Social and Economic Research, University of Alaska Anchorage, who shall be named by the dean, and serve at the pleasure of the university. (2) CHAIRMAN and Officers. The chairman shall be elected by the Governance Board, and shall serve a term of two years as Chairman of the Board. A vice chairman, secretary, treasurer and other officers identified by the board shall also be elected.

(3) POLICIES. Policies determined by the Governance Board under this subsection shall include policies for the conduct and support, through contracts and grants awarded on a competitive basis, of research, projects, monitoring programs, restoration efforts, studies, synthesis and education to be supported by the Institute in accordance with the purposes of this section.

(4) SCIENTIFIC REVIEW. The Governance Board may contract for a scientific review of the research program after five years, to be performed by the National Academy of Sciences or other recognized authority.

(e) DIRECTOR. The Institute shall be administered by a Director who shall be appointed by the Governance Board. The Director may hire such staff and incur such expenses on behalf of the Institute as are authorized by the Advisory Board.

(f) AUDIT. The Comptroller General of the United States, Alaska Department of Revenue, and any of their duly authorized representatives, shall have access, for purposes of audit and examination, to any books, documents, papers, and records of the Institute and its administering agency that are pertinent to the funds received and expended by the Institute and its administering agency.

(g) STATUS OF EMPLOYEES. Employees of the Institute shall not, by reason of such employment, be considered to be employees of the Federal Government or State Government for any purpose.

(h) DURATION OF TRUST. The trust shall endure. To assure continued sustainable herring populations the endowment purpose will be durable, and the principal of the trust maintained. Interest earnings shall be restricted in use for appropriate herring restoration projects, long term studies, monitoring, synthesis and knowledge system maintenance and education, with a continuing focus on herring and herring dependent species as defined in FUNCTIONS subsection (b).

(i) USE OF FUNDS. No funds made available to carry out this section may be used to initiate litigation. No more than 20 percent of funds made available to carry out this section may be used to lease necessary facilities and to administer the Institute. The Governance Board may compensate its Federal, State, and other appointed representatives for their reasonable travel costs. None of the funds authorized by this section shall be used for any purpose other than the functions specified in FUNCTIONS subsection (b).

(j) RESEARCH. The Institute shall publish and make available to any person upon request the results of all research, educational, and demonstration projects conducted by the Institute. The Administrator shall provide a copy of all research, educational, and demonstration projects conducted by the Institute to the Federal and State agencies involved in herring related research and management.

(k) COLLABORATION, SYNTHESIS AND PUBLIC EDUCATION. Projects and programs developed by the SHI shall encourage and take advantage of collaboration, integration and synthesis of data across multiple disciplines. The institute shall develop integrated data sets that synthesize information from various disciplines temporally and spatially, and clearly share knowledge gained, demonstrate historic and ongoing research and document restoration efforts over time. A "Knowledge System" that incorporates the information from diverse disciplines, and provides reasonable access to information on the status of research, herring populations, and knowledge gained through the integrated programs.

(I) DEFINITIONS. In this section, the term "Prince William Sound and its adjacent waters" means such sound and waters as generally depicted on the map entitled "EXXON VALDEZ oil spill dated March 1990".

### Page 1 of 2

## Womac, Cherri G (EVOSTC)

From:	Baffrey,	Michael	(DFG s	sponsored
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Sent: Sunday, April 27, 2008 4:34 PM

To: Lloyd, Denby S (DFG); Jim Balsiger (jim.balsiger@noaa.gov); Joe Meade (jmeade@fs.fed.us); Hartig, Lawrence L (DEC); Randall Luthi (randall.luthi@mms.gov); Colberg, Talis J (LAW)

Cc: Craig O'Connor (Craig.R.O'Connor@noaa.gov); Tillery, Craig J (LAW); Hans Neidig (Hans\_Neidig@ios.doi.gov); Steve Zemke (szemke@fs.fed.us); Brookover, Thomas E (DFG); Fries, Carol A (DNR); Boerner, Catherine W (EVOSTC); Dede Bohn (Dede Bohn@usgs.gov); Jenifer Kohout (Jenifer Kohout@fws.gov); Carlson-Vandort, Marit K (DEC); Baffrey, Michael (DFG sponsored); Peter Hagen (Peter Hagen@Noaa.gov); Holba, Carrie A (EVOSTC); Boerner, Catherine W (EVOSTC); Womac, Cherri G (EVOSTC); Lottsfeldt, JoEllen (EVOSTC); Ortolano, Lynette M (DFG); Schroeder, Lynette M (EVOSTC); Baffrey, Michael (DFG sponsored); Schlei, Michael S (EVOSTC); Talbott, Rebecca (DFG sponsored); Dawn Germain (dawn.germain@usda.gov); Hsieh, Elise M (LAW); Gina Belt (regina.belt@usdoj.gov); Maria Lisowski (mlisowski@fs.fed.us); Ronald McClain (Ronald.McClain@usda.gov); Womac, Cherri G (EVOSTC); douglas mutter@ios.doi.gov; Ed Zeine (edward@ctcak.net); Gary Fandrei (gfandrei@ciaanet.org); jbrune@akrdc.org; Kurt Eilo (keilo@gci.net); Larry Evanoff (Imevanoff@yahoo.com); Mark King (marking@ctcak.net); Martha Vlasoff (unungangirl@yahoo.com); Martin Robards (m.robards@uaf.edu); Patrick Lavin (lavin@nwf.org); Robert J. (RJ) Kopchak (ecotrust@ak.net); Ron Peck (rpeck@alaskatia.org); Stacy Studebaker (tidepoolak@ak.net); Steve Lewis (seldovia.marine@gmail.com); Torie Baker (torie@sfos.uaf.edu); Vern McCorkle (publisher@akbizmag.com)

Subject: Cordova Times Article re: Trustee Council meeting and Herring Workshop

Hello Council Members, there will be interest in your presence in Cordova this week. To correct the reference to the remaining investment funds, as of the end of March the research, monitoring and general sub-account contained approximately \$112 million. The habitat sub-account stood at approximately \$38 million. Also, the herring workshop will be from April 29-May 2 in the Pioneer Igloo.

Michael

## Exxon Valdez oil spill trustees invite comments

### JOY LANDALUCE

April 25, 2008 at 10:50AM AKST

The six state and federal trustees of the Exxon Valdez oil spill settlement will be in Cordova on May 1 to hear from residents, particularly on the Cordova Center project and herring research issues.

The oil spill settlement fund now has more than \$120 million remaining designated for restoration activities. Additionally, there is a smaller fund set aside for habitat protection and acquisition.

The city of Cordova has requested about \$7 million for construction of the Cordova Center, a multi-purpose building designed to house a 200-seat auditorium, an oil spill response center and science education rooms, an expanded public library and museum, and city hall offices.

At its March 17 meeting, a majority of the Trustee Council members expressed support for the Cordova Center project.

However, they also stated their support can only be for portions of the building which have clear connection to restoration of resources injured by the 1989 oil spill.

A separate but related workshop on restoration of herring in Prince William Sound will be held April 29-30. The trustee council is committed to ongoing research investigations by a multidisciplinary group of scientists and has

also appointed a Herring Plan Steering Committee, which includes fishermen, managers and scientists.

The workshop will bring all of these individuals together to review research progress and determine next steps.

The public is invited to the workshop April 29-30; the location is to be determined. Contact Cathy Sherman at 424-6665 or Nancy Bird at 424-5800, ext. 225, for details.

Joy Landaluce can be reached at (907) 424-7181.

## Oil spill trustee council to visit Cordova, discuss center

CATHY SHERMAN

April 25, 2008 at 10:50AM AKST

For The Cordova Times

The adage slow and steady wins the race might seem appropriate for our community center project. Here's an update.

We have an important opportunity to demonstrate community support for this project on Thursday, May 1, when the Exxon Valdez Oil Spill Trustee Council visits Cordova.

The six federal and state trustees want to hear testimony from Cordovans, at a meeting set for 6:30 p.m. in Mount Eccles auditorium, about our wishes and direction for use of remaining funds in the oil spill settlement.

We've requested about \$7 million from the EVOS fund, which reportedly has more than \$120 million remaining in its balance.

The council is charged to spend these funds on restoration activities that have links to the 1989 oil spill.

Cordova Center Committee Chair Dan Logan sees the center as addressing the human services impacted by the oil spill. The Cordova Center combines a conference center with theatre/auditorium and meeting rooms, library, museum, Science Discovery Room, Oil Spill Response Center and visitors' center, as well as some city offices.

"It will replace aging and obsolete facilities," Logan said, "and also will offer more opportunities to host conventions, performances and meetings. The Discovery Room and Oil Spill Response Center will directly address issues related to the '89 spill."

"The center will aid and assist Cordova as an impacted community in helping to diversity and stabilize our economy," said Mayor Tim Joyce, who will be making a presentation at the meeting.

"The city will gain economic benefits from the conference market the Center will access," said Joyce, "bringing increased sales tax, lodging tax and car rental tax revenues. This will accelerate the recovery of the damaged human services."

The Cordova Center committee has developed a broad list of funding sources. The Trustee Council's support is critical to leverage some of those additional sources. These include private foundations and corporations, federal and state funding, and municipal and local fund-raising. Proposals are developed and submitted to many of these sources with great results.

To date, \$5.2 million is secured for a project estimated to cost \$17 million.

Cathy Sherman is the information specialist for the city of Cordova.